



INTERNATIONAL JOINT CONFERENCE ON NEURAL NETWORKS

IJCNN2025

30 JUNE - 5 JULY 2025 | **ROME, ITALY**



INTERNATIONAL NEURAL NETWORK SOCIETY

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Welcome Message from the General Chair of IJCNN 2025

On behalf of the Organizing Committee, it is my great honor and pleasure to welcome you to the 2025 International Joint Conference on Neural Networks (IJCNN 2025), held from June 30 to July 5, 2025, at the Pontifical Gregorian University in Rome, Italy, a city rich in history and culture, and, this year, the cradle of the Jubilee.

IJCNN is the flagship conference of the International Neural Network Society (INNS), bringing together the world's leading researchers, practitioners, and students to explore the latest advances in neural networks and artificial intelligence. In 2025, IJCNN returns with renewed energy and a broad, interdisciplinary vision under the motto: "All Neural Network Roads Lead to Rome."

This year's edition continues the tradition of excellence and inclusion. We are proud to announce that IJCNN 2025 received 5526 paper submissions to be considered for publication on IEEE Proceedings, reflecting the remarkable global engagement and growing influence of our field. After a rigorous peer-review process, a carefully curated program features high-quality technical papers, special sessions, tutorials, and workshops covering a wide range of topics, from foundational theories and architectures to real-world applications in science, medicine, robotics, signal processing, and neuroscience. Our distinguished keynote speakers further enrich the experience.

Among this year's highlights, we are excited to present a Special Track on Human-AI interaction in creative arts and sciences, emphasizing the potential of neural networks in enhancing both human capabilities and machine intelligence. This track embodies the spirit of IJCNN 2025: not only celebrating technical advances, but also exploring the broader impact of neural computation on society, creativity, and discovery.

I would like to express my deepest gratitude to all who contributed to the success of IJCNN 2025: the Honorary Chair, Prof. Tomaso Poggio, the whole Organizing Committee, the INNS Board of Governors, the Conference Sponsors. I am also grateful to Area Chairs and Reviewers, the kind and valuable staff of Conference Catalysts and Symposia, and the countless Volunteers and staff behind the scenes. A special thank you to the authors and attendees who continue to bring their best work and curiosity to our community.

We look forward to an inspiring and unforgettable week in Rome. Whether you are attending for the first time or returning to IJCNN, Rome offers a unique and memorable backdrop for vibrant discussions and meaningful connections. May your time at IJCNN 2025 be filled with insightful exchanges, new collaborations, and the shared excitement of advancing the frontiers of neural networks.

Sincerely,

Danilo Comminiello

General Chair of IJCNN 2025





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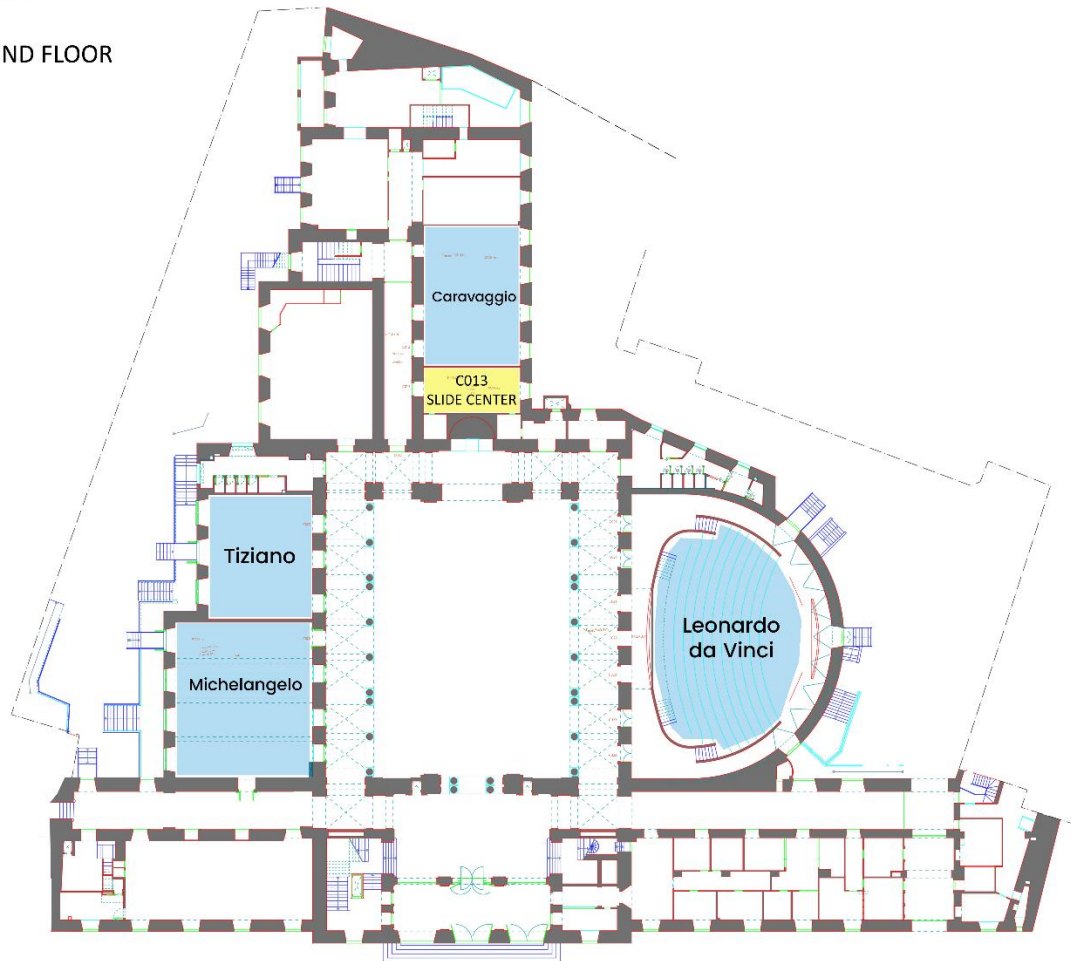
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Venue Map

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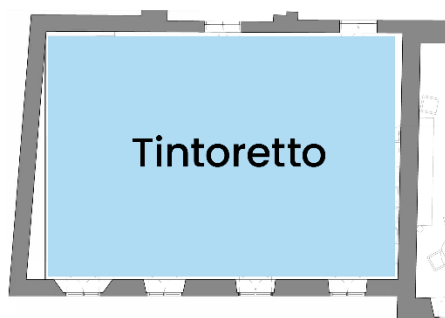
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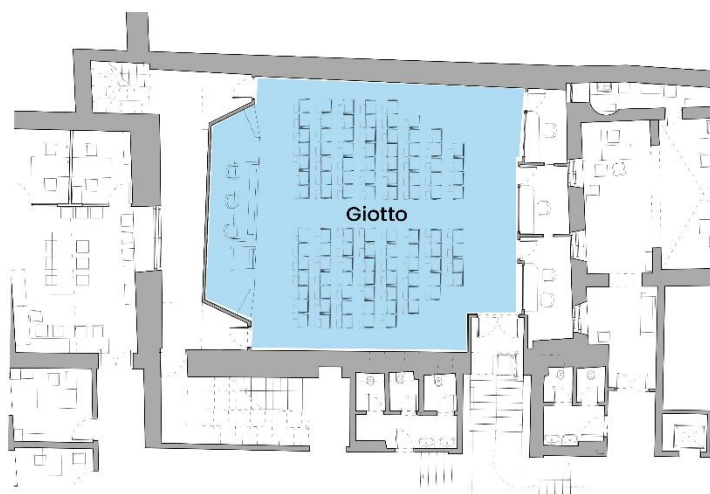


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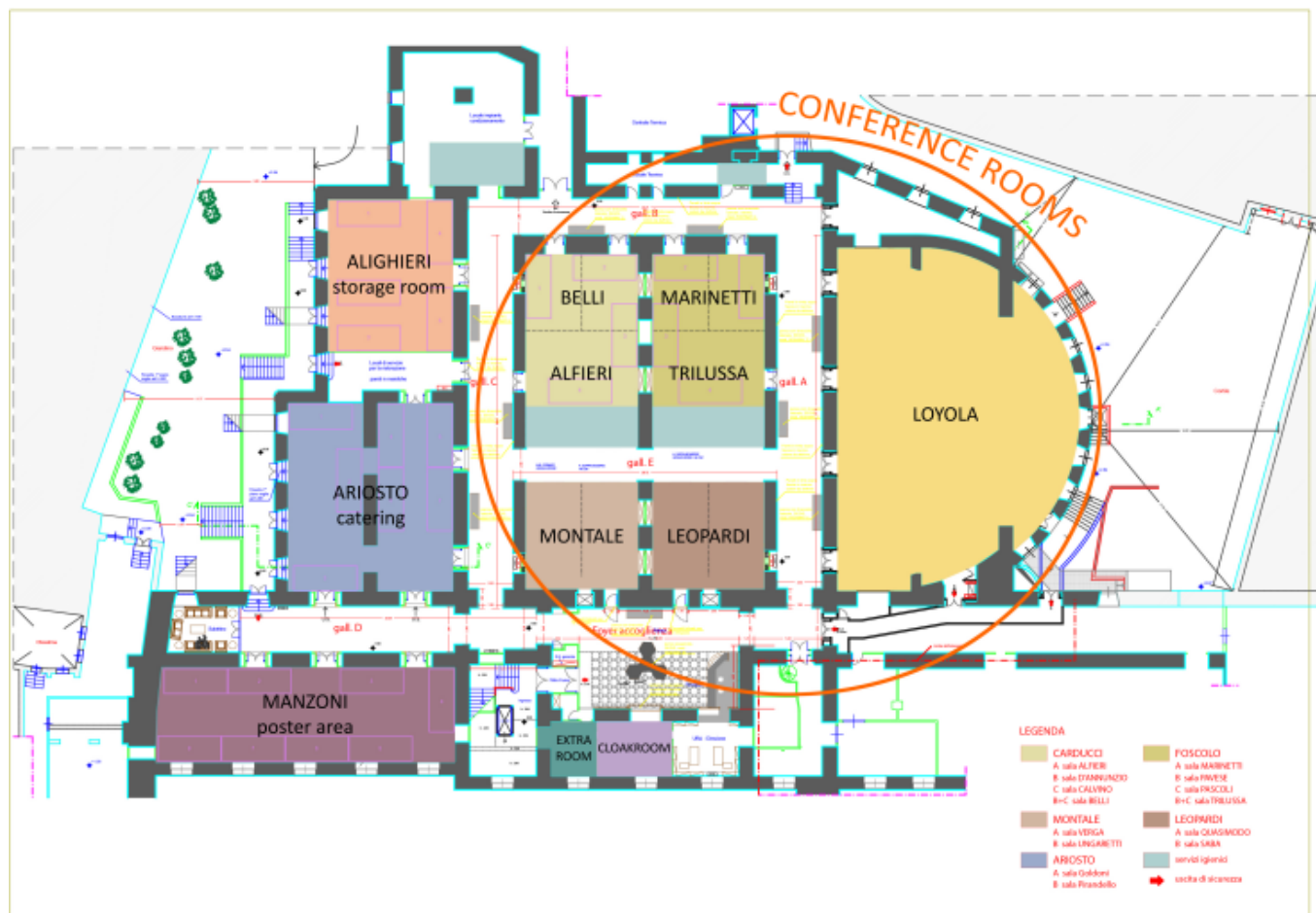
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Conference Dinner

We are pleased to invite all IJCNN 2025 participants to the official Conference Dinner, scheduled for Thursday, July 3, in a truly unique and prestigious setting in the romantic area of Trastevere, in the heart of Rome.

Meeting point:

Orto Botanico, Largo Cristina di Svezia, 24

Thursday, July 3, 2025, 7:45 pm



The evening will take place at the exceptional venue: the tranquil Botanical Garden of Rome.

Guests will enjoy a refined dining experience, with tables distributed between the two venues—one immersed in the lush greenery of the Botanical Garden, the other set in the Baroque elegance of Palazzo Corsini. Both settings will offer a curated menu of traditional Italian cuisine, paired with regional wines.

Access to the event will be exclusively through the entrance of the Botanical Garden (Largo Cristina di Svezia, 24), from where guests will be welcomed.

Advance registration is required, and places at each venue are limited. Please reserve your spot via the IJCNN 2025 online registration system.

Join us for an unforgettable evening of fine dining, cultural heritage, and scientific exchange in the heart of Rome.

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PROGRAM AT A GLANCE

THURSDAY JULY 3														
	Leonardo da Vinci	Michelangelo	Raffaello	Tiziano	Botticelli	Caravaggio	Loyola	Alfieri	Belli	Marinetti	Trilussa	Montale	Leopardi	Manzoni
09:00	KEYNOTE #5													
09:30	L. De Raedt													
10:00	Coffee Break													
10:30	LECTURE Special Track: Human-AI interaction in creative arts and sciences	LECTURE Special Session on Bayesian Methods for Inference and Learning	LECTURE Special Session on Intelligent Vehicles and Transportation Systems (IVTS)	LECTURE Special Session on Artificial Intelligence for Neural Engineering: Innovations, Applications and Future Directions*	LECTURE Special Session on Machine Learning in Complex Energy Systems and Future Sustainability	LECTURE Special Session on Machine Learning and Deep Learning Methods applied to Vision and Robotics (MLDLMVR)	WORK-SHOP #10 AIMB: Artificial Intelligence in Precision Medicine, Molecular Biology, and Bioinformatics							
11:00														
11:30														
12:00	KEYNOTE #6 R. Gao						WORK-SHOP #11 VERIME-DIA: International Workshop on Media Verification and Integrity							
12:30														
13:00	Lunch Room: Gregoriana University Hall						MEETING #12 Neural Networks Journal Editorial Luncheon							
13:30														
14:00	LECTURE Neural Networks for Critical Infrastructures	LECTURE Neural Networks for Image and video processing III	LECTURE Autonomous Vehicles and Intelligent Transportation Systems I	LECTURE Special Session on Leveraging Foundation Models for Efficiently Developing Generative Models	LECTURE Special Session on Self-organizing Clustering for Continual Learning and its Applications	MEETING #13 Mentoring and Skills Development Sub-Committee meeting	ARTISTIC EXHIBITION							
14:30														
15:00														
15:30	Tea Break						MEETING #14 AI for Critical Infrastructure Section Meeting							
16:00														
16:30			LECTURE Special Session on Tiny Machine Learning	LECTURE Neural Networks for Audio and Speech	LECTURE Neural Networks for Healthcare and life sciences III	LECTURE Physics-Informed Neural Networks	LECTURE #3.16 8 th WODETC Drone-vs-Bird Detection Grand Challenge							
17:00	LECTURE Position Papers III	LECTURE Generative Models III												
17:30														
18:00														
19:30	Banquet Dinner Location: Orto Botanico, Largo Cristina di Svezia, 24													
20:00														

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IJCNN Keynote Speakers



Francesca Rossi

“AI Ethics and safety in the era of generative AI”

IBM Research

Abstract: AI is going to bring huge benefits in terms of scientific progress, human wellbeing, economic value, and the possibility of finding solutions to major social and environmental problems. Supported by AI, we will be able to make more grounded decisions and to focus on the main values and goals of a decision process rather than on routine and repetitive tasks. However, such a powerful technology also raises some concerns, related for example to the black-box nature of some AI approaches, the possible discriminatory decisions that AI algorithms may recommend, the spread of misinformation, data privacy/handling issues, and the impact on jobs and societal structures. As AI capabilities advance, from symbolic AI to machine learning to generative AI to agentic AI, new and amplified ethics issues arise and need to be identified and addressed.

These concerns are among the obstacles that hold AI back or that cause worry for current AI users, adopters, and policy makers. Without answers to these questions, many will not trust AI, and therefore will not fully adopt it nor get its positive impact.

In this talk I will present the main issues around AI ethics and safety, some of the proposed technical and non-technical solutions, as well as practical actions and regulations being defined for AI development, deployment, and use.

IJCNN Keynote Speakers Continued



Pierre Baldi

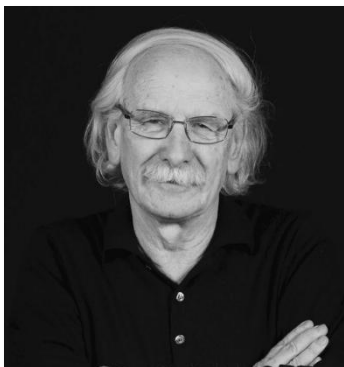
“The AI-Driven Hospital of the Future and Beyond”

University of California

Abstract: AI today can pass the Turing test and is in the process of transforming science, technology, society, humans, and beyond. Surprisingly modern AI is built out of two very simple and old ideas, rebranded as deep learning: neural networks and gradient descent learning. I will describe several applications of AI to problems in

biomedicine developed in my laboratory, from the molecular level to the patient level using omic data, imaging data, clinical data, and beyond.

Examples include the analysis of circadian rhythms in gene expression data, the identification of polyps in colonoscopies, and the prediction of post-operative outcomes. I will discuss the opportunities and challenges for developing, integrating, and deploying AI in the first AI-driven hospitals of the future and present two frameworks for addressing some of the most pressing societal issues related to AI research.



Giacomo Rizzolatti

“The Mirror Mechanism: The Double Life of the Motor and Emotional Systems: Production and Understanding”

Università degli Studi di Parma

Abstract: Mirror mechanism is a basic neural mechanism that transforms sensory representations of others’ actions into motor representations of the same actions in the brain of the observer.

In the first part of my talk I will describe the functions of the mirror mechanism located in the parieto-frontal network of monkeys and humans. I will show that this mechanism enables one to understand others in an immediate, phenomenological way, without recourse to cognitive inferential processing. In the second part of my talk I will discuss the role of the mirror mechanism in understanding vitality forms and basic emotions. The data on emotions will lead me to the last part of my talk where I will present stereo-EEG data on action and emotion recognition. I will conclude discussing the clinical application of the mirror mechanism (action observation therapy, AOT)

IJCNN Keynote Speakers Continued



Samy Bengio

“Recent Results Towards Reasoning”

Apple

Abstract: In this presentation, I will go over a few recent topics towards understanding the limits of reasoning capabilities of large language models. I will start with an analysis of the hardness of problems like syllogisms when tackling them with the Transformer architecture; I will propose a metric to measure that hardness, and an approach to make it easier for LLMs to reduce such hardness. I

will show that these limitations are not specific to the textual domain and also exist for other domains like visual tasks. Finally, I will discuss recent results in better measuring the capabilities of LLMs for math problems.



Luc De Raedt

“Neurosymbolic AI : combining data with knowledge”

KU Leuven and Örebro University

Abstract: The focus in AI today is very much on using just data for learning, but one should not learn what one already knows. The challenge therefore is to use the available knowledge to guide and constrain the learning, and to reason with the resulting models in a trustworthy manner. This requires the integration of symbolic AI with machine learning, which is the focus of neurosymbolic AI,

often touted as the next wave in AI.

I will argue that Neurosymbolic AI = Logic + Probability + Neural Networks. This will allow me to specify a high-level recipe for incorporating background knowledge into any neural network approach. The recipe starts from neural networks, interprets them at the symbol level by viewing them as “neural predicates” (or relations) and adding logical knowledge layers on top of them. The glue is provided by a probabilistic interpretation of the logic. Probability is interpreted broadly, it provides the quantitative differentiable component necessary to connect the symbolic and subsymbolic levels.

IJCNN Keynote Speakers Continued



Ruiqi Gao

“Building generative world models: progress and challenges”

Google DeepMind

Abstract: Equipping AI models with the ability to imagine, reason, and act in the physical world is a crucial step toward achieving Artificial General Intelligence (AGI). Generative world models, which simulate our world with high fidelity, offer a promising avenue for training and evaluating these embodied AI agents.

In this talk, I will present recent progress in this field. I will begin by covering the latest advancements in video generation models and how they can be controlled through various actions, marking a key milestone in developing large-scale world models. Next, I will discuss how these video models can be integrated to interact with other modalities, such as audio and text. Finally, I will address the critical limitations of current video-based world models, such as ensuring long-term consistency and interactivity, and propose potential solutions to overcome these challenges.

IJCNN Keynote Speakers Continued



Sepp Hochreiter
“xLSTM: LSTM is so back”

JKU Linz, NXAI GmbH

Abstract: Long Short-Term Memory (LSTM) networks have withstood the test of time, forming the foundation of many early deep learning breakthroughs—including the first generation of Large Language Models (LLMs). However, the rise of Transformers has since overshadowed LSTMs, establishing them as the dominant

architecture for LLMs.

We revisited the potential of LSTMs and ask: Can LSTMs be scaled up to compete with Transformers?

We introduce xLSTM, a significantly enhanced version of LSTM featuring exponential gating and a novel matrix memory with covariance-based updates. Our kernel implementations of xLSTM adheres to scaling laws and demonstrates faster training than Transformers. More crucially, xLSTM has linear-time inference in the number of produced tokens, in stark contrast to the quadratic complexity of attention mechanisms, making it highly efficient for deployment.

A 7-billion parameter xLSTM model achieves comparable performance to state-of-the-art Transformer models, while offering significantly faster inference. We are currently developing distilled xLSTM variants from large Transformer models with accelerated inference. Additionally, xLSTM time-series foundation models are constructed, which already outperform leading approaches such as Chronos (Amazon), TimesFM (Google), and Moirai (Salesforce).

xLSTM is already seeing real-world adoption: companies like Spleenlab and Festo have successfully integrated it into commercial products.

IJCNN Keynote Speakers Continued



Andrzej Cichocki

“Tensor Networks for AGI, Deep Neural Networks and Machine Learning”

Systems Research Institute of Polish Academy of Science

Abstract: Tensors and tensor networks are powerful mathematical tools that expand upon the idea of vectors, and matrices to multiway arrays, which allow efficiently handling and manipulating multidimensional data. Tensors are the essential building blocks of today’s leading machine learning and deep neural networks frameworks. In fact, modern Machine Learning methods are using tensor representations to power the next generation of AI algorithms. Due to their versatility and efficiency in handling large scale data, they play a crucial role in popular machine learning frameworks such as Tensorflow, PyTorch/TensorLy-Torch and are kernels in GPUs and TPUs (Tensor Processing Units), specifically designed for parallelizing and accelerating matrix/tensor operations. Moreover, tensor networks will be crucial for Artificial General Intelligence (AGI) because they offer a powerful and versatile framework for representing and processing complex, multi-modal, high-dimensional data, which is essential for building multi-intelligence AGI systems that would possess the ability to reason, adapt to new situations, and solve problems across various domains. Their ability to capture intricate complex correlations and patterns within multi-modal data, along with their potential for efficient computation, makes them a promising direction for AGI research. I will critically overview fundamental low-rank tensor decompositions and tensor networks. Special emphasis will be given to tensorization and quantization. I will discuss their applications to compress deep neural networks, optimize multimodal attentions and generate lightweight neural networks for specific tasks, like image/video reconstruction, super resolution, time series forecasting and brain computer interfaces.

Workshops

Workshop: Robust AI for Healthcare (RAH)

Organizer(s): Despina Kontos, Seyedmehdi Payabvash, Junhao (Hao) Wen, Anh Tuan Tran

Date: June 30, 2025

Time: 9:30 – 13:00

Room: Montale

Abstract: The "Robust AI in Healthcare" workshop explores strategies for developing safe, reliable, and efficient AI models for healthcare. It also helps to bridge the gap between AI research and practical deployment in healthcare.

It features discussions between clinicians, data scientists, and AI researchers, addressing real-world challenges. We will specifically tackle the obstacles to increasing trustworthiness and focus on mathematical strategies to improve the robustness and generalizability of image analysis AI tools in healthcare. Participants will gain valuable insights into building robust AI solutions tailored to healthcare needs, enhancing their understanding of the critical interplay between AI and clinical practice.

Workshop: Green Federated Learning: Toward Sustainable AI for a Decentralized Future

Organizer(s): Dipanwita Thakur, Antonella Guzzo, Lalit Garg, Susmita Ruj, Arindam Pal

Date: June 30, 2025

Time: 9:30 – 13:00

Room: Leopardi

Abstract: As AI and ML technologies evolve, the environmental and energy costs associated with training large-scale models have become a growing concern.

Federated Learning (FL) has emerged as a promising approach to enable decentralized training, allowing devices to collaboratively learn models while maintaining privacy. However, as the scale of FL systems grows, the energy consumption, carbon footprint, and resource inefficiency of these systems have also become critical challenges. This workshop aims to bring together researchers, practitioners, and industry experts to discuss how to optimize FL systems for sustainability, focusing on the intersection of AI, ML, and green computing.

Workshop: New Trends for Artificial Intelligence in Medicine (TAIM): providing clinicians the best Deep Learning Architecture

Organizer(s): Francesco Prinzi, Giovanna Maria Dimitri, Salvatore Vitabile, Pietro Lió

Date: June 30, 2025

Time: 14:00-17:30

Room: Montale

Abstract: The workshop delves into advanced deep learning solutions for biomedical data analysis, promoting personalized medicine and digital prevention.

It invites papers addressing aspects like accuracy, reliability, explainability, and ethics to bridge methodological research and clinical practice. Topics include transitioning from medical images to video analysis, integrating imaging with multimodal datasets for robust models, and enhancing model trustworthiness through explainability and ethical considerations. Cutting-edge areas such as large language models, graph representation learning, and novel architectures (e.g., transformers, graph neural networks, convolutional neural networks) in biomedical applications are also encouraged.

Workshop: Sustainable AI for NLP (SusAI)

Organizer(s): Massimo Esposito, Francesco Gargiulo, Aniello Minutolo, Marco Pota

Date: June 30, 2025

Time: 14:00-17:30

Room: Leopardi

Abstract: SusAI workshop aims at gathering researchers to present new trends and highlight new ideas about sustainable AI. In particular, it will present approaches, both at the training and at the inference levels, for obtaining lighter models, requiring less energy for training and/or usable on edge devices.

Significant topics are related to different techniques and methods going towards sustainable AI, which can be applied across a wide range of use cases, with particular regard to Natural Language Processing tasks: data scaling and data sampling, hyperparameters optimization, memory-efficient model architectures, model pruning, knowledge distillation, quantization, matrix decomposition, neuro-morphic paradigm, quantum computing.

Workshop: Quantum Computing and Quantum Neural Networks – QCNN

Organizer(s): Massimo Panella, Stefano Giagu

Date: July 1, 2025

Time: 10:00-18:30

Room: Leopardi

Abstract: The Workshop aims at providing concrete and original insights on quantum neural methods based on the current available technology in the Noisy Intermediate-Scale Quantum (NISQ) era, as quantum computing can potentially bring a disruptive innovation in the Computational Intelligence field, tackling problems from healthcare and bioinformatics to finance and cybersecurity, more in general for the modeling and control of real-world complex systems.

The audience pertains to scientists with high interest in data-driven and neural network applications, as well as to other researchers who want to explore the promising possibilities of the variational design of quantum neural networks.

Workshop: AI Policy and Regulation

Organizer(s): Asim Roy, Nicola Fabiano, Amanda Horzyk, Maja Nisevic

Date: July 1, 2025

Time: 14:00-18:30

Room: Loyola

Abstract: The AI Policy and Regulation workshop responds to the imminent global AI policy and regulatory changes that have profound implications for AI and Neural Networks research and industry deployment.

By welcoming diverse perspectives from different sectors, the workshop unveils how emerging frameworks such as the European AI Act will shape the neural networks research community's technical innovation, deployment, and priorities. This collaborative discussion will assist the community in navigating the complex regulatory landscape, provide insights for AI system pioneers, and allow all to deepen the emerging certification and standardization mechanisms and even fundamental human rights and AI frameworks.

Workshop: ComBayNS: Combining Bayesian and Neural approaches for Structured data

Organizer(s): Davide Bacciu, Daniele Castellana, Federico Errica, Mathias Niepert, Marco Podda, Olga Zaghen

Date: July 2, 2025

Time: 10:00-18:30

Room: Montale

Abstract: The neural network and Bayesian machine learning communities have historically struggled to come together due to philosophical differences and different metrics of success.

Yet, there is much to gain by combining probabilistic approaches and neural architectures to endow the latter, for instance, with the ability to perform uncertainty quantification, handle missing data, and learn and sample from structured data distributions. The aim of this workshop is to encourage such a convergence of ideas in the domain of structured data, such as sequences, trees, directed acyclic graphs, graphs, and general geometries.

Workshop: Neural Networks for Human Behaviour Understanding: From Perception to Prediction

Organizer(s): Vincenzo Dentamaro, Donato Impedovo

Date: July 2, 2025

Time: 10:00-13:00

Room: Leopardi

Abstract: The workshop delves into the convergence point between neural networks and the analysis of human behavior—focusing particularly on methodologies that shift from perceptual processes to predictive analytics.

Key areas encompass behavioral modeling, real-time forecasting derived from multimodal data sources, and utilizations in the sectors of healthcare, robotics, and social engagement. Through featured presentations, scholarly papers, and interactive panels, the workshop tackles issues related to data portrayal, ethical implications, and cross-disciplinary strategies for comprehending human behavior. By convening eminent experts and practitioners in the field, the workshop functions as a forum to propel advancements and nurture collaborative efforts.

Workshop: AI Innovations for Education: Transforming Teaching and Learning through Cutting-Edge Technologies

Organizer(s): Zenglin Xu, Petia Georgieva, Danimir Mandić, Qingsong Wen, Danilo Mandic, Irwin King

Date: July 2, 2025

Time: 14:00 -18:30

Room: Loyola

Abstract: We are pleased to announce a workshop dedicated to exploring the latest advancements in Artificial Intelligence (AI), with a particular emphasis on its applications in education.

Our aim is to provide an in-depth look at how these innovations can revolutionize content creation, teaching methods, and assessments, ultimately enriching the learning experience for students of all ages and backgrounds.

We encourage researchers, practitioners, and industry professionals to submit their latest findings and experiences for Contributed Talks. We invite researchers, practitioners, and industry experts from around the world to join us in this collaborative forum. Your insights will be invaluable in shaping the next generation of educational practices, ensuring that AI-driven innovations are effectively and ethically integrated into teaching and learning contexts.

We look forward to your participation and to fostering a vibrant exchange of ideas that will help chart the course for AI in education.

Workshop: AIMB: Artificial Intelligence in Precision Medicine, Molecular Biology, and Bioinformatics

Organizer(s): Giovanni Cicceri, Marta Lovino, Salvatore Vitabile, Jana Pavlíková Přecechtělová, Giansalvo Cirrincione

Date: July 3, 2025

Time: 10:30-18:00

Room: Loyola

Abstract: AIMB workshop addresses the transformative potential of artificial intelligence (AI) and neural networks (NNs) in healthcare and life sciences, focusing on the development of specialized techniques for complex biological data.

It aligns with IJCNN 2025 by bridging technical AI advancements and biomedical challenges, including interpretability and clinical implementation. The workshop will showcase cutting-edge NN applications in precision medicine, genomics, drug discovery, and biological systems modeling. Key topics include AI-driven drug discovery, deep learning for medical image analysis, AI-based genomic data analysis for personalized treatments, biomarker discovery via machine learning, NN applications in protein structure prediction, and AI-powered systems biology.

Workshop: VERIMEDIA: International Workshop on Media Verification and Integrity

Organizer(s): Mauro Barni, Irene Amerini

Date: July 3, 2025

Time: 9:30-18:00

Room: Montale

Abstract: This workshop addresses the rising challenges of AI-generated content and deepfakes by exploring advancements in multimedia forensics, deepfake detection, adversarial machine learning, AI-generated media attribution, multimodal analysis.

A key focus is lifelong media authentication, emphasizing AI's role in safeguarding media integrity by analyzing diverse media types—text, images, videos, and speech. The session highlights the critical importance of combating disinformation and ensuring trustworthy information across fields like forensics, fake news debunking, cyberattack mitigation, and politics. The primary objective is to bring together experts from these varied fields, policy makers and stakeholders to share challenges and solutions and foster collaborative discussions.

Workshop: Artificial Intelligence for Critical Infrastructure (AICI)

Organizer(s): Ganesh Kumar Venayagamoort

Date: July 3, 2025

Time: 10:00-13:00

Room: Leopardi

Abstract: The AICI workshop will focus on recent applications of AI techniques in Critical Infrastructure research, education and innovation for development, operations, and management, specifically focused on: AI for modelling critical infrastructure systems, AI for control and operations, AI for critical infrastructure optimization. The panelist, mainly from industry, will present the ongoing activities in the AICI.

Workshop: Computational Intelligence for Sustainable Energy Management in Microgrids and Renewable Energy Communities (CISEM 2025)

Organizer(s): Antonello Rizzi, Enrico De Santis, Antonino Capillo

Date: July 3, 2025

Time: 14:00-18:00

Room: Leopardi

Abstract: The "Computational Intelligence for Sustainable Energy Management in Microgrids and Renewable Energy Communities (CISEM 2025)" workshop addresses sustainable energy challenges by applying computational intelligence methods such as machine learning, evolutionary algorithms, and deep learning.

Topics include renewable resource integration, energy flow optimization, predictive maintenance, and battery management. The workshop fosters collaboration among experts to enhance energy efficiency, reduce environmental impact, and advance smart grids. By providing a platform for cutting-edge research and innovation, CISEM 2025 aligns with IJCNN's focus on impactful, multidisciplinary solutions, contributing significantly to energy management, sustainability, and smart grid development.

Workshop: Deep Learning Techniques for Observable Smart Grid and Sustainable Energy Systems (DLT-4-OSGE)

Organizer(s): Giulia Tanoni, Djordje Batic, Stavros Sykiotis, Emanuele Principi, Lina Stankovic, Vladimir Stankovic, Anastasios Doulamis

Date: July 4, 2025

Time: 10:00-18:30

Room: Michelangelo

Abstract: Smart Grids are critical infrastructures to improve energy efficiency, and as they become increasingly complex, the need for advanced methods to monitor, analyze, and optimize them has never been more pressing.

Smart Grids should offer improved observability, accessibility, and controllability, underpinned by distributed intelligence systems. Artificial neural networks can improve the performance of electrical signal processing, by providing adaptive, robust and scalable solutions. This workshop offers an opportunity for researchers from various research fields to share their insights on how deep learning can enhance observability and electrical signal processing for Smart Grids and Sustainable Energy Systems.

Workshop: Eyes Of The Future: Integrating Artificial Intelligence in Smart Eyewear (IAISE)

Organizer(s): Francesca Palermo, Simone Mentasti, Giulio Marano, Alberto Pettenella, Hazem Hesham Yousef Shalby, Manuel Roveri, Luca Merigo, Diana Trojaniello, Matteo Matteucci

Date: July 4, 2025

Time: 10:00-18:30

Room: Tiziano

Abstract: The rapid evolution of Smart Eyewear technology holds the potential to revolutionize daily life by seamlessly integrating artificial intelligence into wearable devices.

The 1st edition of the "Eyes of the Future: Integrating Artificial Intelligence in Smart Eyewear (IAISE)" Workshop at IJCNN 2025 addresses the growing need for advanced machine learning, computer vision, and eye-tracking technologies to enhance these devices' functionality and user experience. By bridging theoretical advancements and real-world applications, the workshop explores topics such as real-time processing, power efficiency, context-aware applications, embedded eye-tracking, and ethical considerations.

Workshop: AI Applications for "Social Goods"

Organizer(s): Giovanni Di Gennaro, Amedeo Buonanno, Anna Esposito, Francesco A.N. Palmieri, Gennaro Cordasco, Eros Pasero

Date: July 4, 2025

Time: 11:00-13:00

Room: Loyola

Abstract: The SIREN workshop explores how Artificial Intelligence can tackle critical social challenges. By bridging advanced AI research with practical applications, the event encourages the development of impactful solutions that benefit society.

Researchers and practitioners are invited to exchange ideas and collaborate on using AI for the common good. The program includes talks from invited speakers and presentations of cutting-edge research, creating opportunities to discuss the ethical and socially responsible use of neural networks. Join us to explore how AI can contribute to improving lives and addressing pressing social needs.

Workshop: AI for a Cooler Planet: Tackling Environmental Challenges with Neural Networks

Organizer(s): Maria Sofia Bucarelli, Francesco Caso, Andrea Drago, Christian Giannetti, Pietro Lió, Andrea Marinoni, Fabrizio Silvestri

Date: July 4, 2025

Time: 14:00-18:30

Room: Loyola

Abstract: The COP29 Declaration on Green Digital Action highlights the critical role of digital technologies in combating climate change. The workshop will focus on multiple applications of neural networks within environmental science and sustainable development.

Climatologists will share insights on how neural networks are reshaping their field. Industry practitioners will highlight the application of foundation models in weather simulations. Distinguished scholars will contribute valuable perspectives on climate predictability and the challenge of developing transparent and reliable AI systems. It will be an occasion for interdisciplinary dialogue, connecting deep learning techniques with the most pressing environmental challenges.

Workshop: ForgtAI: International Workshop on Forging Trust in Artificial Intelligence 2025

Organizer(s): Alexandros Iosifidis, Nistor Grozavu, Aikaterini Tzompanaki, Corina Besliu, Nicoleta Rogovschi

Date: July 5, 2025

Time: 9:30-13:00

Room: Trilussa

Abstract: The "Forging Trust in Artificial Intelligence" workshop focuses on enhancing AI trustworthiness through transparency, fairness, and privacy.

A special focus is given to outlining and addressing the challenges in using sequential, continuous and multimodal data in NLP and AIoT (Artificial Intelligence in IoT). This year's event highlights explainability as vital for understanding and debugging neural networks and ML models, from LLM outputs to IoT decisions, and improving AI performance. Fairness and bias mitigation remain central, ensuring ethical AI applications. By aligning with IJCNN's mission, the workshop provides actionable insights to develop AI systems that are transparent, ethical, and reliable.

Workshop: Deep Learning for Biometrics

Organizer(s): Larbi Boubchir, Boubaker Daachi

Date: July 5, 2025

Time: 9:30-13:00

Room: Montale

Abstract: Biometrics has become a burgeoning research area due to the industrial and government needs for recognition, security, and privacy concerns.

Biometric authentication and identification have become useful solutions for many applications such as access control, surveillance, and security. Recently, Deep Learning has received a great attention to solve difficult and complex problems in various domains. This workshop aims to present and discuss the recent advances on deep learning applied for biometric recognition and security, providing novel solutions to challenging problems in biometrics. It is an opportunity to bring researchers and experts together to discuss the current state of biometrics.

Workshop: Scalable and deep Graph Learning and Mining

Organizer(s): Wissem Inoubli, Haithem Mezni, Sabeur Aridhi, Engelbert Mephu Nguifo

Date: July 5, 2025

Time: 9:30-13:00

Room: Leopardi

Abstract: Graph learning plays a pivotal role in modern AI, enabling the management of massive graphs, extracting insights from complex relationships, and enhancing model interpretability and fairness.

It drives innovation in fields like social network analysis, bioinformatics, and transportation. Emerging technologies such as large language models (LLMs), explainable AI (XAI), and federated learning (FL) offer opportunities to enrich graph representations and broaden applications. However, challenges persist, including scalability, privacy, fairness, and handling dynamic, large-scale graphs. The SGLM@IJCNN workshop aims to address these issues by leveraging cutting-edge tools to advance graph learning and explore its expanding potential across domains.

Workshop: Trustworthiness and Reliability in Neurosymbolic AI

Organizer(s): Angelo Ciaramella, Le Hoang Son, Emanuel Di Nardo, Alessio Ferone, Antonio Maratea, Ihsan Ullah, Paola Barra, Lorenzo Di Rocco

Date: July 5, 2025

Time: 14:00-17:00

Room: Trilussa

Abstract: Neurosymbolic AI is a new growing trend that has been able to merge the recent advances in AI through deep learning with logic and rule-based methods.

It has an expressive and semantic power and a great potential in XAI. These capabilities are only a starting point. It needs to be explored in detail to facilitate the interpretability in any part. This workshop focuses on multiple aspects, extending the exploration of the XAI in multiple contexts, developing and adapting techniques that can be useful to relate classical deep learning approaches to their symbolic extensions with a focus on reliability and trustworthiness.

Workshop: artiFicial And bio-insplred netwoRked intelliGence foR cOnstrained aUtoNomous Devices (FAIRGROUND)

Organizer(s): Fabrizio De Vita, Luca Patanè, Dario Bruneo

Date: July 5, 2025

Time: 14:00-17:00

Room: Montale

Abstract: On-device training using edge compu+ng allows intelligent devices to learn autonomously while improving latency and security.

However, resource constraints remain a challenge. Techniques like weight compression, federated learning, and transfer learning help but may not meet hardware needs. Neuromorphic solutions, such as SNNs, mimic brain-like, energy-efficient, event-driven computa+on, ideal for robots and implants. They bridge neuroscience and AI, overcoming limitations of traditional ANNs and adapting to dynamic environments. This workshop explores neuromorphic systems and bio-inspired architectures, combined with traditional networks, to optimize computational resources for diverse applications.

Workshop: Intelligent Applications for Industrial Systems

Organizer(s): Morteza Moradi, Isaak Kavasidis, Ali Borji, Olivier Le Meur, Dan Guo

Date: July 5, 2025

Time: 14:00-17:00

Room: Leopardi

Abstract: Saliency prediction, an important domain in machine learning and cognitive neuroscience, plays a crucial role in crafting intelligent systems that emulate human attention.

The SAPN workshop delves into cutting-edge techniques and industrial applications spanning autonomous vehicles, smart cities, healthcare, and media. By integrating cognitive theories of attention with advanced neural network architectures, the workshop emphasizes biologically inspired approaches and their relevance to real-world challenges. Designed to foster collaboration and innovation, this session invites researchers and professionals to explore how saliency-driven solutions can enhance the functionality and impact of intelligent systems across diverse industries.

Tutorials

Tutorial: Diffusion Models and Flows

Organizer(s): Chieh-Hsin Lai, Bac Nguyen Cong, Yuki Mitsufuji, Stefano Ermon

Date: June 30, 2025

Time: 9:30-13:00

Room: Leonardo

Abstract: Diffusion models and flow matching techniques have emerged as powerful frameworks in generative modeling, offering significant advances in the synthesis of complex data structures. Despite their increasing prominence, a unified, comprehensive understanding of their underlying principles, mathematical formulations, and practical applications remains scattered across disparate sources. This tutorial aims to bridge this gap by providing an in-depth exploration of diffusion models, flow matching, and their interplay, offering both theoretical insights and practical methodologies. We will also cover their applications in controllable generation or inverse problem solving. By consolidating key findings, this tutorial will serve as a critical reference for researchers, practitioners, and those seeking to develop novel generative models for diverse applications.

Tutorial: Information Bottleneck Methods in Deep Learning

Organizer(s): Jose C. Principe, Badong Chen, Shujian Yu

Date: June 30, 2025

Time: 9:30-13:00

Room: Loyola

Abstract: Deep learning models, including large language models (LLMs), often face significant challenges, such as poor generalization to out-of-distribution (OOD) data, their "black-box" nature, and vulnerability to adversarial attacks. Information theory, particularly the information bottleneck (IB) principle, provides valuable insights to address these challenges in recent years, both mathematically and practically. The "Information-Theoretic Learning" is always a main subject area in previous IJCNN iterations. However, there has been no related tutorials so far. With the recent rapid development of advanced techniques on the intersections between information theory and deep learning processing over the past two years, such as neural network-based mutual information estimators, higher-order information bottleneck for spiking neural networks, and strategies for protecting LLMs against jailbreak attack, it is now an opportune time to deliver a tutorial on these topics. This tutorial will attract audiences from both academia and industry.

Tutorial: Evolution of Neural Networks

Organizer(s): Risto Miikkulainen

Date: June 30, 2025

Time: 9:30-11:00

Room: Giotto

Abstract: Neuroevolution, or optimization of neural networks through evolutionary computation, has gained significant momentum recently. Its primary focus is on evolving neural networks for intelligent agents when the training targets are not known, and good performance requires many decisions over time, such as robotic control, game playing, and decision-making. It can also be used to optimize deep-learning architectures, understand how biological intelligence evolved, and enhance and leverage reinforcement learning and generative AI techniques. In that sense it constitutes a differentiated approach to neural network training, applicable to problems where standard approaches cannot be used

Tutorial: Understanding Memorization and Generalization in Transformer-based Large Language Models and beyond

Organizer(s): Fabio Massimo Zanzotto, Elena Sofia Ruzzetti

Date: June 30, 2025

Time: 14:00-17:00

Room: Caravaggio

Abstract: Transformer-based Large Language Models demonstrate extraordinary capabilities and, thus, change the approach of the ML/NLP/NN communities when conducting research. Large chunks of research topics are neglected as Transformer-based LLMs seem to be the ultimate solution. However, it is already emerging that a large part of the capabilities of LLMs depends on their ability to memorize (Carlini et al. 2021; Zhang et al. 2021; Carlini et al. 2023; Kim, Kim, and Mozafari 2023; Ranaldi, Ruzzetti, and Zanzotto 2023). Moreover, the necessity for deep neural network to memorize long-tailed data to obtain close to optimal generalization error has attracted a lot of discussion (Feldman 2020; Feldman and Zhang 2020). Then, a florid research area on LLMs is exploring how these models memorize and how they generalize from training data. Timeliness: Building on existing research and on the idea that neural networks on discrete symbols, which are the bases of Transformer-based LLMs, it is now time to show again how neural networks on discrete symbols are holistic reasoners (Chalmers 1992) over “classical” symbolic approaches (Fodor and Pylyshyn 1988). This will give a profound understanding of the inner workings of Transformer-based LLMs and, thus, the ability to design novel architectures according to the possible, understood, and foreseen memorization and generalization capabilities of neural networks.

Tutorial: Towards Autonomous Machine Learning: Evolution of AutoML, Roles of Humans, and Related Topics

Organizer(s): Bogdan Gabrys, Thanh Tung Khuat

Date: June 30, 2025

Time: 9:30-11:00

Room: Alfieri

Abstract: Recent years have seen an unprecedented level of technological uptake and engagement by the mainstream. From deepfakes for memes to recommendation systems for commerce, machine learning (ML) has become a regular fixture in society. This ongoing transition from purely academic confines to the general public is not smooth as the public does not have the extensive expertise in data science required to fully exploit the capabilities of ML. As automated machine learning (AutoML) systems continue to progress in both sophistication and performance, it becomes important to understand the ‘how’ and ‘why’ of human-computer interaction (HCI) within these frameworks. This is necessary for optimal system design and leveraging advanced data-processing capabilities to support decision-making involving humans. It is also key to identifying the opportunities and risks presented by ever-increasing levels of machine autonomy.

Tutorial: Sustainable Deep Learning for Time-series: Reservoir Computing

Organizer(s): Andrea Ceni, Peter Ford Dominey, Claudio Gallicchio, Xavier Hinaut, Gianluca Milano

Date: June 30, 2025

Time: 9:30-13:00

Room: Belli

Abstract: The tutorial addresses the timely and critical topic of sustainable deep learning, focusing on energy-efficient alternatives to traditional neural networks for time-series processing. The emphasis on Reservoir Computing (RC) offers a unique perspective that aligns with the growing importance of Green AI and environmentally conscious machine learning practices.

Tutorial: Recently Advancement of Introducing Neural Diversity into Deep Learning

Organizer(s): Feng-Lei Fan, Fei Wang, Jing-Xiao Liao, Xiaoge Zhang

Date: June 30, 2025

Time: 9:30-11:00

Room: Marinetti

Abstract: The brain is the most intelligent system we have ever known so far. Given the incredible capability of the human brain, neuroscience has been constantly supporting deep learning as a think tank and a validation tool, e.g., inspiring the invention of neocognitron, the pioneering work of convolutional models. Although a brain remains vastly undiscovered, it is clear that the existing deep learning still goes far behind the human brain in many important aspects such as efficiency, interpretability, memory, and robustness. Currently, the characteristics of the mainstream deep learning models are fundamentally different from the biological neural system in terms of neuronal diversity. While deep learning models are typically built on a single universal primitive neuron type, the human brain has numerous morphologically and functionally different neurons. It is no exaggeration to say that neuronal diversity is an enabling factor for all kinds of biological intelligent behaviors. Since an artificial network is a miniature of the human brain, introducing neuronal diversity should be able to add value in terms of addressing the essential problems of artificial networks. There have been increasingly many studies dedicated to neuronal diversity in deep learning, such as polynomial neurons and pyramidal neurons. This tutorial will summarize them in detail. In particular, we will also focus on how neuronal diversity can benefit deep learning in four aspects: (1) (efficiency) Can deep learning be as efficient as a human brain? (2) (memory) Can neuronal diversity alleviate the catastrophic forgetting of a neural network? (3) (interpretability) Will neuronal diversity boost the self-explanation of a deep learning model? We will also envision how neuronal diversity pushes the boundary of deep learning and real-world applications, and its potential of escalating deep learning into a new stage.

Tutorial: AI-enabled mechanisms for 5G network management

Organizer(s): Petia Georgieva

Date: June 30, 2025

Time: 9:30-11:00

Room: Trilussa

Abstract: 5G/6G network management applying AI-driven methods is a state-of-the-art topic covered mainly by conferences focused on communications, sensor networks, Internet of Things (IoT) technologies. With this tutorial we want to bring the attention of the community interested in Neural Network and related facets of machine learning to this research field with great potential for academy-industry innovation and transfer of scientific knowledge.

Tutorial: Distributed Learning: Challenges, Security, and Regulatory Compliance

Organizer(s): Dipankar Dasgupta, Arunava Roy

Date: June 30, 2025

Time: 11:30-13:00

Room: Giotto

Abstract: The rapid adoption of distributed learning frameworks such as Federated Learning (FL), distributed generative modeling like Distributed Generative Adversarial Networks (D-GANs), is revolutionizing AI by enabling large-scale, decentralized applications across critical domains like healthcare, IoT, and autonomous systems. However, their scalability and trustworthiness are hindered by challenges such as their underlying architectures/mathematical frameworks, data heterogeneity, adversarial threats, privacy concerns, and regulatory compliance with frameworks like GDPR and CCPA.

Tutorial: Emerging Trends in Automated Design of Neural Network Architectures

Organizer(s): Nelishia Pillay, Ganesh Kumar Venayagamoorthy

Date: June 30, 2025

Time: 11:30-13:00

Room: Alfieri

Abstract: The tutorial focuses on emerging trends for the automated design of neural network architectures. Neural networks are predominantly used in solving large-scale complex realworld problems including smart grids. Designing such neural networks is a challenging task and for this reason has this process been automated leading to areas such as neuroevolution and neural architecture search. This tutorial provides an overview of new emerging techniques that have recently shown success in designing neural network architectures. These include large language models (LLMs), structured-based genetic programming, in the loop automated design (ITLAD), hyper-heuristics, particle swarm optimization and graph theory. Case studies will be used to illustrate the application of each of the approaches. These will include applications from digital twins, power and energy systems, sensor networks, the broadcasting industry, such as video shorts creation, automated thumbnail selection and automated subtitling and various benchmark sets used by the community.

Tutorial: Continual Learning for Anomaly Detection

Organizer(s): Roberto Corizzo, Kamil Faber

Date: June 30, 2025

Time: 11:30-13:00

Room: Marinetti

Abstract: Anomaly detection is paramount in many real-world domains characterized by evolving behavior, such as monitoring cyber-physical systems, human conditions, and network traffic. Current research in anomaly detection leverages offline learning working with static data or online learning, focusing on constant adaptation to evolving data. At the same time, continual learning represents an emerging trend, answering the need for machine learning models that continuously adapt to new challenges in dynamic environments while retaining past knowledge. Although this aspect could be beneficial to build effective and robust anomaly detection models, continual learning research is mainly dedicated to proposing new model update strategies in image classification and reinforcement learning domains. Moreover, anomaly detection provides unique challenges, such as an evolving normal class and limited availability of anomalies, which significantly differ from the landscape and scenarios of continual image classification and reinforcement learning. In this tutorial, we want to introduce and motivate the problem of continual anomaly detection as well as provide foundations about scenarios, strategies, and metrics. Moreover, we want to showcase how to approach the problem of continual anomaly detection with code examples and hands-on practice.

Tutorial: Explainable AI (XAI) for Computer Vision – A Review of Existing Methods and a New Method to Decode CNN models

Organizer(s): Asim Roy

Date: June 30, 2025

Time: 11:30-13:00

Room: Trilussa

Abstract: The machine learning community has made substantial progress in the area of Explainable AI (XAI) and the first part of the tutorial will provide an overview of the different approaches used, including different interpretations of what is meant by explainability of models. From one such perspective on explainability, one can categorize XAI methods in two ways: (1) transparency by design, and (2) posthoc explanation. Transparency by design uses model structure to start with that is interpretable, such as decision trees. Post-hoc explanation methods extract information from already learned black-box models and largely approximate their performance with new interpretable models. The benefit of this approach is that it does not affect the performance of the black-box models. Post-hoc methods mainly deal with the inputs and outputs of black-box models and are, therefore, model agnostic.

Tutorial: Practical Guide to Training Flow-Based Generative Models

Organizer(s): Scott H. Hawley

Date: June 30, 2025

Time: 14:00-15:30

Room: Leonardo

Abstract: Unavailable

Tutorial: Advances in Multimodal Models: Continual Learning and Trustworthiness

Organizer(s): Dianshi Yu, Xinni Zhang, Guanzhong Chen, Zhuo Wang, Yukun Zhang, Zenglin Xu, Irwin King

Date: June 30, 2025

Time: 14:00-17:30

Room: Loyola

Abstract: Multimodal models are recently gaining popularity and become widely used in both academia and industries. However, currently, most models face two challenges: 1. Fixed models do not have up-to-date knowledge, but direct finetuning will lead to catastrophic forgetting of models' pre-trained knowledge. 2. Models do not address trustworthy concerns such as safety and privacy. In this tutorial, we aim to give a structured presentation of works to address the challenges above. Continual learning (CL) aims to empower machine learning models to learn continually from new data, while building upon previously acquired knowledge without forgetting. As recent machine learning models have evolved from small to large pre-trained architectures, and from supporting unimodal to multimodal data, it has become more imperative and important to develop AI systems capable of learning continually from new datasets while maintaining computational and resource efficiency, hence the rise of multimodal continual learning (MMCL). We will present our novel works and also give descriptions of other people's excellent works, allowing the audience to gain a holistic perspective of this field. Multimodal trustworthiness primarily focuses on enhancing the reliability and stability of multimodal systems, aiming to ensure more precise and credible outcomes during multimodal data fusion and decision-making processes. With the increased accessibility of multimodal data and the continuous advancement of multimodal large-scale model technologies, the trustworthiness and security of models have become increasingly significant, prompting extensive research interest within the academic community. We will present novel works which address various aspects of trustworthiness, including explainability, privacy, security, robustness, and fairness.

Tutorial: Deep Learning for Graphs: an information propagation perspective

Organizer(s): Davide Bacciu

Date: June 30, 2025

Time: 14:00-17:30

Room: Giotto

Abstract: The tutorial will introduce the audience to the area of deep learning for graphs and some of its most compelling research challenges. Current models dealing with graph data typically leverage a neural message-passing like approach. We will first introduce the foundations of such an approach and discuss its reference models for static and dynamic graphs. We will then study neural message passing from an information propagation perspective and discuss new model designs leveraging a dynamical systems perspective.

Tutorial: Large Language Models for AI Techniques Design: Exploring Challenges, Tools and Future Opportunities

Organizer(s): Michal Pluhacek, Roman Senkerik, Niki van Stein

Date: June 30, 2025

Time: 14:00-15:30

Room: Caravaggio

Abstract: Our tutorial aims to foster cross-disciplinary awareness by introducing LLM innovations to the computational intelligence community and, vice versa, general principles of automated metaheuristics and selected machine learning to the LLM community. Attendees will gain a comprehensive understanding of the state of the art at the intersection of these fields, facilitating bilateral knowledge exchange and encouraging future collaborations. The tutorial is highly up-to-date since breakthroughs in generative AI, specifically with LLMs like GPT-4, Claude, Llama, etc., open new pathways for intelligent support in the automatic generation of AI techniques. Furthermore, the session will outline a roadmap for ongoing research, addressing key technical challenges, ethical implications, and emerging opportunities unique to this powerful combination of technologies. The attendees will gain novel insights for contributing to this promising area of innovation.

Tutorial: Collaborative Learning and Optimization

Organizer(s): Kai Qin, Nelishia Pillay

Date: June 30, 2025

Time: 14:00-15:30

Room: Alfieri

Abstract: Machine learning (ML) and optimization are two essential missions that Computational Intelligence (CI) aims to address. Accordingly, many CI-based ML and optimization techniques have been proposed, where deep neural networks (used for ML) and evolutionary algorithms (used for optimization) are the most well-known representatives. Intrinsically, CI-based ML and optimization are closely related. On the one hand, CI-based ML consists of various model-centric or data-centric optimization tasks. On the other hand, CI-based optimization is often formulated into ML-assisted search problems. In recent years, there emerges a new research frontline in CI, namely Collaborative Learning and Optimization (COLO), which studies how to synergise CI-based ML and optimization techniques while unleashing the unprecedented computing power (e.g., via supercomputers) to generate more powerful ML and optimization techniques for solving challenging problems. This tutorial aims at introducing this newly emerging research direction. Specifically, we will first introduce CI, CI-based ML and optimization techniques, and their relationships, and then describe COLO from three aspects, i.e., how to make use of ML techniques to assist optimization (Learn4Opt), how to leverage optimization techniques to facilitate ML (Opt4Learn), and how to synergise ML and optimization techniques to deal with real-world problems which involve ML and optimization as two indispensable and interwoven tasks (LearnOpt), where the most representative research hotspots in these three aspects, including automated construction of deep neural networks, data-driven evolutionary optimization (including neural network approaches for optimization), large language models for search, and predictive optimization will be discussed in detail.

Tutorial: All You Need To Know About Image Quality and Image Similarity Metrics

Organizer(s): Riza Velioglu, Robin Chan, Petra Bevandić, Barbara Hammer

Date: June 30, 2025

Time: 14:00-17:30

Room: Belli

Abstract: To provide participants with a comprehensive understanding of image quality and similarity metrics, their theoretical underpinnings, practical applications, and limitations. Attendees will leave equipped to evaluate and select the most appropriate metrics for their research or industrial projects.

Tutorial: Hands-on generative AI for image generation on Microcontrollers with Neural Processing Unit

Organizer(s): Alberto Ancilotto, Elisabetta Farella, Danilo Pau

Date: June 30, 2025

Time: 14:00-15:30

Room: Marinetti

Abstract: The tutorial will focus on the full development pipeline of a generative AI approach targeting microcontrollers, from network design to STM32N6 hardware deployment. Participants will see how a style transfer task, typically requiring very large networks and intensive computation, can be solved with novel lightweight neural architectures and on low-power MCU hardware.

Tutorial: Introduction to Quantum Machine Learning and Quantum Architecture Search

Organizer(s): Jun Qi, Ying-Jer Kao, Samuel Yen-Chi Chen

Date: June 30, 2025

Time: 14:00-15:30

Room: Trilussa

Abstract: The comprehensive tutorial covers essential principles of quantum information processing, quantum machine learning, and quantum neural networks, while integrating key advancements in quantum-enhanced model compression and quantum architecture search. It explores practical applications in classification, time-series modeling, speech recognition and natural language processing, and sequential decision-making tasks such as RL. The introductory section provides concise yet informative explanations of foundational concepts in quantum computing, quantum mechanics, and multilinear algebra, catering to attendees with varying levels of expertise. This foundational knowledge provided in the tutorial lays the groundwork for a deeper understanding of advanced topics and the hands-on coding examples will enable the attendees to apply these tools in their research works.

Tutorial: Introduction to Evolutionary Multi-Objective Optimization

Organizer(s): Hisao Ishibuchi, Lie Meng Pang

Date: June 30, 2025

Time: 16:00-17:30

Room: Alfieri

Abstract: The proposed topic of evolutionary multi-objective optimization (EMO) holds considerable importance and would be highly attractive to a wide range of audiences. In numerous real-world scenarios, problem-solving tasks often involve multiple conflicting objectives, making it crucial to develop effective strategies to address these challenges. For example, in neural architecture search (NAS), the goal is to automatically find the best architecture of a neural network that balances multiple objectives, such as maximizing accuracy while minimizing the model complexity. This is inherently a multi-objective problem because improving one objective (e.g., accuracy) often leads to a deterioration of another (e.g., model complexity). Traditional methods, such as the weighted sum approach that converts multiple objectives into a single one, have been frequently used. However, the choice of weights is subjective, which significantly impacts the solutions obtained. Additionally, multiple runs are often needed to obtain a set of trade-off solutions. In contrast, EMO algorithms have gained popularity for their effectiveness in solving multiobjective optimization problems. Due to their population-based search nature, EMO algorithms can obtain a diverse set of non-dominated solutions in a single run, which approximates the Pareto front effectively. Leveraging principles of natural selection and genetic evolution, these algorithms efficiently find solutions that balance trade-offs between conflicting objectives. This tutorial is designed for a diverse audience, ranging from individuals with basic optimization knowledge to those with no prior experience in the field. Having prior knowledge of optimization may enhance the learning experience, but it is not a requirement.

Tutorial: Machine Learning Evaluation: Implementing Responsible and Reliable AI

Organizer(s): Zois Boukouvalas, Nathalie Japkowicz

Date: June 30, 2025

Time: 16:00-17:30

Room: Marinetti

Abstract: The tutorial aims to provide attendees with a comprehensive understanding of machine learning evaluation and its critical role in contemporary AI applications. The tutorial begins by addressing the shortcomings of traditional machine learning evaluation methods in light of contemporary AI advancements. Graphical illustrations are used to highlight the intricacies involved in conducting comprehensive evaluations. It then explores various tools designed for assessing machine learning system performance across diverse scenarios, offering practical insights into their application. The tutorial emphasizes the importance of reliability in machine learning systems, discussing best practices for preparing them to perform robustly in real-world deployments through rigorous testing and thorough preparation. Lastly, ethical considerations in deploying machine learning systems are examined, with strategies outlined for integrating principles like explainability and fairness to mitigate biases and ensure equitable outcomes.

Tutorial: Evolutionary Quantum Neural Networks

Organizer(s): Giovanni Acampora, Autilia Vitiello, Angela Chiatto

Date: June 30, 2025

Time: 16:00-17:30

Room: Trilussa

Abstract: The topic of “Evolutionary quantum neural networks” addresses key challenges in machine learning by integrating two groundbreaking paradigms: quantum neural networks and evolutionary algorithms. Quantum Neural Networks (QNNs) exploit the computational advantages of quantum mechanics, such as superposition and entanglement, for potentially tackling problems intractable for classical systems. The current and forthcoming era of quantum computing, known as Noisy IntermediateScale Quantum (NISQ), is characterized by constraints such as the limited number of physical qubits available on quantum processors and the presence of noise affecting the reliability of extended sequences of quantum operations. In this scenario, QNNs stand out as one of the most popular classification approaches within the Quantum Machine Learning (QML) community in the NISQ era because QNN architectures require fewer layers, reducing susceptibility to decoherence, and they QNNs often combine quantum computations with classical processing, optimizing performance while minimizing quantum hardware requirements.

Technical Content

June 30, 2025

9:30 – 13:00

Tutorial: Diffusion Models and Flows

Room: Auditorium Leonardo da Vinci

Organizer(s): Chieh-Hsin Lai, Bac Nguyen Cong, Yuki Mitsufuji, Stefano Ermon

9:30 – 13:00

Tutorial: Information Bottleneck Methods in Deep Learning

Room: Loyola

Organizer(s): Jose C. Principe, Badong Chen, Shujian Yu

9:30 – 11:00

Tutorial: Evolution of Neural Networks

Room: Giotto

Organizer(s): Risto Miikkulainen

9:30 – 13:00

Tutorial: Understanding Memorization and Generalization in Transformer-based Large Language Models and beyond

Room: Caravaggio

Organizer(s): Fabio Massimo Zanzotto, Elena Sofia Ruzzetti

9:30 – 11:00

Tutorial: Towards Autonomous Machine Learning: Evolution of AutoML, Roles of Humans, and Related Topics

Room: Alfieri

Organizer(s): Bogdan Gabrys, Thanh Tung Khuat

9:30 – 13:00

Tutorial: Sustainable Deep Learning for Time-series: Reservoir Computing

Room: Belli

Organizer(s): Andrea Ceni, Peter Ford Dominey, Claudio Gallicchio, Xavier Hinaut, Gianluca Milano

9:30 – 11:00

Tutorial: Recently Advancement of Introducing Neural Diversity into Deep Learning

Room: Marinetti

Organizer(s): Feng-Lei Fan, Fei Wang, Jing-Xiao Liao, Xiaoge Zhang

9:30 – 11:00

Tutorial: AI-enabled mechanisms for 5G network management

Room: Trilussa

Organizer(s): Petia Georgieva

9:30 – 13:00

Workshop: Robust AI for Healthcare (RAH)

Room: Montale

Session Chair(s): Despina Kontos, Seyedmehdi Payabvash, Junhao (Hao) Wen, Anh Tuan Tran

09:30 Welcome and Introduction

09:45 Keynote (KEYNOTE)

Seyedmehdi Payabvash (Columbia University Irving Medical Center)

10:15 Pursuing the SOTA of your AI models? Lessons from Alzheimer's disease classification (KEYNOTE)

Junhao Wen (Columbia University Irving Medical Center)

10:30 Rad4XCNN: Bridging Deep Learning and Radiomics for Explainable and Accurate AI in Medical Image Analysis (KEYNOTE)

Francesco Prinzi (University of Palermo)

11:00 Fulcrum Rebalancing and Hybrid Classification for Multi-class Multi-labeled ECG

Ayan Mukherjee (Tata Consultancy Services), Varsha Sharma (Tata Consultancy Services), Anirban Dutta Choudhury (Tata Consultancy Services), Chirayata Bhattacharyya (Indian Institute of Science), Aniruddha Sinha (Tata Consultancy Services)

11:20 Quality and Robustness of Generative Watermarking on Biomedical Data

Liyue Fan (UNC Charlotte), Luca Bonomi (Vanderbilt University)

11:40 Beyond Accuracy: The Role of Calibration in Computational Pathology

João Nunes (INESC TEC), Diana Montezuma (IMP Diagnostics), Domingos Oliveira (IMP Diagnostics), Tania Pereira (INESC TEC), Inti Zlobec (University of Bern), Jaime Cardoso (INESC TEC)

12:00 Towards Resilient AI in healthcare (KEYNOTE)

Paolo Soda (Università Campus Bio-Medico di Roma)

9:30 – 13:00

Workshop: Green Federated Learning: Toward Sustainable AI for a Decentralized Future

Room: Leopardi

Session Chair(s): Dipanwita Thakur, Antonella Guzzo, Lalit Garg, Sushmita Ruj, Arindam Pal

09:30 Welcome and opening remarks

09:45 Federated Learning under Operational Constraints: A Study on Statistical and Device Heterogeneity (KEYNOTE)

11:00 Yuragi Learning: A Brain-Inspired Decision-Making Framework for Green AI Applications (SHORT PAPER)

Tatsuya Otoshi (Osaka University), Shin'ichi Arakawa (Osaka University), Tetsuya Shimokawa (Osaka University), Toshiyuki Kanoh (Osaka University), Masayuki Murata (Osaka University)

11:20 Sparse Self-Federated Learning for Energy Efficient Cooperative Intelligence in Society 5.0

Davide Domini (University of Bologna), Laura Ebran (Free University of Bozen), Gianluca Aguzzi (University of Bologna), Lucia Cavallaro (Radboud University), Amirhossein Douzandeh Zenoozi (Free University of Bozen), Antonio Liotta (Free University of Bozen), Mirko Viroli (University of Bologna)

11:50 Quantization in Energy-Efficient Federated Learning

Farwa Ikram (The university of Calabria), Dipanwita Thakur (The University of Calabria), Antonella Guzzo (The University of Calabria), Giancarlo Fortino (The University of Calabria)

12:20 Efficient Domain-Specific LLMs: Energy Profiling in Medical QA Tasks

Claudia I. Gonzalez (TECNM/Instituto Tecnológico de Tijuana), Cesar Torres (TECNM/Instituto Tecnológico de Tijuana), Mario Garcia (TECNM/Instituto Tecnológico de Tijuana), Juan Julián Merelo (Department of Computer Engineering, Automatics and Robotics, University of Granada)

12:50 Closing remarks

11:00 – 11:30

Coffee Break

Room: Pontifical Gregorian University Hall

11:30 – 13:00

Tutorial: Distributed Learning: Challenges, Security, and Regulatory Compliance

Room: Giotto

Organizer(s): Dipankar Dasgupta, Arunava Roy

11:30 – 13:00

Tutorial: Emerging Trends in Automated Design of Neural Network Architectures

Room: Alfieri

Organizer(s): Nelishia Pillay, Ganesh Kumar Venayagamoorthy

11:30 – 13:00

Tutorial: Continual Learning for Anomaly Detection

Room: Marinetti

Organizer(s): Roberto Corizzo, Kamil Faber

11:30 – 13:00

Tutorial: Explainable AI (XAI) for Computer Vision – A Review of Existing Methods and a New Method to Decode CNN models

Room: Trilussa

Organizer(s): Asim Roy

13:00 – 14:00

Lunch

Room: Pontifical Gregorian University Hall

14:00 – 15:30

Tutorial: Practical Guide to Training Flow-Based Generative Models

Room: Leonardo da Vinci

Organizer(s): Scott H. Hawley

14:00 – 17:30

Tutorial: Advances in Multimodal Models: Continual Learning and Trustworthiness

Room: Loyola

Organizer(s): Dianzhi Yu, Xinni Zhang, Guanzhong Chen, Zhuo Wang, Yukun Zhang, Zenglin Xu, Irwin King

June 30, 2025

14:00 – 17:30

Tutorial: Deep Learning for Graphs: an information propagation perspective

Room: Giotto

Organizer(s): Davide Bacciu

14:00 – 15:30

Tutorial: Large Language Models for AI Techniques Design: Exploring Challenges, Tools and Future Opportunities

Room: Caravaggio

Organizer(s): Michal Pluhacek, Roman Senkerik, Niki van Stein

14:00 – 15:30

Tutorial: Collaborative Learning and Optimization

Room: Alfieri

Organizer(s): Kai Qin, Nelishia Pillay

14:00 – 17:30

Tutorial: All You Need to Know About Image Quality and Image Similarity Metrics

Room: Belli

Organizer(s): Riza Veliloglu, Robin Chan, Petra Bevandić, Barbara Hammer

14:00 – 15:30

Tutorial: Hands-on generative AI for image generation on Microcontrollers with Neural Processing Unit

Room: Marinetti

Organizer(s): Alberto Ancilotto, Elisabetta Farella, Danilo Pau

14:00 – 15:30

Tutorial: Introduction to Quantum Machine Learning and Quantum Architecture Search

Room: Trilussa

Organizer(s): Jun Qi, Ying-Jer Kao, Samuel Yen-Chi Chen

14:00 – 17:30

Workshop: New Trends for Artificial Intelligence in Medicine (TAIM): providing clinicians the best Deep Learning Architecture

Room: Montale

Session Chair(s): Francesco Prinzi, Giovanna Maria Dimitri, Salvatore Vitabile, Pietro Lió

14:00 Welcome from the Organizers

14:05 Abstraction in neural networks and biomedical foundation models as novel paradigms for AI in life sciences (KEYNOTE)

Nicola Toschi (University of Rome Tor Vergata)

14:45 Improving electrocardiogram signal classification using the FlexPoints algorithm and convolutional long short-term memory networks

Daniel Bulanda (AGH University of Science and Technology), Janusz Starzyk (Ohio University), Małgorzata Bulanda (Jagiellonian University Medical College), Adrian Horzyk (AGH University of Krakow)

15:00 Multimodal Doctor-in-the-Loop: A Clinically-Guided Explainable Framework for Predicting Pathological Response in Non-Small Cell Lung Cancer

Alice Natalina Caragliano (Università Campus Bio-Medico di Roma), Claudia Tacconi (Università Campus Bio-Medico di Roma), Carlo Greco (Università Campus Bio-Medico di Roma), Lorenzo Nibid (Università Campus Bio-Medico di Roma), Edy Ippolito (Università Campus Bio-Medico di Roma), Michele Fiore (Università Campus Bio-Medico di Roma), Giuseppe Perrone (Università Campus Bio-Medico di Roma), Sara Ramella (Università Campus Bio-Medico di Roma), Paolo Soda (Università Campus Bio-Medico di Roma), Valerio Guarrasi (Università Campus Bio-Medico di Roma)

15:15 Timing Is Everything: Finding the Optimal Fusion Points in Multimodal Medical Imaging

Valerio Guarrasi (Università Campus Bio-Medico di Roma), Klara Mogensen (Umeå University), Sara Tassinari (Università Campus Bio-Medico di Roma), Sara Qvarlander (Umeå University), Paolo Soda (Università Campus Bio-Medico di Roma)

15:30 Tea Break

16:00 A Local-to-Global Graph Neural Network for Major Depressive Disorder Classification from rs-fMRI

Leoni-Stavroula Christakou (University of Padova), Tiziana Currieri (University of Palermo), Francesco Prinzi (University of Palermo), DIRECT Consortium (DIRECT Consortium), Salvatore Vitabile (University of Palermo)

16:15 Integrating Background Knowledge in Medical Semantic Segmentation Models with Logic Tensor Network

Luca Bergamin (University of Padua), Giovanna Maria Dimitri (University of Siena), Fabio Aiolfi (University of Padua)

16:30 MicarVLMoE: A Modern Gated Cross-Aligned Vision-Language Mixture of Experts Model for Medical Image Captioning and Report Generation

Amaan Izhar (Universiti Malaya), Nurul Japar (Universiti Malaya), Norisma Idris (Universiti Malaya), Ting Dang (University of Melbourne)

16:45 Designing LLM-powered agents to manage clinical text reports in medical institutions

Gianluca Carlini (IRCCS Istituto delle Scienze Neurologiche di Bologna), Francesco Durazzi (Department of Physics and Astronomy, University of Bologna), Daniel Remondini (Department of Physics and Astronomy, University of Bologna), Raffaele Lodi (IRCCS Istituto delle Scienze Neurologiche di Bologna)

17:00 SP-Net: Semantic Distillation and Pixel Refine Network for Surgical Triplet Recognition (SHORT PAPER)

Aoying Wang (Chinese Academy of Sciences Shenzhen Institute of Advanced Technology), Yunhao Li (Chinese Academy of Sciences Shenzhen Institute of Advanced Technology), Yan Ang (Chinese Academy of Sciences Shenzhen Institute of Advanced Technology), Jinpeng Li (South China University of Technology), Ying Hu (Chinese Academy of Sciences Shenzhen Institute of Advanced Technology), Qiong Wang (Chinese Academy of Sciences Shenzhen Institute of Advanced Technology)

17:15 Cross Patient Seizure Onset Zone Classification by Patient Weight (SHORT PAPER)

Xuyang Zhao (Institute of Physical and Chemical Research), Hidenori Sugano (Juntendo University), Toshihisa Tanaka (Tokyo University of Agriculture and Technology)

17:30 Closing remarks

14:00 – 17:30

Workshop: Sustainable AI for NLP (SusAI)

Room: Leopardi

Session Chair(s): Massimo Esposito, Francesco Gargiulo, Aniello Minutolo, Marco Pota

14:00 A White-Box Knowledge Distillation Approach for Task-Optimized Large Language Model Compression

Anusha Jayasimhan (Sri Sivasubramaniya Nadar College of Engineering), Subhankar S (Sri Sivasubramaniya Nadar College of Engineering), Manickam Palaniappan (Sri Sivasubramaniya Nadar College of Engineering)

14:30 The Energy-Efficient Hierarchical Neural Network with Fast FPGA-Based Incremental Learning

Mohammad Saleh Vahdatpour (Georgia State University), Huaiyuan Chu (Georgia State University), Yanqing Zhang (Georgia State University)

15:00 Latent-Space profiling of Translation Variants with Unsupervised Neural Embeddings

Soo Yong Kim (Seoul National University)

15:30 Tea break

16:00 Resilient and Sustainable Multimodal AI in Healthcare: From Generative Imputation to Missing-Aware Learning (KEYNOTE)

(Valerio Guarrasi, Università Campus Bio-Medico di Roma)

16:30 Efficient training at edge (KEYNOTE)

(Lorenzo Valerio, Istituto di Informatica e Telematica - CNR)

17:00 Can Larger Models Save Lives? Energy vs. Accuracy in Medical NLP (KEYNOTE)

(Rolando Roller, German Research Center for Artificial Intelligence (DFKI))

15:30 – 16:00

Tea Break

Room: Pontifical Gregorian University Hall

16:00 – 17:30

Tutorial: Introduction to Evolutionary Multi-Objective Optimization

Room: Alfieri

Organizer(s): Hisao Ishibuchi, Lie Meng Pang

June 30, 2025

16:00 – 17:30

Tutorial: Machine Learning Evaluation: Implementing Responsible and Reliable AI

Room: Marinetti

Organizer(s): Zois Boukouvalas, Nathalie Japkowicz

16:00 – 17:30

Tutorial: Evolutionary Quantum Neural Networks

Room: Trilussa

Organizer(s): Giovanni Acampora, Autilia Vitiello, Angela Chiatto

18:00 – 20:00

Welcome Cocktail

Room: Pontifical Gregorian University Hall

July 1, 2025

9:00 – 9:30

Opening Ceremony

Room: Quirino Theater

9:30 – 10:30

Keynote talk by Francesca Rossi

Room: Quirino Theater

AI Ethics and safety in the era of generative AI

Francesca Rossi

IBM Research

AI is going to bring huge benefits in terms of scientific progress, human wellbeing, economic value, and the possibility of finding solutions to major social and environmental problems. Supported by AI, we will be able to make more grounded decisions and to focus on the main values and goals of a decision process rather than on routine and repetitive tasks. However, such a powerful technology also raises some concerns, related for example to the black-box nature of some AI approaches, the possible discriminatory decisions that AI algorithms may recommend, the spread of misinformation, data privacy/handling issues, and the impact on jobs and societal structures. As AI capabilities advance, from symbolic AI to machine learning to generative AI to agentic AI, new and amplified ethics issues arise and need to be identified and addressed.

These concerns are among the obstacles that hold AI back or that cause worry for current AI users, adopters, and policy makers. Without answers to these questions, many will not trust AI, and therefore will not fully adopt it nor get its positive impact.

In this talk I will present the main issues around AI ethics and safety, some of the proposed technical and non-technical solutions, as well as practical actions and regulations being defined for AI development, deployment, and use.

10:30 – 11:00

Coffee Break

Room: Pontifical Gregorian University Hall

10:00 – 18:30

Workshop: Quantum Computing and Quantum Neural Networks – QCNN

Room: Leopardi

Session Chair(s): Massimo Panella, Stefano Giagu

10:00 Welcome greetings

10:10 The Italian research on quantum computing and the PNRR achievements (KEYNOTE)

Fabio Sciarrino (Sapienza University of Rome)

10:30 Coffee break

11:00 The interplay between quantum computing and artificial intelligence (KEYNOTE)

Samuel Yen-Chi Chen (Wells Fargo Bank, USA)

11:30 The quest for use-cases and applications of Quantum machine learning (KEYNOTE)

Bertrand Le Saux (AI for Earth, France)

12:00 Quantum computing and applications at DOE's SQMS Quantum Research Center (KEYNOTE)

Silvia Zorzetti (Fermilab, USA)

12:30 Physics-aware Quantum Machine Learning (KEYNOTE)

Oleksandr Kyriienko (University of Sheffield, U.K.)

13:00 Lunch

14:00 Quantum Technology and High energy physics: a mutual interaction (KEYNOTE)

Michele Grossi (CERN, Switzerland)

14:45 Pauli Propagation: a classical simulation algorithm to compete with and enhance quantum circuits (KEYNOTE)

Zoë Holmes (EPFL, Switzerland)

15:30 Hybrid and hardware-oriented approaches for quantum diffusion models

Andrea Cacioppo (Sapienza University of Rome), Lorenzo Colantonio (Sapienza University of Rome), Simone Bordoni (Sapienza University of Rome), Stefano Giagu (Sapienza University of Rome)

15:45 Classical to Quantum Knowledge Distillation: A Study on the Impact of Hybridization

Simone Piperno (University of Rome Sapienza), Giacomo Vittori (University of Rome Sapienza), David Windridge (Middlesex University), Antonello Rosato (University of Rome Sapienza), Massimo Panella (University of Rome Sapienza)

16:00 Variational Inference for Quantum HyperNetworks

Luca Nepote (Eurecom), Alix Lhéritier (Amadeus), Nicolas Bondoux (Amadeus), Marios Kountouris (Eurecom), Maurizio Filippone (Kaust)

16:15 A Study on Quantum Reservoir Recurrent Models for Time-Constrained Volatile Sequence Forecasting

Antonello Rosato (Sapienza University of Rome), Andrea Ceschini (Sapienza University of Rome), Federico Succetti (Sapienza University of Rome), Samuel Yen-Chi Chen (Wells Fargo Bank), Massimo Panella (Sapienza University of Rome)

16:30 Tea break

17:00 Quantum machine learning beyond parametrized quantum circuits: Quantum Gaussian Processes (KEYNOTE)

Marco Cerezo (Los Alamos National Laboratory, USA)

18:00 Closing remarks

11:00 – 12:48

Special Session on AI, Law and Regulation

Room: Leonardo da Vinci

Session Chair: Amanda Horzyk, Asim Roy

11:00 Self-Refining Language Models to Assess Insurance Claims

Rayno Mostert (University of Leeds), Abdulrahman Altahhan (University of Leeds)

11:18 When Fundamental Rights Meet Artificial Intelligence: An Extended Framework for Impact Assessment in the Age of Generative AI

Andrea Cosentini (Data & AI Office, Intesa Sanpaolo SpA), Oreste Pollicino (Dept. of Law, Bocconi University), Giovanni De Gregorio (Católica Global School of Law, Universidade Católica Portuguesa, Lisbona), Andrea Ermellino (Data & AI Office, Intesa Sanpaolo SpA, Milano), Dario Fontanella (International Public Affairs, Intesa Sanpaolo SpA, Milano), Nicole Inverardi (Intesa Sanpaolo SpA), Federica Paolucci (Angelo Sraffa Department of Legal Studies, Bocconi University, Milano), Ilaria Penco (Data & AI Office, Intesa Sanpaolo SpA, Milano), Daniele Regoli (Data & AI Office, Intesa Sanpaolo SpA, Milano), Silvia Tessaro Trapani (Data & AI Office, Intesa Sanpaolo SpA, Milano)

11:36 (In)adequate Data Protection and Algorithmic Predictive Analysis: An Unresolved Battle

Amanda Horzyk (University of Edinburgh)

11:54 AI Governance: Ethics of Trustworthy AI in Healthcare

Ida Skubis (Silesian University of Technology / Rennes School of Business)

12:12 AI Law and Regulation in Healthcare in Africa

Martha Iyambo (MK Legal Consultancy), Mbanangwa Kwilasya (MK Legal Consultancy), Uyavhuya Matibe (MK Legal Consultancy)

12:30 AI Act: self-assessment and liability (SHORT PAPER)

Paolo Iannuccelli (Enel)

11:00 – 12:30

Generative Models I

Room: Michelangelo

Session Chair(s): Petra Bevandic

11:00 DistillNSF: Advancing Noisy Slot-Filling Using LLMs for Knowledge Distillation Under Generative Framework

Fangwei Xue (Beijing University of Posts and Telecommunications), Tingfeng Hui (Beijing University of Posts and Telecommunications), Gongque Zhuoma (Beijing University of Posts and Telecommunications), Weiran Xu (Beijing University of Posts and Telecommunications)

11:18 ADP: Answer-oriented Distinction Perception for End-to-end Clarification Question Generation

Yuchong Chen (Soochow University), Yifan Fan (School of Computer Science and Technology, Soochow University, Suzhou, China), Yanling Li (School of Computer Science and Technology, Soochow University, Suzhou, China), Chuyao Ding (School of Computer Science and Technology, Soochow University, Suzhou, China), Yu Hong (School of Computer Science and Technology, Soochow University, Suzhou, China)

11:36 DiffuER: Auxiliary Regularized Diffusion Model for Text Generation with Semantic Consistency

Miao Gao (Southeast University), Chuanqi Shi (Southeast University), Baixuan Li (Southeast University), Yikemaiti Sataer (Southeast University), Youyong Kong (Southeast University)

11:54 SH-RAG: A Syntax-Based Hierarchical Retrieval-Augmented Generation Framework for Handling Syntactic Complexity in Literary Machine Translation

Haojie Lu (Nanjing University of Information Science & Technology), Zhenjie Zhao (Nanjing University of Information Science & Technology)

12:12 PREF: A Personalized Retrieval-Evolution Framework for Enhancing Large Language Models on General Text Tasks

Shaoqi Song (Northwestern Polytechnical University), Lianwei Wu (Northwestern Polytechnical University), Linyong Wang (Northwestern Polytechnical University)

11:00 – 12:30

Special Session on Randomization Based Deep and Shallow Learning Methods and Applications to Healthcare Domain

Room: Raffaello

Session Chair: Ponnuthurai Suganthan, M Tanveer

11:00 Para-X: Graph-based Facial Paralysis Detection using Structural Deformations of Facial Expression.

Nandani Sharma (IIT Mandi), Kajal Singh (IIT Mandi), Dinesh Singh (IIT Mandi)

11:18 RVFL-X: A Novel Randomized Network Based on Complex Transformed Real-Valued Tabular Datasets

M. Sajid (IIT Indore), Mushir Akhtar (IIT Indore), Abdul Quadir (IIT Indore), M Tanveer (IIT Indore)

11:36 I1 Regularization Based Random Vector Functional Link Network for Alzheimer's Disease Diagnosis

Dr. Tripti Goel (NIT Silchar), Raveendra Pilli (NIT Silchar), Shradha Verma (NIT Silchar), M Tanveer (IIT Indore), R. Murugan (NIT Silchar), P.N. Suganthan (KINDI Center for Computing Research, Qatar University, Doha)

11:54 When Explainability Meets Vision AI: Analyzing CNNs, Transformers, and State-Space Models in Healthcare

Utkarsh Varman (Indian Institute of Technology Dharwad), Vandana Bharti (Indian Institute of Technology Dharwad), Anshul Sharma (Indian Institute of Information Technology & Management Gwalior (IIITM Gwalior)), Abhinav Kumar (Indian Institute of Technology Ropar), Sanjay Kumar Singh (IIT (BHU) Varanasi)

11:00 – 12:30

Special Session on Deep Learning in Computational Biology and Biomedicine: from Biomedical Data to Drug Discovery

Room: Tiziano

Session Chair: Simone Riva

11:00 Attention Ensemble based Whole Heart and Great Vessel Segmentation for Surgical Planning of Total Anomalous Pulmonary Venous Connections

Erlei Zhang (Northwest A&F University), Weihao Chen (Northwest A&F University), Jiahao Feng (The First Affiliated Hospital of Xi'an Jiaotong University), Jinglei Li (Guangdong Provincial People's Hospital), Xiaowei Xu (Guangdong Provincial People's Hospital)

11:18 CoMPO-GPT: Cross-Attention Conditioning for Multi-target Molecular Design in Generative Models

Arthur Cerveira (Universidade Federal de Pelotas), Frederico Kremer (Universidade Federal de Pelotas), Gabriel Gomes (Universidade Federal de Pelotas), Ulisses Corrêa (Universidade Federal de Pelotas)

11:36 Modelling constant and cell-type specific CTCF sites by using Convolutional Neural Networks

Edward Sanders (University of Oxford), Simone Riva (University of Oxford), Emily Georgiades (University of Oxford), Matthew Baxter (University of Oxford), Jim Hughes (University of Oxford)

11:54 Geometric Diffusion Model Based on Stochastic Differential Equations for 3D Molecular Generation

Xinyi Guan (Xiamen University), Song He (Institute of Health Service and Transfusion Medicine), Xiaochen Bo (Institute of Health Service and Transfusion Medicine), Zhongnan Zhang (Xiamen University)

11:00 – 12:30

Special Session on Machine Learning for Optimisation

Room: Botticelli

Session Chair(s): Nelishia Pillay, Jorge Cruz-Duarte

11:00 Designing Competitive Ensembles for the Container Relocation Problem

Marko Đurasević (University of Zagreb, Faculty of Electrical Engineering and Computing), Mateja Đumić (School of Applied Mathematics and Informatics J. J. Strossmayer University of Osijek), Francisco Javier Gil Gala (University of Oviedo, Department of Computing)

11:18 Combinatorial U-Curve Optimization for Multi-Task Learning: A Task Selection Approach

Giovana Bonás (Unicamp), Marcelo Reis (Unicamp), Marcos Raimundo (Unicamp)

11:36 Using Momentum Moves as Training Data for Neural Network-Based Offspring Generation in Evolutionary Multi-Objective Optimization

Longcan Chen (City University of Hong Kong), Lie Meng Pang (Southern University of Science and Technology), Qingfu Zhang (City University of Hong Kong), Hisao Ishibuchi (Southern University of Science and Technology)

11:54 Deep Learning and Low-Discrepancy Sampling for Efficient Approximate Dynamic Programming

Cristiano Cervellera (National Research Council), Danilo Macciò (National Research Council)

12:12 An Inverse Model-based Solution Generation Method for Evolutionary Multi-objective Optimization Algorithms

Tianye Shu (Southern University of Science and Technology), Hisao Ishibuchi (Southern University of Science and Technology), Lie Meng Pang (Southern University of Science and Technology)

11:00 – 12:30

LLMs in Motion: Transformative Advances in LLMs for Autonomous Navigation and Decision-Making at the Edge

Room: Alfieri

Session Chair(s): Manuel Roeder

11:00 Decision-Making Algorithm Based on Multiple Context-Aware Agents for Human-Robot Interaction

Elio Triana Rodriguez (Universidade Federal do Espirito Santo), Guilherme Zanetti (Universidade Federal do Espirito Santo), Ricardo Mello (Universidade Federal do Espirito Santo), Mario Jimenez (Universidad el Rosario), Thiago Oliveira-Santos (Universidade Federal do Espirito Santo), Anselmo Frizera (Universidade Federal do Espirito Santo)

11:18 ROVER: Autonomous Open-Vocabulary Object Searching in Unexplored Environments Using VLM-Driven Scene Understanding

Abdul Basit (New York University Abu Dhabi), Niraj Pudasaini (New York University Abu Dhabi), Muhammad Shafique (New York University Abu Dhabi)

11:54 LLM-based Interactive Imitation Learning for Robotic Manipulation

Jonas Werner (University Hamburg), Kun Chu (University of Hamburg), Cornelius Weber (University of Hamburg), Stefan Wermter (University of Hamburg)

12:12 Joint Action Language Modelling for Transparent Policy Execution

Theodor Wulff (The University of Manchester), Rahul Singh Maharjan (The University of Manchester), Xinyun Chi (The University of Manchester), Angelo Cangelosi (The University of Manchester)

12:30 Adaptive Graph Structure Inference for Learning Multivariate Point Processes using Spiking Neural Networks

Biswadeep Chakraborty (Georgia Institute of Technology), Hemant Kumawat (Georgia Institute of Technology), Beomseok Kang (Georgia Institute of Technology), Saibal Mukhopadhyay (Georgia Institute of Technology)

11:00 – 12:30

Neural Networks for Biomedical engineering

Room: Marinetti

Session Chair(s): Nina Moutonnet

11:00 Multi-stream Complementary Interchange Consistency for Semi-Supervised Medical Image Segmentation

Yufei Gao (Zhengzhou University), Hua feng (Zhengzhou University), Yucheng Shi (Zhengzhou University), Lei Shi (Zhengzhou University), Yameng Zhang (People's Hospital of Zhengzhou University)

11:18 Multitask Stress Detection on Low-frequency Physiological Signals

yiming rong (Peking University), Jinshi Cui (Peking University), Li Wang (Peking University), Chen Zhang (Peking University), Guosong Gao (Xiaomi Wearable Department)

11:36 Generating Radiograph Reports with Phrase-Level Template and Dynamic Templates Bank Network

Haoquan Chen (Beijing Institute of Technology), Bin Yan (Beijing Institute of Technology), Hongyu Shen (Beijing Institute of Technology), Mingtao Pei (Beijing Institute of Technology)

11:54 MCC-Net: Mamba based Consistency Constraints Network for Semi-Supervised 3D Medical Image Segmentation

yufei gao (School of Cyber Science and Engineering,Zhengzhou University,SongShan Laboratory), bingning liu (School of Cyber Science and Engineering,Zhengzhou University), guohua zhao (Department of Magnetic Resonance Imaging, The First Affiliated Hospital of Zhengzhou University), yameng zhang (Department of Pathology, Henan Provincial People's Hospital,People's Hospital of Zhengzhou University), lei shi (School of Cyber Science and Engineering, Zhengzhou University), mengyang he (School of Cyber Science and Engineering, Zhengzhou University)

12:12 Augmentation of EEG and ECG Time Series for Machine Learning Applications: Integrating Changepoint Detection into the iAAFT Surrogates

Nina Moutonnet (Imperial College London), Danilo Mandic (Imperial College London), Gregory Scott (Imperial College London)

11:00 – 12:00

Meeting: Industry Relations

Room: Belli

13:00 – 14:00

Lunch

Room: Pontifical Gregorian University Hall

13:00 – 15:00

Meeting: AI Ethics Committee

Room: Belli

13:00 – 15:00

Meeting: TCDS - Editorial Board

Room: Trilussa

14:00 – 15:00

Keynote talk by Pierre Baldi

Room: Leonardo da Vinci

The AI-Driven Hospital of the Future and Beyond

Pierre Baldi

University of California

AI today can pass the Turing test and is in the process of transforming science, technology, society, humans, and beyond. Surprisingly modern AI is built out of two very simple and old ideas, rebranded as deep learning: neural networks and gradient descent learning. I will describe several applications of AI to problems in biomedicine developed in my laboratory, from the molecular level to the patient level using omic data, imaging data, clinical data, and beyond.

Examples include the analysis of circadian rhythms in gene expression data, the identification of polyps in colonoscopies, and the prediction of post-operative outcomes. I will discuss the opportunities and challenges for developing, integrating, and deploying AI in the first AI-driven hospitals of the future and present two frameworks for addressing some of the most pressing societal issues related to AI research.

14:00 – 18:30

Workshop: AI Policy and Regulation

Room: Loyola

Session Chair(s): Amanda Horzyk, Nicola Fabiano, Asim Roy, Maja Nisevic

14:10 Keynote by MEP Brando Benifei, co-rapporteur of the AI Act, on 'Navigating the implementation of the AI Act'

15:00 Panel Discussion 1: Impact of European and International AI Policy, Regulation on Neural Networks

Alexander Kriebitz, Karine Caunes, Flavia Massucci, Denis Naughton, moderated by Amanda Horzyk and Asim Roy

16:20 Tea break

16:40 Greetings and opening by the Undersecretary of Foreign Affairs (*TBC*)

17:10 Panel Discussion 2: Responding to Change: Implementation, standardization and certification for Research and Development in AI Domenico Squillace

Valentina Grazia Sapuppo, Massimo Ruffolo, moderated by Nicola Fabiano

18:30 Closing by Workshop Organizers

15:00 – 16:30

Position Papers I

Room: Leonardo da Vinci

Session Chair(s): Pranab K. Muhuri

15:00 *Digital intelligent beings*

Włodzisław Duch (UMK)

15:18 *Position Paper: Beyond Calibration - Leveraging Controlled Self-Deception for Robust Neural Network Learning*

Taniya Seth (South Asian University), Pranab K. Muhuri (South Asian University)

15:36 *Position Paper: From Data Thirst to Aesthetic Hunger: The Pivotal Role of Artistic Exploration in Machine/AI Creativity*

Chun-yien Chang (National Yang Ming Chiao Tung University), Ying-ping Chen (National Yang Ming Chiao Tung University)

15:54 *Position Paper: Collectionless Artificial Intelligence*

Marco Gori (University of Siena), Stefano Melacci (University of Siena)

16:12 *Position Paper: A new Perspective on Online Continual Learning*

Nicolò Navarin (Università di Padova), Alessandro Betti (IMT Lucca), Marco Gori (University of Siena)

15:00 – 16:30

Special Session on Advancing Structural Engineering with Neural Networks and AI: Design, Assessment, and Optimization

Room: Michelangelo

Session Chair(s): Marco Martino Rosso

15:00 *Post-earthquake Damage Assessment of Buildings Exploiting Data Fusion*

Simone Saquella (Sapienza University of Rome), Michele Scarpiniti (Sapienza University of Rome), Wangyi Pu (Sapienza University of Rome), Livio Pedone (Sapienza University of Rome), Giulia Angelucci (Sapienza University of Rome), Michele Matteoni (Sapienza University of Rome), Mattia Francioli (Sapienza University of Rome), Stefano Pampanin (Sapienza University of Rome)

15:18 *Improving Concrete Mix Design Predictions with Machine Learning Algorithms*

Jonathan Melchiorre (Politecnico di Torino), Costanza Anerdi (Politecnico di Torino), Vincenzo Randazzo (Politecnico di Torino), Giuseppe Carlo Marano (Politecnico di Torino)

15:36 *Enhancing Computational Design by integrating Visual Programming Language with Natural Language Processing Models*

Laura Sardone (Politecnico di Torino)

15:54 Transfer learning strategies comparisons of pre-trained neural model for tunnel flaws detection

Marco Rosso (Politecnico di Torino), Salvatore Aiello (Politecnico di Torino), Giulia Marasco (Lehigh University), Giansalvo Cirrincione (Univ. of Picardie Jules Verne), Bernardino Chiaia (Politecnico di Torino), Giuseppe Marano (Politecnico di Torino)

16:12 A Low-Noise Web Content Extraction Framework for LLM Data Pipelines: Integrating XGBoost Classification and Reverse Coloring

Bin Wang (Peking University), Ziyang Zhang (University of Electronic Science and Technology of China), Lexi Chen (University of Electronic Science and Technology of China), HUI Li (Peking University)

15:00 – 16:30

Special Session on Reservoir computing in the deep learning era: theory, models, applications, and hardware implementations

Room: Raffaello

Session Chair(s): Claudio Gallicchio, Andrea Ceni

15:00 Federated Learning with Reservoir State Analysis for Time Series Anomaly Detection

Keigo Nogami (Nagoya Institute of Technology), Hiroto Tamura (Graduate Schools for Law and Politics the University of Tokyo, International Research Center for Neurointelligence), Gouhei Tanaka (Nagoya Institute of Technology, International Research Center for Neurointelligence)

15:18 Reservoir Computing in Real-World Environments: Optimizing the Cost of Offline and Online Training

Matteo Mendula (Centre Tecnologic de Telecomunicacion Catalunya), Marco Miozzo (Centre Tecnologic de Telecomunicacion Catalunya), Paolo Dini (Centre Tecnologic de Telecomunicacion Catalunya)

15:36 Online classification of multivariate time series data through Gaussian Reservoir State Analysis (GRSA)

Hiroto Tamura (The University of Tokyo), Kantaro Fujiwara (The University of Tokyo), Kazuyuki Aihara (The University of Tokyo), Gouhei Tanaka (Nagoya Institute of Technology, The University of Tokyo)

15:54 Dynamic Reservoir Computing with Physical Neuromorphic Networks

Yinhao Xu (University of Sydney), Georg Gottwald (University of Sydney), Zdenka Kuncic (University of Sydney)

16:12 Residual Reservoir Memory Networks

Matteo Pinna (University of Pisa), Andrea Ceni (University of Pisa), Claudio Gallicchio (University of Pisa)

15:00 – 16:30

Neural Networks for Image and video processing I

Room: Tiziano

Session Chair(s): Riza Velioglu

15:00 PTRS: Parallax-Tolerant Robust Omnidirectional Deep Image Stitching

Zihao Zhao (Zhengzhou University), Yun Tie (Zhengzhou University), Dalong Zhang (Zhengzhou University), Lei Shi (Zhengzhou University), Chenliang Ma (Zhengzhou University)

15:18 Adaptive Semantic Anchoring for Enhanced Generalized Few-Shot Semantic Segmentation

xinrao chen (Chongqing University), Taiping Zhang (Chongqing University), xinyu chen (Chongqing Technology and Business University), jiaxuan Li (Chongqing University)

15:36 SDFeat: Learning Sparse Keypoints and Descriptors from Dense Feature

Jiajun Wu (State Key Laboratory of Multimodal Artificial Intelligence Systems, Institute of Automation, Chinese Academy of Sciences), Ying Wang (State Key Laboratory of Multimodal Artificial Intelligence Systems, Institute of Automation, Chinese Academy of Sciences), Linsu Shi (China Tower Corporation Limited), Jiazhong Yu (China Tower Corporation Limited), Qinghua Liang (China Tower Corporation Limited), Fei Li (China Tower Corporation Limited), Shiming Xiang (State Key Laboratory of Multimodal Artificial Intelligence Systems, Institute of Automation, Chinese Academy of Sciences, School of Artificial Intelligence, University of Chinese Academy of Sciences)

15:54 ECAM: A Contrastive Learning Approach to Avoid Environmental Collision in Trajectory Forecasting

Giacomo Rosin (Ca' Foscari University of Venice), Muhammad Rameez Rahman (Ca' Foscari University of Venice), Sebastiano Vascon (Ca' Foscari University of Venice & European Centre for Living Technology)

16:12 Tagging Generatively: Dynamic and Open-Ended Image Tagging with MLLM

Hongshuo Chen (University of Chinese Academy of Sciences), Yixuan Cao (Institute of Computing Technology), Shiwei Ye (University of Chinese Academy of Sciences), Ping Luo (Institute of Computing Technology)

15:00 – 16:30

Special Session on Towards Robust Federated Learning: Addressing Data and Device Heterogeneity

Room: Botticelli

Session Chair(s): Francesco Piccialli, Fabio Giampaolo

15:00 Federated Meta Learning for Cross-Domain Personalization with Partial Model Initialization

Ayshika Kapoor (IIT Roorkee), Dheeraj Kumar (IIT Roorkee)

15:18 Driving Cooperation in Federated Learning via Evolutionary Game Theory

Manuel Röder (Technical University of Applied Sciences Würzburg-Schweinfurt), Fabian Geiger (University of Würzburg), Frank-Michael Schleif (Technical University of Applied Sciences Würzburg-Schweinfurt)

15:36 HEXA: Heterogeneity-aware Exact Aggregation for Efficient Fine-Tuning in Federated Learning

Marco Garofalo (University of Pisa), Massimo Villari (University of Messina), Fakhri Karray (Mohamed Bin Zayed University of Artificial Intelligence)

15:54 Personalized federated learning for sedentary behavior classification with heterogeneous feature distributions under adversarial threats

Pedro Barros (Federated University of Minas Gerais), Túlio Polido (Federated University of Minas Gerais), Judy Guevara (State University of Campinas), Leandro Villas (State University of Campinas), Daniel Guidoni (Federal University of Ouro Preto), Nelson Fonseca (State University of Campinas), Heitor Filho (Federal University of Minas Gerais)

16:12 Zero-shot Decentralized Federated Learning

Alessio Masano (Università degli studi di Catania), Matteo Pennisi (Università degli studi di Catania), Federica Proietto Salantri (Università degli studi di Catania), Concetto Spampinato (Università degli studi di Catania), Giovanni Bellitto (Università degli studi di Catania)

15:00 – 16:30

Manufacturing and Industrial AI Applications

Room: Alfieri

Session Chair(s): Davide Rigoni

15:00 An Optimization based on Cyclic Check Network for the Process Simulation of Polyacrylonitrile

Xun Cai (Shandong University), Siwei Xue (Shandong University), Yanbo Gao (Shandong University), Tianyou Wang (Shandong University), Bo Zhu (Shandong University), Jianguo Lv (Shandong University), Kin-Tak LAU (Technological and Higher Education Institute of HongKong)

15:18 Data-Driven Modeling and Closed-Loop Control of Bead Geometry in Wire Arc Additive Manufacturing

Marcel Mendes (Federal University, Rio de Janeiro), Igor Novais (Federal University, Rio de Janeiro), Fernando Lizarralde (Federal University, Rio de Janeiro)

15:36 Industrial Feasibility of PEFTPYCODER: A Parameter-Efficient Fine-Tuned Model for In-House Code Assistance

Adnan Riaz (Department of Computer Science and Engineering, University of Bologna), Moreno Marzolla (Department of Computer Science and Engineering, University of Bologna), Davide Rossi (Department of Computer Science and Engineering, University of Bologna), Stefano Sinigardi (COESIA S.p.A., Bologna)

15:54 Robust Few-Shot Semantic Segmentation for Blurred and Occluded Objects in Construction Environments

Maghsood Salimi (Mälardalen University), Mohammad Loni (Mälardalen University), Antonio Cicchetti (Mälardalen University), Marjan Sirjani (Mälardalen University)

16:12 A Deep Learning Approach to Shell and Tube Heat Exchangers Customization

Davide Rigoni (University of Padova), Matteo Mirafiori (terraXcube, Eurac Research, Via Ipazia 2, Bolzano 39100, Italy), Andrea Padovan (Onda S.p.A.), Giuseppe Censi (Onda S.p.A.), Alessandro Sperduti (University of Padova)

15:00 – 16:30

Computational Neuroscience I

Room: Marinetti

Session Chair(s): Thomas Trappenberg

15:00 Uncovering the EEG Temporal Representation of Low-dimensional Object Properties

Jiahua Tang (Harbin Institute of Technology, Weihai), Song Wang (Southern University of Science and Technology), Jiachen Zou (Southern University of Science and Technology), Chen Wei (University of Birmingham), Quanying Liu (Southern University of Science and Technology)

15:18 Hierarchical decomposition of calcium imaging into multi-level ensembles using neural matrix factorization

Tanishk Tanishk (Indian Institute of Technology Delhi), Pablo Vergara (University of Tsukuba), Yuteng Wang (University of Tsukuba), Masanori Sakaguchi (University of Tsukuba), Taro Tezuka (University of Tsukuba)

15:36 Source-free Few-shot Segmentation for Rarer Brain Tumors

Shenghui Yan (University of New South Wales), Sidong Liu (Macquarie University), Antonio Di Leva (Macquarie University), Maurice Pagnucco (University of New South Wales), Yang Song (University of New South Wales)

15:54 BRAVE: Brain-Controlled Prosthetic Arm with Voice Integration and Embodied Learning for Enhanced Mobility

Abdul Basit (New York University Abu Dhabi), Maha Nawaz (New York University Abu Dhabi), Muhammad Shafique (New York University Abu Dhabi)

16:12 Mapping EEG Sensor Networks: Persistent Topology-Driven Learning for Affective States Recognition

Kumar Gaurav (IIT Roorkee), Neha Sharma (IIT Roorkee), Jaykumar Landge (IIT Roorkee), THARUN KUMAR REDDY BOLLU (IIT Roorkee)

16:00 – 17:00

Meeting: Women's Chapter Meeting

Room: Belli

16:30 – 17:00

Tea Break

Room: Pontifical Gregorian University Hall

16:30 – 18:30

Poster #1A: Neural Networks for Bioinformatics and Biomedical Applications

Room: Manzoni

Session Chair(s):

1. MoHyperSynergy: A multimodal representation fusion method using hypergraph neural networks for drug synergy prediction.

Zelong Chen (XiaMen University), Yue Hong (XiaMen University), Yanni Xu (XiaMen University), Xinyi Zhang (XiaMen University), Menglong Zhang (XiaMen University), Ruichao Hu (XiaMen University), Juan Liu (XiaMen University), Xiangrong Liu (XiaMen University)

2. Deep Feature Learning for Multi-Omics Clustering Using Supervised Variational Autoencoders with Clinical Information

Tianyi Shi (University of Tsukuba), Xiucai Ye (University of Tsukuba), Tetsuya Sakurai (University of Tsukuba)

3. GapDNER: A Gap-Aware Grid Tagging Model for Discontinuous Named Entity Recognition

Yawen Yang (Tsinghua University), Fukun Ma (Tsinghua University), Shiao Meng (Tsinghua University), Aiwei Liu (Tsinghua University), Lijie Wen (Tsinghua University)

4. A Structure and Semantic Aware Framework for Generalized Medical Image Segmentation via Frequency and Probabilistic Learning

Yuheng Xu (Chongqing university), tianyang wang (Xi'an Jiaotong-Liverpool University), Taiping Zhang (Chongqing university)

5. On Sequential Maximum a Posteriori Inference for Continual Learning

Menghao Waiyan William Zhu (Tsinghua Shenzhen International Graduate School), Ercan Engin Kuruoğlu (Tsinghua Shenzhen International Graduate School)

6. SAM-AEKD: SAM-Based Knowledge Distillation with Adaptive Fusion and Edge Features for Enhancing Medical Image Segmentation

Shirong Zhou (Chongqing University), Xing Wu (Chongqing University), Chengliang Wang (Chongqing University), Lingqiu Zeng (Chongqing University), Zhongshi He (Chongqing University), Yao Liu (Chongqing University Cancer Hospital Chongqing)

7. Weakly-Supervised Domain Adaptation with Proportion-Constrained Pseudo-Labeling

Takumi Okuo (Kyushu University), Shinnosuke Matsuo (Kyushu University), Shota Harada (Kyushu University), Kiyohito Tanaka (Kyoto Second Red Cross Hospital), Ryoma Bise (Kyushu University)

8. R^2VFL : A Robust Random Vector Functional Link Network with Huber-Weighted Framework

Anuradha Kumari (IIT Indore), Mushir Akhtar (IIT Indore), P.N. Suganthan (Qatar University), M Tanveer (IIT Indore)

9. Intuitionistic Fuzzy Graph Embedded Random Vector Functional Link with Multiview Learning

Vrushank Ahire (Indian Institute of Technology Ropar), Yogesh Kumar (Indian Institute of Technology Ropar), M.A. Ganaie (Indian Institute of Technology Ropar)

10. Adaptive Sleep Staging via Cross-Modal Feature Interaction and Time-Frequency Analysis

Hao Fu (South China Normal University), Delin Zhang (South China Normal University), Chuqi Fu (South China Normal University), Jiahao Yang (South China Normal University), Jiahui Pan (South China Normal University)

11. An Enhanced Autism Detection Model Based on Electroencephalogram Signals

Yuheng Huang (South China Normal University), Weihao Huang (South China Normal University), Chunhong Jiang (South China Normal University), Qian Wu (South China Normal University), Jiahui Pan (South China Normal University)

12. Frequency-Aware Contrastive Loss for Self-Supervised EEG Seizure Detection

Kristina Stemikovskaya (Tecnalia Research and Innovation), Diana Manjarrés (Tecnalia Research and Innovation), Isaac Triguero (Universidad de Granada, Dasci)

13. Platelet Enumeration in Dense Aggregates

H. Martin Gillis (Dalhousie University), Yogeshwar Shendye (Dalhousie University), Paul Hollensen (Alentic Microscience), Alan Fine (Dalhousie University), Thomas Trappenberg (Dalhousie University)

16:30 – 18:30

Poster #1B: Trustworthy and Interpretable Neural Networks

Room: Manzoni

Session Chair(s): Felipe Nakano

14. Energy Efficient Online Stream Classification under Concept Drift on FPGAs for Edge Computing

Jonas Vaquet (Bielefeld University), Florian Porrmann (Bielefeld University), Sarah Pilz (Bielefeld University), Valerie Vaquet (Bielefeld University), Jens Hagemeyer (Bielefeld University), Ulrich Rückert (Bielefeld University), Barbara Hammer (Bielefeld University)

15. Weakening Prediction Confidence Makes Backdoors Strengthened: A Strong Textual Backdoor Attack on Prefix-tuning

Yixin Tan (Institute of Science Tokyo), Haoyu Zhang (Lan-Bridge), Jun Sakuma (Institute of Science Tokyo / Riken AIP)

16. A Simple and Effective Method for Uncertainty Quantification and OOD Detection

Yaxin Ma (University of Florida), Benjamin Colburn (University of Florida), Jose Principe (University of Florida)

17. Uncertainty Quantification with Noise Injection in Neural Networks: A Bayesian Perspective

Xueqiong Yuan (Tsinghua University), Jipeng Li (Tsinghua University), Ercan Kuruoglu (Tsinghua University)

18. Active semi-supervised learning for multi-target regression

Maira Lira (Federal University of Pernambuco), Luisa Cavalcante (Federal University of Pernambuco), Celine Vens (KU Leuven), Ricardo Prudencio (Federal University of Pernambuco), Felipe Nakano (KU Leuven)

19. Enhancing Fake News Detection by Incorporating Evidence Credibility

Yike Wu (Nankai University), Mengying Liu (Nankai University), Mingming Liu (Nankai University), Jiahao Sun (Nankai University), Yang Xiao (Nankai University), Mengting Hu (Nankai University)

20. Fair and Efficient Federated Learning Client Selection via Dynamic Contribution Evaluation

Zhengnan Zhang (Southwest University), Shmuel Tyszberowicz (Afeka Academic College of Engineering, Tel-Aviv, Israel and Southwest University, Chongqing), Zhiming Liu (Southwest University, Chongqing), Bo Liu (Southwest University, Chongqing)

21. Enhanced Interpretability for Conditional Coordinated Behavior in Multi-Agent Reinforcement Learning

Yoshinari Motokawa (Waseda University), Toshiharu Sugawara (Waseda University)

22. Frequency maps reveal the correlation between Adversarial Attacks and Implicit Bias

Lorenzo Basile (University of Trieste), Nikos Karantzas (Stanford University), Alberto d'Onofrio (University of Trieste), Luca Manzoni (University of Trieste), Luca Bortolussi (University of Trieste), Alex Rodriguez (University of Trieste), Fabio Anselmi (University of Trieste)

23. Explainability of Technical Debt: An Analysis on the Role of Refactoring in Software Systems

Lerina Aversano (University of Foggia), Martina Iammarino (Pegaso University), Antonella Madau (University of Sannio), Debora Montano (University of Modena and Reggio), Chiara Verdone (Università degli studi di Foggia)

24. Towards Autonomous Cyber Defence: Applying Systems Theoretic Process Analysis to Human-Machine Teaming

Shu-Jui Chang (Loughborough University), Chris Hicks (The Alan Turing Institute), Vasilios Mavroudis (The Alan Turing Institute), Iain Phillips (Loughborough University), Tim Watson (Loughborough University)

25. HREB-CRF: Hierarchical Reduced-bias EMA for Chinese Named Entity Recognition

Sijin Sun (Agency for Science, Technology and Research), Ming Deng (Shanghai University), Xingrui Yu (Agency for Science, Technology and Research), Liangbin Zhao (Agency for Science, Technology and Research)

17:00 – 18:30

Neural Networks for Time Series Analysis I

Room: Michelangelo

Session Chair(s): Wenxin Zhang

17:00 DConAD: A Differencing-based Contrastive Representation Learning Framework for Time Series Anomaly Detection

Wenxin Zhang (University of Chinese Academy of Sciences), Xiaojian Lin (Tsinghua University), Wenjun Yu (Shanghai University of International Business and Economics), Guangzhen Yao (Northeast Normal University), Jiangxing Zhong (Fuzhou University), Yu Li (Hubei University), Renda Han (Hainan University), Songcheng Xu (Northeastern University), Hao Shi (University of Chinese Academy of Science), Cuicui Luo (University of Chinese Academy of Sciences)

17:18 HITS: Hierarchical Interpretable Time Series Classification via Multiple Instance Learning

Kun Han (University of Queensland), Abigail Koay (University of the Sunshine Coast)

17:36 Discontinuous Parsimony Embedding Empowered Transformer for Shipping Market Forecasting

Ruobin Gao (Nanyang Technological University), Zicheng Wang (Anhui University), Minghui Hu (Nanyang Technological University), Maohan Liang (National University of Singapore), Ponnuthurai Suganthan (Qatar University)

17:54 A wind power forecasting model based on global and local feature extraction using key meteorological factors

Wei Song (Shanghai Ocean University), Xuming Yin (Shanghai Ocean university), Shuai Shi (Shanghai University of Electric Power), Zhaocai Wang (Shanghai Ocean University)

18:12 Multi-Agent Transformer-based Automated Imbalanced Time Series Classification with Hyperparameter Optimization

NaiHsin Cheng (National Yang Ming Chiao Tung University), Yujia Wu (National Yang Ming Chiao Tung University), Vincent S. Tseng (National Yang Ming Chiao Tung University)

17:00 – 18:30

Neural Models for Computer Graphics

Room: Raffaello

Session Chair(s):

17:00 Learning Neural Velocity Fields from Dynamic 3D Scenes via Inter-Frame Consistency Loss

Sota Ito (Gifu University), Yoshikazu Hayashi (Gifu University), Hiroaki Aizawa (Hiroshima University), Kunihiro Kato (Gifu University)

17:18 RecolorGaussian: Palette-based 3D Scene Recoloring with Gaussian Splatting

Haoyu Bi (University of Science and Technology of China), Jianhui Wu (University of Science and Technology of China), Zhangjin Huang (University of Science and Technology of China)

17:36 Optimizing Aspect Ratio and Angle Predictions for Rotated Object Detection via GWD Loss

QIANLIN GU (University of Shanghai for Science and Technology)

17:54 Self-Attention Based Multi-Scale Graph Auto-Encoder Network of 3D Meshes

Saqib Nazir (University of Caen Normandy), Olivier L  zoray (University of Caen Normandie), S  bastien Boudoux (University of Caen Normandie)

18:12 A Dental Periapical X-ray Images Segmentation Network Based on Pixel-Wise Contrastive Learning with Dual Attention Mechanisms

Du Yanan (Chongqing Normal University), Zeng Zhi (Chongqing Normal University), Tian Yibin (Shenzhen University), Zhang Zhiyuan (Singapore Management University), Zhang Xueyang (Southern Medical University), Shan Lianlei (University of Chinese Academy of Sciences)

17:00 – 18:30

Neural Networks for Healthcare and life sciences I

Room: Tiziano

Session Chair(s):

17:00 Personalizing Dialog Policy in Health Guidance via Model-based Multitask Reinforcement Learning

Taiga Sano (NTT Corporation), Masahiro Kohjima (NTT Corporation), Masami Takahashi (NTT Corporation), Kaori Fujimura (NTT Corporation), Tae Sato (NTT Corporation), Yurika Katagiri (NTT Corporation)

17:18 Context-Aware Meta-Reinforcement Learning for Intelligent Diverse Indoor HVAC Control

Songling Liu (Politecnico di Milano & RGF Environmental Group, Inc. in China), Jing Li (Tsinghua University), Tommaso Buganza (Politecnico di Milano)

17:36 IPI-CVx: Explainable and Robust Detection of Intestinal Parasites Using Augmentation-Based Supervised Target Learning

Sankar Behera (Indian Institute of Technology Jammu), Anuj Kumar (Indian Institute of Technology Jammu), Satyadev Ahlawat (Indian Institute of Technology Jammu), Yamuna Prasad (Indian Institute of Technology Jammu)

17:54 CA-U-Net: Context Aware U-Net For Brain Tumor Segmentation

Krishen Jagani (Birla Institute of Technology and Science, Pilani Dubai Campus, Dubai), Muhammad Abdullah Hanif (New York University Abu Dhabi), J. Angel Arul Jothi (Department of Computer Science, Birla Institute of Technology and Science, Pilani Dubai Campus, Dubai), Muhammad Shafique (New York University Abu Dhabi)

18:12 A Unified Multimodal Multi-Granularity Pre-Training Framework for Fine-Grained Medical Image Analysis

ZeNan Gong (Sichuan University), Linchao He (Sichuan University), Nan Zhou (Sichuan University), Peixi Liao (Chengdu Sixth People's Hospital), Hongjie Yang (Chengdu Sixth People's Hospital, University of Electronic Science & Technology of China China), Zhihong Wu (Sichuan University), Hu Chen (Sichuan University), Yi Zhang (Sichuan University)

17:00 – 18:30

Special Session on Towards Robust Federated Learning: Addressing Data and Device Heterogeneity

Room: Botticelli

Session Chair(s): Francesco Piccialli, Fabio Giampaolo

17:00 S-VOTE: Similarity-based Voting for Client Selection in Decentralized Federated Learning

Pedro Miguel Sánchez Sánchez (University of Murcia & Advantx Technological Foundation (Funditec)), Enrique Tomás Martínez Beltrán (University of Murcia), Chao Feng (University of Zurich), G r me Bovet (Cyber-Defence Campus, armasuisse Science & Technology), Gregorio Mart nez P rez (University of Murcia), Alberto Huertas Celdr n (University of Murcia & University of Zurich)

17:18 VFL-RPS: Relevant Participant Selection in Vertical Federated Learning

Afsana Khan (Maastricht University), Marijn Ten Thij (Tilburg University), Guangzhi Tang (Maastricht University), Anna Wilbik (Maastricht University)

17:36 Empirical Analysis of Asynchronous Federated Learning on Heterogeneous Devices: Efficiency, Fairness, and Privacy Trade-offs

Samaneh Mohammadi (RISE Research Institutes of Sweden), Iraklis Symeonidis (RISE Research Institutes of Sweden), Ali Balador (M lardalens University), Francesco Flammini (M lardalens University)

17:54 FedAdap: An Adaptive Federated Knowledge Graph Embedding Framework for Tackling KGs Heterogeneity via Partial Model Sharing

Zihao Zheng (Deakin University), Borui Cai (Beihang University), Yong Xiang (Deakin University), Keshav Sood (Deakin University)

18:12 MQFL-FHE: Multimodal Quantum Federated Learning Framework with Fully Homomorphic Encryption

Siddhant Dutta (SVKM's Dwarkadas J. Sanghvi College of Engineering), Nouhaila Innan (New York University Abu Dhabi), Sadok Ben Yahia (University of Southern Denmark), Muhammad Shafique (New York University Abu Dhabi), David E. Bernal Neira (Purdue University)

17:00 – 18:30

Self-supervised Learning

Room: Alfieri

Session Chair(s): Mingyu Liu

17:00 MaCSE: Multi-Agent Ranking Distillation for Contrastive Learning of Sentence Embeddings

Zekai Zhi (Tiangong University), Zhilan Wang (Tiangong University), Rize Jin (Tiangong University), Kehui Song (Tiangong University), He Wang (Tiangong University), Da-Jung Cho (Ajou University)

17:18 DepthCNE: Contrastive Neighbor Embedding in Self-Supervised Learning for Point Clouds

Mingyu Liu (TUM), Zhijie Yang (Canonical Group Limited), Ekim Yurtsever (The Ohio State University), Yuning Cui (TUM), Alois Knoll (TUM)

17:36 Specific Emitter Identification Based on Self-supervised Learning

Yurui Zhao (National University of Defense Tech), Xiang Wang (National University of Defense Technology), Didi Xie (National University of Defense Technology), Yu Pan (National University of Defense Technology), Enlin Chen (National University of Defense Technology)

17:54 Dependent syntactic analysis of Mongolian based on semi-supervised self-training

Zhonghao Zhang (Inner Mongolia University of Technology, Hohhot, China), JIAJIA MA (Inner Mongolia University of Technology, Hohhot, China), NA LIU (Inner Mongolia University of Technology), NIER WU (Inner Mongolia University of Technology, Hohhot, China), YATU JI (Inner Mongolia University of Technology, Hohhot, China), GUIPING LIU (Inner Mongolia University of Technology, Hohhot, China)

18:12 Osmotic Learning: A Self-Supervised Paradigm for Decentralized Contextual Data Representation

Mario Colosi (University of Messina), Reza Farahani (University of Klagenfurt), Maria Fazio (University of Messina), Radu Prodan (University of Klagenfurt), Massimo Villari (University of Messina)

17:00 – 18:30

Neural Networks for LLM Applications

Room: Marinetti

Session Chair(s):

17:00 End-to-End Argument Mining through Autoregressive Argumentative Structure Prediction

Nilmadhab Das (IIT Guwahati), Vishal Vaibhav (NERIST), Yash Sunil CHOUDHARY (IIT Guwahati), V. Vijaya Saradhi (IIT Guwahati), Ashish Anand (IIT Guwahati)

17:18 CNMBERT: A Model for Converting Hanyu Pinyin Abbreviations to Chinese Characters

Zishuo Feng (BUPT), Feng Cao (BUAA), Lei Feng (BUPT)

17:36 Exploration of Marker-Based Approaches in Argument Mining through Augmented Natural Language

Nilmadhab Das (IIT Guwahati), VISHAL CHOUDHARY (IIT Guwahati), V. Vijaya Saradhi (IIT Guwahati), Ashish Anand (IIT Guwahati)

17:54 Leveraging Large Language Models for Tacit Knowledge Discovery in Organizational Contexts

Gianlucca Zuin (UFMG & Kunumi), Tulio Loures (UFMG & Kunumi), Saulo Mastelini (Kunumi), Adriano Veloso (UFMG & Kunumi)

18:12 Informative Memory Mechanism for Enhancing Crisis Response in Large Language Models

Boyang Wang (Beihang University), Xianjie Wu (Beihang University), Zhoujun Li (Beihang University)

17:30 – 19:30

Mentor/Mentee Dinner

Room: Hard Rock

July 2, 2025

8:30 – 9:30

Keynote talk by Giacomo Rizzolatti

Room: Quirino Theater

The Mirror Mechanism: The Double Life of the Motor and Emotional Systems: Production and Understanding

Giacomo Rizzolatti

Università degli Studi di Parma

Mirror mechanism is a basic neural mechanism that transforms sensory representations of others' actions into motor representations of the same actions in the brain of the observer. In the first part of my talk I will describe the functions of the mirror mechanism located in the parieto-frontal network of monkeys and humans. I will show that this mechanism enables one to understand others in an immediate, phenomenological way, without recourse to cognitive inferential processing. In the second part of my talk I will discuss the role of the mirror mechanism in understanding vitality forms and basic emotions. The data on emotions will lead me to the last part of my talk where I will present stereo-EEG data on action and emotion recognition. I will conclude discussing the clinical application of the mirror mechanism (action observation therapy, AOT)

9:30 – 10:30

Keynote talk by Samy Bengio

Room: Quirino Theater

Recent Results Towards Reasoning

Samy Bengio

Apple

In this presentation, I will go over a few recent topics towards understanding the limits of reasoning capabilities of large language models. I will start with an analysis of the hardness of problems like syllogisms when tackling them with the Transformer architecture; I will propose a metric to measure that hardness, and an approach to make it easier for LLMs to reduce such hardness. I will show that these limitations are not specific to the textual domain and also exist for other domains like visual tasks. Finally, I will discuss recent results in better measuring the capabilities of LLMs for math problems.

10:00 – 18:30

Workshop: ComBayNS: Combining Bayesian and Neural approaches for Structured data

Room: Montale

Session Chair: Davide Bacciu, Daniele Castellana, Federico Errica, Mathias Niepert, Marco Podda, Olga Zaghen

11:15 Introduction and dinner plans

11:30 Keynote talk of Prof. Coates (KEYNOTE)

12:30 Ensembles of Multi-scale Kernel Smoothers for Data Imputation

Amit Schreiber (Tel-Aviv University), Dalia Fishelov (Afeka Tel-Aviv Academic College of Engineering), Neta Rabin (Tel-Aviv University)- Virtual

13:00 Lunch break

14:00 Keynote talk of Dr. Lutzeyer (KEYNOTE)

15:00 Learn to Jump: Adaptive Random Walks for Long-Range Propagation through Graph Hierarchies (SHORT PAPER)

Joël Mathys (ETH Zurich), Federico Errica (NEC)

15:20 BN-Pool: a Bayesian Nonparametric Approach to Graph Pooling (SHORT PAPER)

Daniele Castellana (Università di Firenze), Filippo Bianchi (UiT The Arctic University of Norway)

15:40 On Learning the Width of Neural Networks (SHORT PAPER)

Federico Errica (NEC), Henrik Christiansen (NEC), Viktor Zaverking (NEC), Mathias Niepert (University of Stuttgart), Francesco Alesiani (NEC)

16:00 Tea break

16:30 Towards solving Kolmogorov-Arnold Theorem using Variational Optimization (SHORT PAPER)

Francesco Alesiani (NEC Laboratories Europe), Henrik Christiansen (NEC Laboratories Europe), Federico Errica (NEC Italy)

16:50 Panel discussion

17:50 Conclusion and dinner location

10:00 – 13:00

Workshop: Neural Networks for Human Behaviour Understanding: From Perception to Prediction

Room: Leopardi

Session Chair: Vincenzo Dentamaro, Donato Impedovo

10:00 Opening remarks

10:20 Aligning LiDAR to Vision Language Space: A fusion approach for Steering Angle Regression of a Vehicle

Parvez Alam (Indian Institute of Technology Hyderabad), Sri Vishnu Sathvik (Indian Institute of Technology Hyderabad), Rajalakshmi Pachamuthu (Indian Institute of Technology Hyderabad)

10:45 Decoding Dyadic Social Interactions via Multimodal Fusion of Gaze and EEG (SHORT PAPER)

Kong-Yi Chang Chang (National Tsing Hua University), Chun-Hsiang Chuang (National Tsing Hua University)

11:10 CombinedNet: A Hybrid Model for Deepfake Audio Detection Using Deep Learning Techniques

Vincenzo Gattulli (Uniba), Donato Impedovo (Uniba)

11:35 Coffee break

11:50 Comparing eye-tracking time series imaging methods in ADHD screening

Shailendra Bhandari (OsloMet – Oslo Metropolitan University)

12:15 Panel Discussion: “Future Directions in Behavioral Understanding”

10:30 – 11:00

Coffee Break

Room: Pontifical Gregorian University Hall

10:30 – 12:30

Meeting: IEEE TNNLS Annual Editorial Board Meeting

Room: Alfieri

10:30 – 12:30

Meeting: INNS Doctoral Consortium

Room: Belli

10:30 – 12:30

Poster #2A: Neural Networks for Federated Learning and Communications

Room: Manzoni

Session Chair(s): Michele Scarpiniti

1. FSBridge: Bridging Federated and Split Learning for Next-Generation Edge AI

Tran Khoa (National Institute of Information and Communications Technology, Japan), Minh-Son Dao (National Institute of Information and Communications Technology, Japan), Koji Zettsu (National Institute of Information and Communications Technology, Japan)

2. Causeways: Building Bridges with Context in Peer-to-Peer Federated Learning

Melike Geçer (University of Lausanne), Benoît Garbinato (University of Lausanne)

3. Efficient and Secure Federated Learning with Ensemble of One-Layer Neural Networks

Abel Pampín-Rodríguez (University of A Coruña), Oscar Fontenla-Romero (University of A Coruña), Elena Hernández-Pereira (University of A Coruña), Bertha Guijarro-Berdiñas (University of A Coruña)

4. Embedded Federated Feature Selection with Dynamic Sparse Training: Balancing Accuracy-Cost Tradeoffs

Afsaneh Mahanipour (University of Kentucky), Hana khamfroush (University of Kentucky)

5. Lazy But Effective: Collaborative Personalized Federated Learning with Heterogeneous Data

Ljubomir Rokvic (EPFL), Panayiotis Danassis (Telenor Research), Boi Faltings (EPFL)

6. Clustered Federated Learning Framework for Non-IID Ambient Noise Mapping for Urban Sensing

Ayshika Kapoor (IIT Roorkee), Pranjal Gulati (IIT Roorkee), Dheeraj Kumar (IIT Roorkee)

7. Gradient-Aware Participation for Energy Reduction in Federated Learning with Extreme Label Skew

Erich Malan (Politecnico di Torino), Valentino Peluso (Politecnico di Torino), Andrea Calimera (Politecnico di Torino), Enrico Macii (Politecnico di Torino)

8. Hierarchical Knowledge Structuring for Effective Federated Learning in Heterogeneous Environments

Wai Fong Tam (Queen Mary University of London), Qilei Li (Queen Mary University of London), Ahmed M. Abdelmoniem (Queen Mary University of London)

9. Personalized Federated Learning Based on Feature Filtering

Zhangshuai Bie (Xinjiang University), Linlin zhang (School of Software, Xinjiang Univeresity), Congjie Lin (School of Software, Xinjiang Univeresity), Shuo Li (School of Software, Xinjiang Univeresity), Wenshou Wu (School of Software, Xinjiang Univeresity), Kai Zhao (School of Software, Xinjiang Univeresity)

10. Federated Unlearning in Healthcare: Why It Matters

Alessio Mora (University of Bologna), Carlo Mazzocca (University of Salerno), Rebecca Montanari (University of Bologna), Paolo Bellavista (University of Bologna)

11. On the Volatility of Shapley-Based Contribution Metrics in Federated Learning

Arno Geimer (University of Luxembourg), Beltran Fiz (University of Luxembourg), Radu State (University of Luxembourg)

12. Privacy Enhancing Federated Learning for Predicting Energy Consumption in Smart Buildings

Sima Sinaei (RISE Research Institute of Sweden), Mohammadreza Mohammadi (RISE Research Institute of Sweden), David Eklund (RISE Research Institute of Sweden), Henrik Abrahamsson (RISE Research Institute of Sweden)

13. Federated Prompt Tuning for News Framing: A Community-Aware Approach to Narrative Exploitability

Maria Di Gisi (Scuola IMT Alti Studi Lucca), Giuseppe Fenza (University of Salerno), Domenico Furno (University of Salerno), Mariacristina Gallo (University of Salerno), Vincenzo Loia (University of Salerno), Pio Pasquale Trotta (Scuola IMT Alti Studi Lucca)

14. The Built-In Robustness of Decentralized Federated Averaging to Bad Data

Samuele Sabella (IIT-CNR), Chiara Boldrini (IIT-CNR), Lorenzo Valerio (IIT-CNR), Andrea Passarella (IIT-CNR), Marco Conti (IIT-CNR)

15. A Resource-aware Adaptation Approach for Heterogeneous Federated Learning

Mario Luca Bernardi (University of Sannio), Marta Cimitile (Unitelma Sapienza), Muhammad Usman (University of Sannio), Anna Vacca (University Unitelma Sapienza)

16. Federated Unlearning with Oriented Saliency Compression

Boxu Xiao (Sun Yat-sen University), Sijia Liu (Michigan State University), Qing Ling (Sun Yat-sen University)

17. A Comparative Analysis of Models for Real-Time Personal Protective Equipment Detection on Edge Devices

Giustino Claudio Miglionico (University of Pisa), Francesco Di Rienzo (University of Pisa), Pietro Ducange (University of Pisa), Francesco Marcelloni (University of Pisa), Carlo Vallati (University of Pisa)

18. FedLCR: An Enhanced Personalized Federated Learning Method for Mitigating Intra-Client Inconsistency

Chunxiang Xiang (Guangdong University of Technology), Jiahui Chen (Guangdong University of Technology), Huiwu Huang (Guangdong University of Technology)

19. Edge-Enabled Federated Learning for Predictive Energy Modeling in Multi-Building Systems

Faizan Hamayat (University of Engineering and Technology Taxila), Haider Ali (Pak-Austria Fachhochschule IAST), Maha Driss (Prince Sultan University), Jan Sher Khan (Air University)

20. Lightweight Spatial-Temporal Resolution Network for Massive MIMO CSI Feedback

Bolin Yan (Beijing University of Posts and Telecommunications), Zhijun Wang (Beijing University of Posts and Telecommunications), Wu Guan (Beijing University of Posts and Telecommunications), Yi Ding (Beijing University of Posts and Telecommunications), Liping Liang (Beijing University of Posts and Telecommunications)

21. DRAMA: A Dynamic Packet Routing Algorithm using Multi-Agent Reinforcement Learning with Emergent Communication

Wang Zhang (South University of Science and Technology), Chenguang Liu (Durham University), Yue Pi (Shenzhen Key Laboratory of Safety and Security for Next Generation of Industrial Internet, Southern University of Science and Technology), Yong Zhang (Huawei Technologies Co., Ltd.), Hairong Huang (Huawei Technologies Co., Ltd.), Baoquan Rao (Huawei Technologies Co., Ltd.), Yulong Ding (Shenzhen Key Laboratory of Safety and Security for Next Generation of Industrial Internet, Southern University of Science and Technology), ShuangHua Yang (Shenzhen Key Laboratory of Safety and Security for Next Generation of Industrial Internet, Southern University of Science and Technology, Department of Computer Science, University of Reading, UK), Jie Jiang (China University of Petroleum (Beijing), Beijing, China, Southern University of Science and Technology, Shenzhen, China)

22. Latent Space Alignment for AI-Native MIMO Semantic Communications

Mario Edoardo Pandolfo (Sapienza University of Rome), Simone Fiorellino (Sapienza University of Rome), Emilio Calvanese Strinati (CEA), Paolo Di Lorenzo (Sapienza University of Rome)

23. FPGA Based In-Situ CNN Transfer Learning of Wireless Signal Modulation for In-Orbit Deployment

Chris Yakopcic (Nil), Tarek Taha (University of Dayton), Yangjie Qi (University of Dayton), Shuo Zhang (University of Dayton), Sanjeevi Karri (Prixarc, LLC), Guru Subramanyam (Prixarc, LLC), Aaron Smith (NASA Glenn Research Center), Janette Briones (NASA Glenn Research Center)

24. Efficient CNN-Based Classification of NLOS/LOS Conditions Using CIR features in Ultra-Wideband Networks

Nadir Bouzar (Sapienza University of Rome), Luca De Nardis (Sapienza University of Rome), Fouzia Boukour (Gustave Eiffel University), Maria-Gabriella Di Benedetto (Sapienza University of Rome)

25. DualFormer: Complex-value Automatic Modulation Recognition via a Dual-channel Transformer

Yurui Zhao (National University of Defense Tech), Shuya Cao (National University of Defense Technology), Xiang Wang (National University of Defense Technology), Ming Cheng (National University of Defense Technology), Zheng Liu (National University of Defense Technology)

10:30 – 12:30

Poster #2B: Graph Neural Networks and Social Networks

Room: Manzoni

Session Chair(s): Anthony Kuh

26. Optimization of Graph Neural Networks Training Using Graph Reordering

Guohua Wen (South China University of Technology), Yi Zou (South China University of Technology), Xianfeng Song (South China University of Technology)

27. Time-Lag and Edge Features Incorporated Graph Attention Network for Stock Movement Prediction

Jiahao Lai (GDUFE), Mengzhu Chen (GDUFE), Jia Cai (GDUFE)

28. Active Few-Shot Learning for Vertex Classification Starting from an Unlabeled Dataset

Felix Burr (University of Ulm), Marcel Hoffmann (University of Ulm), Ansgar Scherp (University of Ulm)

29. Progressive Multifaceted Dynamic Hypergraph Convolutional Network Model for Traffic Flow Prediction

bin ren (Dongguan University of Technology), Yongfa Zhang (Dongguan University of Technology), Yamin Wen (Shenzhen University), Haocheng Luo (Dongguan University of Technology), Tao Cheng (Dongguan University of Technology), Chunhong He (Dongguan City University)

30. You do not have to train Graph Neural Networks at all on text-attributed graphs

Kaiwen Dong (University of Notre Dame), Zhichun Guo (University of Notre Dame), Nitesh Chawla (University of Notre Dame)

31. Graph Local Pooling Optimization for Hierarchical Graph Neural Networks

Qinxin Zhao (Nanjing University), Sheng Zhong (Nanjing University)

32. LLM-Enhanced Heterogeneous Graph Neural Networks for Research Project Conflict Detection

Wenjing Chang (Computer Network Information Center, CAS, Beijing, China, University of Chinese Academy of Sciences, Beijing, China), Gege Qi (Computer Network Information Center, CAS, Beijing, China, University of Chinese Academy of Sciences, Beijing, China), Yue Wang (Computer Network Information Center, CAS, Beijing, China, University of Chinese Academy of Sciences, Beijing, China), Jianjun Yu (Computer Network Information Center, CAS, Beijing, China)

33. Next Point of Interest Prediction with Graph Attention Networks and Cognitive Navigational Styles

Valerio Ponzi (Sapienza University), Samuele Russo (Sapienza University), Janusz Starczewski (Czestochowa University of Technology), Imad Tibermacine (Sapienza University), Christian Napoli (Sapienza University)

34. Dual-channel Heterophilic Message Passing for Graph Fraud Detection

Wenxin Zhang (University of Chinese Academy of Sciences), Jingxing Zhong (Fuzhou University), Guangzhen Yao (Northeast Normal University), Renda Han (Hainan University), Xiaojian Lin (Tsinghua University), Lei Jiang (University of Chinese Academy of Sciences), Zeyu Zhang (The Australian National University), Cuicui Luo (University of Chinese Academy of Science)

35. Remote Sensing Change Detection via Graph Compression and Adaptive Feature Fusion

Jingxing Zhong (Fuzhou University), Haoliang Li (School of Computing and Data Science, Xiamen University Malaysia), Renda Han (School of Computer Science and Technology, Hainan University), Wenxin Zhang (School of Computer Science and Technology, University of Chinese Academy of Science), Yutian You (Chang'an Dublin International College of Transportation, Chang'an University), Junhao Xiao (School of Computer, Central China Normal University)

36. Word and Phrase Features in Graph Convolutional Network for Question Classification

Junyoung Lee (Home Team Science and Technology Agency), Ninad Dixit (Nanyang Technological University), Kaustav Chakrabarti (Nanyang Technological University), S. Supraja (Nanyang Technological University)

37. Anonymisation & graph theory application in AI models: how to strike a balance between privacy and computational efficiency?

Anna Popowicz-Pazdej (University of Wroclaw)

38. Bayesian Graph Convolutional Neural Network with Noise Injection

Dongdong Nian (Tsinghua University), Xueqiong Yuan (Tsinghua University), Ercan Kuruoglu (Tsinghua University)

39. Spectral Core Entropy Based Graph Data Generation Algorithm

Dongdong Nian (Tsinghua University), Dayu Qin (Tsinghua University), Ercan Kuruoglu (Tsinghua University)

40. ASD Classification on Dynamic Brain Connectome using Temporal Random Walk with Transformer-based Dynamic Network Embedding

Suchanuch Piriyaatit (Tsinghua University), Chaohao Yuan (Tsinghua University), Ercan Kuruoglu (Tsinghua University)

41. A deep Point-Of-Interest recommendation system combining spatial, categorical, and social influence

Chaima Laroussi (Institut Supérieur de Gestion)

42. Predictively Combatting Toxicity in Health-related Online Discussions through Machine Learning

Jorge Paz-Ruza (Universidade da Coruña), Amparo Alonso-Betanzos (Universidade da Coruña), Bertha Guijarro-Berdiñas (Universidade da Coruña), Carlos Eiras-Franco (Universidade da Coruña)

43. Modeling Social Opinion Evolution with LLM Agents: Integrating Personality Traits with Embedded Opinion Dynamics

Fan Yang (Institute of Automation, CAS), Jie Bai (Institute of Automation, CAS), Linjing Li (Institute of Automation, CAS), Daniel Zeng (Institute of Automation, CAS)

10:30 – 12:30

Poster #2C: Reinforcement Learning

Room: Manzoni

Session Chair(s): Danial Zendehehd

44. Strategic Behavioral Deception in Cooperative-Competitive Multi-Agent Systems

Wei Hao (Nanjing University), Huaping Liu (Tsinghua University), Huanhuan Lv (Nanjing University), Wenjie Li (Nanjing University), Wubin Chen (Nanjing University), Lijun Chen (Nanjing University)

45. Wavelet Fourier Diffuser: Frequency-Aware Diffusion Model for Reinforcement Learning

Yifu Luo (Tsinghua University), Yongzhe Chang (Tsinghua University), Xueqian Wang (Tsinghua University)

46. DSAC-C: Robust Discrete Soft-Actor Critic for Distribution Shift Scenarios

Dexter Neo (National University of Singapore), Tsuhan Chen (National University of Singapore)

47. PD-Vitamin: Uncertainty-driven Preliminary Dosage of Reinforcement Learning Gradients for Online Fine-Tuning of Decision Transformers

Shujiong Tang (University of Electronic Science and Technology of China), Zenglin Xu (Artificial Intelligence Innovation and Incubation Institute, Fudan University, Shanghai, China)

10:30 – 12:30

Poster #2D: Competitions on Learning with Noisy Graph Labels

Room: Manzoni

Session Chair(s): Andrea Giuseppe Di Francesco

48. IJCNN 2025 Competition: Learning with Noisy Graph Labels

Farooq Wani (Sapienza Università di Roma), Maria Sofia Bucarelli (Sapienza Università di Roma), Giulia Di Teodoro (Università di Pisa), Andrea Giuseppe Di Francesco (Sapienza Università di Roma)

49. Robust Graph Classification with Instance Independent Noisy Labels: An EM Approach using Kolmogorov-Arnold Networks

Arif Khan Pathan (IIT Hyderabad), Raghavendra Kulkarni (IIT Hyderabad), Subbareddy Batreddy (IIT Hyderabad), Giridhar Pamisetty (IIT Hyderabad), Priya Verma (Administrative Staff College of India, Hyderabad), Sobhan Babu Ch (IIT Hyderabad)

50. Cyclo-VGAE: Dual-Mechanism Approach to GNN Robustness Against Noisy Labels

Carlos Minutti (INFOTEC), Boris Escalante (UNAM), Jimena Olveres (UNAM)

51. Fuzzy-Enhanced Uncertain Knowledge Graph Embeddings with Oscillatory Layer Integration
(SHORT PAPER)

You Wu (BNU-HKBU United International College (UIC))

11:00 – 12:30

Special Session on Explainable AI in Neural Networks: Advances, Challenges, and Applications

Room: Leonardo da Vinci

Session Chair(s): Alan Perotti

11:00 (Sometimes) Less is More: Mitigating the Complexity of Rule-based Representation for Interpretable Classification

Luca Bergamin (University of Padua), Roberto Confalonieri (University of Padua), Fabio Aioli (University of Padua)

11:18 Localizing and Exploiting Concept Areas in LLMs for Downstream Classification Tasks

Alfredo Nascita (University of Napoli Federico II), Jonatan Krolikowski (Huawei Technologies Co. Ltd, France), Valerio Persico (University of Napoli Federico II), Antonio Pescapè (University of Napoli Federico II), Dario Rossi (Huawei Technologies Co. Ltd, France)

11:36 InTranCeNet: Interpretable and Lightweight Attention-Based Transformer Architecture for Cervical Cancer Diagnosis

Neha Sharma (IIT Roorkee), Kumar Gaurav (IIT Roorkee), Tharun Kumar Reddy Bollu (IIT Roorkee)

11:54 Shedding Light on Depth: Explainability Assessment in Monocular Depth Estimation

Lorenzo Cirillo (Sapienza University of Rome), Claudio Schiavella (Sapienza University of Rome), Lorenzo Papa (Sapienza University of Rome), Paolo Russo (Sapienza University of Rome), Irene Amerini (Sapienza University of Rome)

12:12 SteelBlastQC: Shot-blasted Steel Surface Dataset with Interpretable Detection of Surface Defects

Irina Ruzavina (Maastricht University), Lisa Sophie Theis (Maastricht University), Jesse Lemeer (Maastricht University), Rutger de Groen (Maastricht University), Leo Ebeling (Maastricht University), Andrej Hulak (Maastricht University), Jouaria Ali (Maastricht University), Guangzhi Tang (Maastricht University), Rico Mockel (Maastricht University)

11:00 – 12:30

Special Session on Foundation Models for Medicine & LLMs for Healthcare Innovation

Room: Michelangelo

Session Chair(s): Valerio Guarrasi

11:00 Mitigating Semantic Drift: Evaluating LLMs' Efficacy in Psychotherapy through MI Dialogue Summarization Leveraging MITI Code

Vivek Kumar (Universität der Bundeswehr München), Pushpraj Singh Rajawat (Barkatullah University), Eirini Ntoutsis (Universität der Bundeswehr München)

11:18 Enhancing Alzheimer's Disease Detection Using LLM-Generated Synthetic Data and Multi-Level Embeddings

Venkata Sai Bhargav Mutala (Department of Information and Technology, Kennesaw State University, Marietta, GA, USA), Seyedamin Pouriyeh (Department of Information and Technology, Kennesaw State University, Marietta, GA, USA), Reza M. Parizi (Decentralized Science Lab, Kennesaw State University, Marietta, GA, USA), Chloe Yixin Xie (Kennesaw State University), Alessandro Santopaolo (Department of Computer, Control, and Management Engineering "Antonio Ruberti" (DIAG), Sapienza University), Ilaria Basile (ICAR), Giovanna. Sannino (Icar, Italy)

11:36 Evaluating Vision Language Model Adaptations for Radiology Report Generation in Low-Resource Languages

Marco Salmè (Università Campus Bio-Medico di Roma), Rosa Sicilia (Università Campus Bio-Medico di Roma), Paolo Soda (Università Campus Bio-Medico di Roma), Valerio Guarrasi (Università Campus Bio-Medico di Roma)

11:54 Foundation Models for Hepatocellular Carcinoma: Challenges in Generalization under Data Scarcity

Giulia Corso (UNIMORE), Marta Lovino (UNIMORE), Reha Akpınar (Humanitas University), Luca Di Tommaso (Humanitas University), Elisa Ficarra (UNIMORE), Marta Bianca Maria Ranzini (IRCCS Humanitas Research Hospital)

12:12 Any-to-Any Vision-Language Model for Multimodal X-ray Imaging and Radiological Report Generation

Daniele Molino (Università Campus Bio-Medico di Roma), Francesco Di Feola (Umeå University), Linlin Shen (Shenzhen University), Paolo Soda (Università Campus Bio-Medico di Roma), Valerio Guarrasi (Università Campus Bio-Medico di Roma)

11:00 – 12:48

Special Session on Ethical, Legal and Social Implications of Computational Intelligence

Room: Raffaello

Session Chair(s): Tayo Obafemi-Ajayi, Catherine Huang

11:00 Public Perception of Accountability for AI Systems: The Influence of Age and Education

Shi Yun Ng (Manchester Metropolitan University), Keeley Crockett (Manchester Metropolitan University), Annabel Latham (Manchester Metropolitan University), Mohammed Kaleem (Manchester Metropolitan University)

11:18 Retaining Disadvantaged Students Using a BERT-based Recommender System

Muhammad Arju (Montana State University), John Sheppard (Montana State University), Md. Asaduzzaman Noor (Montana State University), Carina Beck (Montana State University), Durward Sobek (Montana State University)

11:36 Ethics vs. Regulation: Converging Frameworks for Trustworthy Human-Centered AI in Biomedical Research

Tayo Obafemi-Ajayi (Missouri State University), Tiffani Bright (Cedars-Sinai Medical Center), Emily Wong (Cedars-Sinai Medical Center), Donald Wunsch (Missouri University of Science & Technology), Joan Peckham (University of Rhode Island), Jason Moore (Cedars-Sinai Medical Center)

11:54 Bridging AI and Regulation: Large Language Models for Documentation Compliance Check

Quynh Tran (PricewaterhouseCoopers GmbH), Josef Salg (PricewaterhouseCoopers GmbH), Krystsina Shpileuskaya (PricewaterhouseCoopers GmbH), Qi Wang (University of the West of Scotland), Larissa Putzar (Hamburg University of Applied Sciences), Sven Blankenburg (PricewaterhouseCoopers GmbH)

12:12 Are Horses Always Strong and Donkeys Dumb? Animal Bias in Vision Language Models

Mohammad Anas (Jamia Hamdard, New Delhi, India.), Mohammad Nadeem (Aligarh Muslim University), Shahab Saquib Sohail (VIT Bhopal, India), Erik Cambria (Nanyang Technological University, Singapore), Amir Hussain (Edinburgh Napier University, Scotland, UK)

12:30 SAFE Natural Language Processing

Golnoosh Babaei (University of Pavia), Oliver Giudice (Banca d'Italia), Paolo Giudici (University of Pavia), Alessandro Maggi (Banca d'Italia)

11:00 – 12:48

Privacy and Security I

Room: Tiziano

Session Chair(s): Gautam Srivastava

11:00 VIP: Versatile Identity Protection with Dual-property Watermarking System

YuYang Sun (The University of Tokyo), Federico Savonuzzi (University of Ferrara), Ching-Chun Chang (National Institute of Informatics), Xing Zhang (xingzhang@nii.ac.jp), Isao Echizen (National Institute of Informatics)

11:18 E-BiGraphSAGE: Bipartite Graph Neural Networks for Network Intrusion Detection

Qinxin Zhao (Nanjing University), Sheng Zhong (Nanjing University)

11:36 Robustness and Privacy Interplay in Patient Membership Inference

Anahita Baninajjar (Lund University), Amin Aminifar (Heidelberg University), Kamran Hosseini (Linköping University), Amir Aminifar (Lund University), Ahmed Rezine (Linköping University)

11:54 Attacking RAG Systems in Multiple Domains with Locally Running and Automatic Procedures

Christian Di Maio (University of Pisa), Stefano Melacci (University of Siena)

12:12 LogLLaMA: Transformer-based log anomaly detection with LLaMA

Zhuoyi Yang (University of California, Irvine), Ian Harris (University of California, Irvine)

12:30 Labeler-Dependent Noise with Adversarial Awareness

Vincent Del Tufo (Rowan University), Glenn Dawson (Rowan University), Robi Polikar (Rowan University)

11:00 – 12:30

Special Session on Advances in Time-Series Data: Novel Theories, Methods, and Applications

Room: Botticelli

Session Chair(s): Victoria Hankemeier

11:00 Bias-Variance Analysis of Multi-Step Loss Functions for Dynamical System Identification

Fabien Lioni (INRIA), Nicolas Gutowski (LERIA), Sébastien Aubin (DGA TT), Philippe Martinet (INRIA)

11:18 Enhancing Time Series Classification with Diversity-Driven Neural Network Ensembles

Javidan Abdullayev (University of Haute Alsace), Maxime Devanne (University of Haute Alsace), Cyril Meyer (University of Haute Alsace), Ali Ismail-Fawaz (University of Haute Alsace), Jonathan Weber (University of Haute Alsace), Germain Forestier (University of Haute Alsace)

11:36 Tailored Architectures for Time Series Forecasting: Evaluating Deep Learning Models on Gaussian Process-Generated Data

Victoria Hankemeier (University of Münster, Germany), Malte Schilling (University of Münster)

11:54 A Dual-Encoder framework for Enhancing Driving Behavior and Mission Profiling Characterization

Federico Pennino (Università di Bologna), Davide Dette (Ducati Motor), David Attisano (Ducati Corse), Maurizio Gabbrielli (Università di Bologna)

12:12 Fuzzy-Based Ensemble Method for Robust Concept Drift Detection in Multivariate Time Series

Lucas Tavares (CEFET/RJ), Janio Lima (CEFET/RJ & Petrobras), Matheus Melo (CEFET/RJ), Chao Chen (University of Nottingham), Jon Garibaldi (University of Nottingham), Gabriel dos Santos Scatena (USP), Anna Helena Reali Costa (USP), Edson Satoshi Gomi (USP), Rebecca Salles (INRIA & Univ. of Montpellier), Esther Pacitti (INRIA & Univ. of Montpellier), Isabela Guimarães Siqueira (Petrobras), Ismael Santos (Petrobras), Diego Carvalho (CEFET/RJ), Rafaelli Coutinho (CEFET/RJ), Fabio Porto (LNCC), Eduardo Ogasawara (CEFET/RJ)

11:00 – 12:30

Reinforcement Learning I

Room: Marinetti

Session Chair(s): Malte Schilling

11:00 A Reinforcement Learning Method for Environments with Stochastic Variables: Post-Decision Proximal Policy Optimization with Dual Critic Networks

Leonardo Felizardo (UNIFESP), Paolo Brandimarte (Politecnico di Torino), Edoardo Fadda (Politecnico di Torino), Emilio Del-Moral-Hernandez (USP), Mariá Nascimento (ITA)

11:18 Mixed Policy-Space Response Oracles

Junyu Zhang (Tsinghua University), Feihong Yang (Tsinghua University), Jian Wang (Tsinghua University), Chao Wang (Tsinghua University), Xudong Zhang (Tsinghua University)

11:36 Navigation With QPHIL: Quantizing Planner for Hierarchical Implicit Q-Learning

Alexi Canesse (ENS Lyon), Mathieu Petitbois (Ubisoft), Ludovic Denoyer (H Company), Sylvain Lamprier (Université d'Angers), Rémy Portelas (Ubisoft)

11:54 A Visual Feature-Based Inverse Reinforcement Learning Approach for Reward Reconstruction from Image Observations

Yanbin Lin (Florida Atlantic University), Zhen Ni (Florida Atlantic University)

12:12 Value of Information-Enhanced Exploration in Bootstrapped DQN

Stergios Plataniotis (Technical University of Crete), Charilaos Akasiadis (Technical University of Crete & NCSR 'Demokritos'), Georgios Chalkiadakis (Technical University of Crete)

11:00 – 12:30

Generative Models II

Room: Trilussa

Session Chair(s):

11:00 Polyfit generative model: can a group of lower-order polynomials generate high resolution diverse images?

Arghya Pal (Monash University), AiFang Chai (Monash University), Sailaja Rajanala (Monash University), Raphael Phan (Monash University), KokSheik Wong (Monash University), CheeMing Ting (Monash University)

11:18 Super-Resolution Using Dual-Stage Generative Adversarial Network (DS-GAN) and IGMRF Prior

Krishna Veer Singh (Dhirubhai Ambani Institute of Information and Communication Technology), Dhiraj Golhar (Dhirubhai Ambani Institute of Information and Communication Technology), Manjunath Joshi (Dhirubhai Ambani Institute of Information and Communication Technology)

11:36 Heterogeneous Graph Generation: A Hierarchical Approach using Node Feature Pooling

Hritaban Ghosh (Indian Institute of Technology Kharagpur), Changyu CHEN (Singapore Management University), Arunesh Sinha (Rutgers University), Shamik Sural (Indian Institute of Technology Kharagpur)

11:54 Conventional Augmentation is More Effective than ImageGPT and GANs? A Comparison of Synthetic Data Evaluation Methods

Andrew Kennedy (University of Exeter)

12:12 Improving the generation of VAEs with high dimensional latent spaces by the use of hyperspherical coordinates

Alejandro Ascarate Castro (Queensland University of Technology), Leo Lebrat (Queensland University of Technology), Rodrigo Fonseca de Santa Cruz Oliveira (CSIRO-Data61), Clinton Fookes (Queensland University of Technology), Olivier Salvado (Queensland University of Technology)

13:00 – 14:00

Lunch

Room: Pontifical Gregorian University Hall

13:00 – 15:30

Meeting: IEEE CIS Italy Section Chapter

Room: Alfieri

13:00 – 14:00

Meeting: Student Luncheon

Room: Belli

14:00 – 18:30

Workshop: AI Innovations for Education: Transforming Teaching and Learning through Cutting-Edge Technologies

Room: Loyola

Session Chair(s): Zenglin Xu, Petia Georgieva, Danimir Mandić, Qingsong Wen, Danilo Mandic, Irwin King

14:00 Opening remarks

14:10 AI-Powered Education: Unlocking the Future of Learning and Assessment? (KEYNOTE)

Danilo Mandic (Imperial College London)

14:40 A Novel Multidisciplinary Graduate Education Program in Data Science

Anthony Kuh (University of Hawaii at Manoa), Narayana Santhanam (University of Hawaii), Daniel Port (University of Hawaii), London Thompson (University of Hawaii), Mary Lee (Pacific Policy Research Center)

15:00 Enhancing AI-Driven Education: Integrating Cognitive Frameworks, Linguistic Feedback Analysis, and Ethical Considerations for Improved Content Generation

ANTOUN YAACOB (ESIEA), Sansiri Tarnpradab (KMUTT), Phattara Khumprom (KMUTT), Zainab Assaghir (Lebanese University), Lionel Prevost (ESIEA), Jérôme Da-Rugna (ESIEA)

15:20 Integrating Semi-Supervised Learning and Ensemble Deep Learning for Low-resource Deep Knowledge Tracing

Xishuang Dong (Prairie View A&M University), Lin Li (Prairie View A&M University), Uchechukwu Melody Okechukwu (Prairie View A&M University), Lijun Qian (Prairie View A&M University)

15:40 Tea Break

16:00 Tutors and Partners: The Dual Role of LLMs in Education (SHORT PAPER)

Eleonora Grassucci (Sapienza University of Rome), Gualtiero Grassucci (Liceo Scientifico G.B. Grassi), Aurelio Uncini (Sapienza University of Rome), Danilo Communiello (Sapienza University of Rome)

16:20 Automated Formative Feedback for Short-form Writing: An LLM-Driven Approach and Adoption Analysis

Tiago Tavares (Insper), Luciano Soares (Insper)

July 2, 2025

16:40 Engineering Advanced AI-Driven Interactive Avatars for Smart Education: Innovations and Applications (INVITED TALK)

Danimir Mandić (University of Belgrade)

17:40 Panel discussion

Panelists: Danilo Mandic, Anthony Kuh, Danimir Mandić, Irwin King, Petia Georgieva

17:50 Concluding remarks

14:00 – 16:30

Meeting: Paper Development Workshop

Room: Belli

15:00 – 16:30

Position Papers II

Room: Leonardo da Vinci

Session Chair(s): Ali Minai

15:00 Position Paper: Integrating Explainability and Uncertainty Estimation in Medical AI

Xiuyi Fan (Nanyang Technological University)

15:18 Position Paper: Metadata Enrichment Model: Integrating Neural Networks and Semantic Knowledge Graphs for Cultural Heritage Applications

Jan Ignatowicz (Jagiellonian University), Krzysztof Kutt (Jagiellonian University), Grzegorz Nalepa (Jagiellonian University)

15:36 Position Paper on the Role of Sequential Switches in Human Cognition and Supporting Sustainable AI

Robert Kozma (University of Memphis), Joshua J.J. Davis (Auckland University)

15:54 Position paper: Foundation models are not the brain

Thomas Trappenberg (Dalhousie University)

16:12 Position Paper: Bounded Alignment: What (Not) to Expect from AGI Agents

Ali Minai (University of Cincinnati)

15:00 – 16:30

Special Session on Quantum Machine Learning Algorithms and Applications

Room: Michelangelo

Session Chair(s): Samuel Yen-Chi Chen

15:00 Quantum-StateHD: Leveraging Random Quantum States for Hyperdimensional Learning

Yangjie XU (University of Luxembourg), Hui Huang (University of Luxembourg), Radu State (University of Luxembourg)

15:18 Hybrid Quantum-Classical Framework for Anomaly Detection in Time Series with QUBO formulation and QAOA

Marco Casalbore (Sapienza University of Rome), Leonardo Lavagna (Sapienza University of Rome), Antonello Rosato (Sapienza University of Rome), Massimo Panella (Sapienza University of Rome)

15:36 Quantum Approaches for Degree-Constrained Minimum Spanning Tree Computation

Rafael Carmo (São Paulo State University), Marcos Santana (São Paulo State University), Felipe Fanchini (São Paulo State University), Kelton Costa (São Paulo State University), Wesley Santana Rosalem (São Paulo State University), João Papa (São Paulo State University)

15:54 Using Topology-Aware Reinforcement Learning to Synthesize Quantum Linear Reversible Circuits

Giovanni Acampora (University of Naples Federico II), Allegra Cuzzocrea (University of Naples Federico II), Marco Lapegna (University of Naples Federico II), Roberto Schiattarella (University of Naples Federico II), Atilia Vitiello (University of Naples Federico II)

16:12 Quantum Machine Learning in Healthcare: Evaluating QNN and QSVM Models

Antonio Tudisco (Politecnico di Torino), Deborah Volpe (Politecnico di Torino), Giovanna Turvani (Politecnico di Torino)

15:00 – 16:30

Special Session on AI for Social Good

Room: Raffaello

Session Chair(s): Erik Cambria

15:00 LLMs at the Edge: Performance and Efficiency Evaluation with Ollama on Diverse Hardware

Donghao Huang (SMU), Zhaoxia Wang (SMU)

15:18 Upper confidence bound multi-armed bandits for partially observed Hawkes processes

Wen-Hao Chiang (Purdue University in Indianapolis), George Mohler (Boston College)

15:36 DRCO: a Toolkit for Intelligently Curbing Illegal Wildlife Trade

Songcheng Xu (Northeastern University), Yuhao Ye (Northeastern University), Mingyuan Li (Hebei University of Technology), Haochen You (Columbia University), Kangsheng Wang (University of Science and Technology Beijing), Wenxin Zhang (University of Chinese Academy of Science)

15:54 Fine-Scale Population Estimation Using a Variational Autoencoder-Based Approach Integrating Geospatial Data

Issa Nasralli (DES Unit)

16:12 Quantifying the Cross-sectoral Intersecting Discrepancies within Multiple Groups Using Latent Class Analysis Towards Fairness

Yingfang Yuan (Heriot-Watt University), Kefan Chen (Heriot-Watt University), Mehdi Rizvi (Heriot-Watt University), Lynne Baillie (Heriot-Watt University), Wei Pang (Heriot-Watt University)

15:00 – 16:30

Special Session on AI-Driven Revolution in Healthcare

Room: Tiziano

Session Chair(s): Sirui Li

15:00 Differential Privacy on Large Language Models for Privacy Preserving Clinical Coding

Ben Marshall (The University of Western Australia), Wei Liu (The University of Western Australia), Sirui Li (Murdoch University), Shiv Akarsh Meka (Royal Perth Hospital)

15:18 VMS2-UNet: A Lightweight Non-Causal Vision Mamba2 Model with State Space Duality for Medical Image Segmentation

Jiawei Mo (South China Normal University), Chaoqun Wang (South China Normal University)

15:36 Integrating Neural Language Models in Clinical Practice: A Case Study on Chronic Kidney Disease Consultations

Victor Neves (Mотор.ai), Claudine Badue (Universidade Federal do Espírito Santo), Thiago Santos (Universidade Federal do Espírito Santo), Alberto De Souza (Universidade Federal do Espírito Santo), Lucas Thom (Mотор.ai), João Calenzani (Mотор.ai)

15:54 GNN-ViTCap: GNN-Enhanced Multiple Instance Learning with Vision Transformers for Whole Slide Image Classification and Captioning

S M Taslim Uddin Raju (University of Waterloo), Md. Milon Islam (University of Waterloo), Md Rezwanul Haque (University of Waterloo), Hamdi Altaheri (University of Waterloo), Fakhri Karray (University of Waterloo)

15:00 – 16:30

Special Session on Explainable Deep Neural Networks for Responsible AI: Post-Hoc and Self-Explaining Approaches (DeepXplain 2025)

Room: Botticelli

Session Chair(s): Roseli Aparecida Francelin Romero

15:00 Segmentation and Smoothing Affect Explanation Quality More Than the Choice of Perturbation-based XAI Method for Image Explanations

Gustav Grund Pihlgren (Umeå University), Kary Främling (Umeå University)

15:18 Muppet: a modular and constructive decomposition for perturbation-based explanation methods

Quentin Ferré (Euranova), Ismail Bachchar (Euranova), Hakima Arroubat (Euranova), Aziz Jedidi (Euranova), Youssef Achenchabe (Euranova), Antoine Bonnefoy (Euranova)

15:36 Intersectional Bias Quantification in Facial Image Processing with Pre-Trained ImageNet Classifiers

Valerie Krug (Otto-von-Guericke-University Magdeburg), Florian Röhrbein (Chemnitz University of Technology), Sebastian Stober (Otto-von-Guericke-University Magdeburg)

15:54 Saliency Map Explainability for Breast Ultrasounds

Joao Vitor Santillo (University of São Paulo), Fernando Pereira dos Santos (University of São Paulo)

16:12 Visual Analytics for Explainable AI with Spatio-Temporal Data: A Comparative Study

Roberto Corizzo (American University), Alex Godwin (American University), Massimiliano Altieri (University of Bari Aldo Moro), Michelangelo Ceci (University of Bari Aldo Moro)

15:00 – 16:30

Graph Neural Networks

Room: Marinetti

Session Chair(s): Andrea Giuseppe Di Francesco

15:00 Cross-Graph Relational Knowledge Distillation with Lightweight ST-GCN for Gait Disorder Recognition

Youssef Mourchid (CESI LINEACT), Zakariae Zimek (Mohammed V University), Mohammed El Hassouni (Mohammed V University)

15:18 Learn from Heterophily: Heterophilous Information-enhanced Graph Neural Network

Yilun Zheng (Nanyang Technological University), Jiahao Xu (Nanyang Technological University), Lihui Chen (Nanyang Technological University)

15:36 Every Hop Etched in Memory: Tokenized Graph Mamba Meets Directed Graph Learning

Lizhi Liu (China UnionPay)

15:54 Link Prediction with Physics-Inspired Graph Neural Networks

Andrea Giuseppe Di Francesco (Sapienza University of Rome), Francesco Caso (Sapienza University of Rome), Maria Sofia Bucarelli (Sapienza University of Rome), Fabrizio Silvestri (Sapienza University of Rome)

16:12 Non-Dissipative Graph Propagation for Non-Local Community Detection

William Leeney (University of Bristol), Alessio Gravina (University of Pisa), Davide Bacciu (University of Pisa)

15:00 – 16:30

Trustworthy and Reliable Machine Learning

Room: Trilussa

Session Chair(s): Camilo Carvajal Reyes

15:00 ProARD: Progressive Adversarial Robustness Distillation: Provide Wide Range of Robust Students

Seyedhamidreza Mousavi (Malardalen University), Seyedali Mousavi (Mälardalen University), Masoud Daneshtalab (Mälardalen University)

15:18 Input-Specific and Universal Adversarial Attack Generation for Spiking Neural Networks in the Spiking Domain

Spyridon Raptis (Sorbonne Université, CNRS, LIP6), Haralampos Stratigopoulos (Sorbonne Université, CNRS, LIP6)

15:36 Towards SFW sampling for diffusion models via external conditioning

Camilo Carvajal Reyes (Imperial College London), Joaquín Fontbona (Universidad de Chile), Felipe Tobar (Imperial College London)

15:54 CUBIC: Concept Embeddings for Unsupervised Bias Identification using VLMs

David Méndez (University of Granada), Gianpaolo Bontempo (University of Modena and Reggio Emilia), Elisa Ficarra (University of Modena and Reggio Emilia), Roberto Confalonieri (University of Padova), Natalia Díaz-Rodríguez (University of Granada)

16:12 HEDEL: Homomorphically Encrypted Distributed Ensemble Learning

Riccardo Pazzi (Dhiria S.r.l.), Alessandro Falcetta (Politecnico di Milano), Manuel Roveri (Politecnico di Milano)

16:30 Measuring Multivariate Divergences to Improve Neural Network Performances

Gennaro Auricchio (University of Padua), Paolo Giudici (University of Pavia), Giuseppe Toscani (University of Pavia), Adelaide Emma Bernardelli (University of Pavia)

16:30 – 17:00

Tea Break

Room: Pontifical Gregorian University Hall

16:30 – 18:30

Poster #2E: Language Modeling and Processing

Room: Manzoni

Session Chair(s): Eleonora Lopez

1. Sentiment-aware Dual-flow Graph Convolutional Networks for Aspect Based Sentimental Analysis

Zixin Xue (Beijing University of Posts and Telecommunications), Ruifan Li (Beijing University of Posts and Telecommunications)

2. Understanding User Behavior in Cross-Domain Recommendation: An LLM-Based Approach

Dipak Meher (George Mason University), Ajay Krishna Vajjala (George Mason University), David Rosenblum (George Mason University)

3. Strategy-Augmented Planning for Large Language Models via Opponent Exploitation

Shuai Xu (Nanjing University of Information Science & Technology), Sijia Cui (Institute of Automation of the Chinese Academy of Sciences), Yanna Wang (Institute of Automation of the Chinese Academy of Sciences), Bo Xu (Institute of Automation of the Chinese Academy of Sciences), Qi Wang (Nanjing University of Information Science & Technology)

4. Learning to Learn: When Chain-Of-Thought in Domain-Specific Machine Translation

Yuqian Dai (Logistics and Supply Chain MultiTech R&D Centre), Chun Fai Chan (Logistics and Supply Chain MultiTech R&D Centre), Ying Ki Wong (Logistics and Supply Chain MultiTech R&D Centre), Tsz Ho Pun (Logistics and Supply Chain MultiTech R&D Centre)

5. Evaluating Knowledge-based Cross-lingual Inconsistency in Large Language Models

Hayu Xu (Soochow University), He Zhiwei (Shanghai Jiao Tong University), Xiaolin Xing (Soocow University), Xing Wang (Tencent AI Lab), Rui Wang (Tencent AI Lab), Yu Hong (Soochow University)

6. LLM-Based Embeddings for Program Analysis and Optimization

Calvin Higgins (University of Rhode Island), Marco Alvarez (University of Rhode Island)

7. Learning to Follow Domain-specific Instruction with Verifiable Rewards

Shaohan Huang (Beihang University), Yi Liu (Beihang University), Jiaying Qi (Beihang University), Hailong Yang (Beihang University), Zhongzhi Luan (Beihang University), Depei Qian (Beihang University)

8. Flight Delay Prediction with a Spatiotemporal Cross-Attention Large Language Model

Jianli Ding (Civil Aviation University of China), YIXIANG PENG (Civil Aviation University of China)

9. Measuring Human Involvement in AI-Generated Text: A Case Study on Academic Writing

Yuchen Guo (NII, UT), Zhicheng Dou (NII, UT), Huy Nguyen (NII), ChingChun Chang (NII), Saku Sugawara (NII), Isao Echizen (NII, UT)

10. *LentEx: Generalizable Latent Entity Extraction via Synthetic Data and Instruction-Tuned LLMs*

Umesh Bodhwani (Amazon), Yuan Ling (Amazon), Cibi Chakravarthy Senthilkumar (Amazon), Shujing Dong (Amazon), Yarong Feng (Amazon), Hongfei Li (Amazon), Ayush Goyal (Amazon)

11. *ForPKG: A Framework for Constructing Forestry Policy Knowledge Graph and Application Analysis*

Jingyun Sun (Northeast Forestry University), Zhongze Luo (Northeast Forestry University)

12. *CAST: Sparse Fine-Tuning with Counterfactual Data Augmentation*

Yuqi Qiu (Communication University of China), Xiaoning Wang (Communication University of China)

13. *Interventional Prompt-Tuning for Relation Extraction*

Yu Wang (Peking University), Zhonglin Guo (Beijing Institute of Control and Electronic Technology, P. R. China), Liqiang Wen (Peking University), Yipu Chen (Peking University), Zhen Wang (Peking University), Wen Zhao (Peking University)

14. *Pre-training and Fine-tuning Multi-task Learning Model: An Effective Method for Mongolian Morphological Tagging*

Na Liu (Inner Mongolia University of Technology), Jiajia Ma (Inner Mongolia University of Technology, Hohhot, China), Zhonghao Zhang (Inner Mongolia University of Technology, Hohhot, China), Aodeng Bala (Inner Mongolia Regional Language Research and Application Center), Min LU (Inner Mongolia University of Technology, Hohhot, China), Guiping Liu (Inner Mongolia University of Technology, Hohhot, China)

15. *SciClaimHunt: A Large Dataset for Evidence-based Scientific Claim Verification*

Sujit Kumar (Indian Institute of Technology Guwahati), Anshul Sharma (International Institute of Information Technology - Hyderabad), Siddharth Hemant Khincha (Indian Institute of Technology Guwahati), Gargi Shroff (International Institute of Information Technology - Hyderabad), Sanasam Ranbir Singh (Indian Institute of Technology Guwahati), Rahul Mishra (International Institute of Information Technology - Hyderabad)

16. *Mongolian Sentiment Analysis for Isomorphism-enhanced Projection Word Embedding and BiDTCN*

Yuxin Zhao (Inner Mongolia University of Technology), Nier Wu (Inner Mongolia University of Technology), Menghan Li (Inner Mongolia University of Technology), Yukun He (Inner Mongolia University of Technology)

17. *Harnessing NLP for test case prioritization: unsupervised approaches*

Andrea Vignali (University of Naples Federico II), Giancarlo Sperli (University of Naples Federico II), Simon Pietro Romano (University of Naples Federico II)

18. Understanding the Difficulty of Low-Precision Post-Training Quantization for LLMs

Zifei Xu (d-Matrix), Sayeh Sharify (d-Matrix), Wanzin Yazar (d-Matrix), Tristan Webb (d-Matrix), Xin Wang (d-Matrix)

19. GIELLM: Japanese General Information Extraction Large Language Model Utilizing Mutual Reinforcement Effects

Chengguang Gan (Yokohama National University), Qinghao Zhang (Pusan National University), Tatsunori Mori (Yokohama National University)

16:30 – 18:30

Poster #2F: Multimodal and Speech Processing

Room: Manzoni

Session Chair(s): Eleonora Lopez

20. Multimodal Graph Learning and Sequential Modeling for Video Recommendation

Khalil Bachiri(Cy Cergy Paris Université), Ali Yahyaouy (Sidi Mohamed Ben Abdellah University), Maria Malek (CY Cergy Paris University), Nicoleta Rogovschi (Paris Cité University)

21. MSALNet: Capturing Contextual Relationships for Monocular 3D Visual Grounding

Keyu Guo (Chang'an University), Yongle Huang (Chang'an University), Yongfeng Bu (Chang'an University), Hongkai Wei (Chang'an University), Shijie Sun (Chang'an University), Xiangyu Song (Chang'an University)

22. BlendFL: Blended Federated Learning for Handling Multimodal Data Heterogeneity

Alejandro Guerra Manzanares (New York University Abu Dhabi), Omar El Herraoui (New York University Abu Dhabi), Michail Maniatakos (New York University Abu Dhabi), Farah E. Shamout (New York University Abu Dhabi)

23. FADD-Net:Multimodal Sentiment Analysis Based on Feature Alignment and Differential Decoupling

Jixu Zhang (Anhui University of Science and Technology), Shunxiang Zhang (Anhui University of Science and Technology), Jiajia Liu (Anhui University of Science and Technology), Hua Wen (Anhui University of Science and Technology), Yulei Zhang (Anhui University of Science and Technology), Meng Chen (Anhui University of Science and Technology)

24. EfficientAudioNet: Enhancing Environmental Sound Classification through Data Fusion of Multiple Audio Representations

Michele Scarpiniti (Sapienza University of Rome), Saud Hussain (Sapienza University of Rome), Wangyi Pu (Sapienza University of Rome), Aurelio Uncini (Sapienza University of Rome), Yong-Cheol Lee (Louisiana State University)

25. Two-Level Test-Time Adaptation in Multimodal Learning

Jixiang Lei (Graz University of Technology), Franz Pernkopf (Graz University of Technology)

26. Shared Knowledge Base for Multi Deep Learning in Defect Detection

Youcef Djenouri (University of South Eastern Norway), Asma Belhadi (OsloMet), Gautam Srivastava (Brandon University), Ahmed Nabil Belbachir (NORCE), Alberto Cano (Virginia Tech University)

27. A Hybrid Neural Approach to Speaker Verification with an Improved Additive Angular Margin Loss

Jahangir Alam (Computer Research Institute of Montreal (CRIM), Montreal (Quebec) Canada), Abderrahim Fathan (Computer Research Institute of Montreal (CRIM)), Md Shahidul Alam (Independent Researcher)

28. Q-PGD: A Stealthy and Effective Speaker Recognition Adversarial Attacks Based on Quantized Projected Gradient Descent

Jiahui Wang (Xidian university), Yulong Fu (Xidian University), Jincheng Yang (Xidian university)

29. CEC-MMR: Cross-Entropy Clustering Approach to Multi-Modal Regression

Krzysztof Byrski (Jagiellonian University), Jacek Tabor (Jagiellonian University), Przemysław Spurek (Jagiellonian University), Marcin Mazur (Jagiellonian University)

30. Cross-Modal Neuromorphic Semantic Segmentation based on Knowledge Distillation

Dalia Hareb (I3S/LEAT - Université Côte d'Azur - CNRS), Jean Martinet (I3S - Université Côte d'Azur - CNRS), Benoit Miramond (LEAT - Université Côte d'Azur - CNRS)

31. SymCL: Riemannian Contrastive Learning on the Symmetric Positive Definite Manifold for Visual Classification

Yusheng Bao (Jiangnan University), Rui Wang (Jiangnan University), Tianyang Xu (Jiangnan University), Xiao-jun Wu (Jiangnan University), Josef Kittler (University of Surrey)

16:30 – 18:30

Poster #2G: Continual Learning and Time Series Analysis

Room: Manzoni

Session Chair(s): Jary Pomponi

32. FOCA: Foundation-model-based One-Class Anomaly Detection for Time Series

Mengyuan Ma (Beihang University), Tiejun Wang (Beihang University), Rui Wang (Beihang University), Xudong Mou (Beihang University), Tianyu Wo (Beihang University), Xudong Liu (Beihang University)

33. GenCNER: A Generative Framework for Continual Named Entity Recognition

Yawen Yang (Tsinghua University), Fukun Ma (Tsinghua University), Shiao Meng (Tsinghua University), Aiwei Liu (Tsinghua University), Lijie Wen (Tsinghua University)

34. Estimating Individual Dose-Response Curves under Unobserved Confounders from Observational Data

Chen Shutong (Tsinghua University), Rong Zhengze (Tsinghua University), Yang Li (Tsinghua University)

35. Continual Gesture Learning without Data via Synthetic Feature Sampling

Zhenyu Lu (Carnegie Mellon University), Hao Tang (ETH Zurich & CMU)

36. Haphazard Inputs as Images in Online Learning

Rohit Agarwal (UiT The Arctic University of Norway, Tromsø), Aryan Dessai (IIT (ISM) Dhanbad), Arif Sekh (UiT The Arctic University of Norway, Tromsø), Krishna Agarwal (UiT The Arctic University of Norway, Tromsø), Alexander Horsch (UiT The Arctic University of Norway, Tromsø), Dilip Prasad (UiT The Arctic University of Norway, Tromsø)

37. A Quality Control Method for Ocean Data Based on Multi-time Scale Downsampling and Dynamic Threshold Strategy

Yuhui Lu (Shanghai Ocean University), Qi He (Shanghai Ocean University), Yanling Du (Shanghai Ocean University), Wei Song (Shanghai Ocean University)

38. Evaluation of Time-Series Training Dataset through Lens of Spectrum of Deep State Space Models

Sekitoshi Kanai (NTT), Yasutoshi Ida (NTT), Kazuki Adachi (NTT / Yokohama National University), Mihiro Uchida (NTT), Tsukasa Yoshida (NTT / Toyohashi University of Technology), Shin'ya Yamaguchi (NTT / Kyoto University)

17:00 – 18:30

Special Session on Graph-based solutions for Artificial Intelligence

Room: Michelangelo

Session Chair(s): Luca Virgili

17:00 Explaining Vision Transformers Through Similarity-based Graphs

Michele Marchetti (Università Politecnica delle Marche), Davide Traini (Università di Modena e Reggio Emilia), Domenico Ursino (Università Politecnica delle Marche), Luca Virgili (Università Politecnica delle Marche)

17:18 Augmented Knowledge Graph Querying leveraging LLMs

Marco Arazzi (University of Pavia), Davide Ligari (University of Pavia), Serena Nicolazzo (University of Milan), Antonino Nocera (University of Pavia)

17:36 CRoCExplainer: A Tool to Explain Graph Learning with Improved Connectedness Representation

Yanghepu Li (Kyoto University), Liang Zhao (Kyoto University)

17:54 Exploring Large Language Models for Knowledge Graph Completion with Auto-Prompting

Jia Zhu (Zhejiang Normal University), Pasquale De Meo (University of Messina)

18:12 DeBUGCN - Detecting Backdoors in CNNs Using Graph Convolutional Networks

Akash Vartak (University of Maryland Baltimore County), Khondoker Murad Hossain (University of Maryland Baltimore County), Tim Oates (University of Maryland Baltimore County)

17:00 – 18:30

Neural Networks for Image and video processing II

Room: Raffaello

Session Chair(s): Xiangwei Cheng

17:00 Hierarchical Semantic Enhancement and Efficient Bi-temporal Interaction for Remote Sensing Change Detection

Jingxing Zhong (Fuzhou University), Renda Han (School of Computer Science and Technology, Hainan University), Bingxin Su (School of Software, Harbin Institute of Technology Weihai), Wenxin Zhang (School of Computer Science and Technology, University of Chinese Academy of Science), Yutian Yu (Chang'an Dublin International International College of Transportation, Chang'an University), Cuicui Luo (International College, University of Chinese Academy of Science)

17:18 Assisted-MobileSAM: Unleashing the Potential of MobileSAM through Teacher Assistant Distillation

Zhuolin Li (College of Computer Science, Chongqing University), Xing Wu (College of Computer Science, Chongqing University), Dejian Fang (Fujian Polytechnic Normal University, Fujian, China), Chengliang Wang (College of Computer Science, Chongqing University), Lingqiu Zeng (College of Computer Science, Chongqing University), Peng Wang (Medical big data center, Southwest Hospital of Army Medical University)

17:36 A Lightweight AI-Based Solution for Rain Detection and Vehicle Wiper Control Using Autonomous Driving Cameras

Xiangwei Cheng (Ferdinand-Steinbeis-Institut), Pankhuri Verma (Ferdinand-Steinbeis-Institut), Dirk Slama (Robert-Bosch GmbH and Ferdinand-Steinbeis-Institute), Jens Lachenmaier (Ferdinand-Steinbeis-Institut)

17:54 Self-Adaptive Gamma Context-Aware SSM-based Model for Metal Defect Detection

Sijin Sun (Agency for Science, Technology and Research), Ming Deng (Shanghai University), Xingrui Yu (Agency for Science, Technology and Research), Xinyu Xi (Shanghai Maritime University), Liangbin Zhao (Agency for Science, Technology and Research)

18:12 Object Detection in Remote Sensing Images Based on Knowledge Graph and Visual Attention

Yibo Liu (School of Information and Communication, National University of Defense Technology), Haisu Zhang (School of Information and Communication, National University of Defense Technology), Feng Wen (School of Information and Communication, National University of Defense Technology), Xu Wang (School of Information and Communication, National University of Defense Technology), Luyao Wang (School of Information and Communication, National University of Defense Technology), Xin Cheng (School of Information Engineering, Wuhan University of Technology)

17:00 – 18:30

Neural Networks for Healthcare and life sciences II

Room: Tiziano

Session Chair(s): Peter Erdi

17:00 Frame-Skeleton: A Dual-Stream Network for Action Events Sequence Spotting

Tingyu Xie (Beijing University of Posts and Telecommunications), Bo Zhang (Beijing University of Posts and Telecommunications), Wufan Wang (Beijing University of Posts and Telecommunications), Xirong Que (Beijing University of Posts and Telecommunications), Wendong Wang (Beijing University of Posts and Telecommunications)

17:18 FD-GAN: A Dual-Domain Approach with Fourier Domain Discriminators for Denoising Low-Dose CT Images

Jiashu Li (Wenzhou-Kean University), Yixuan Mi (Wenzhou-Kean University), Moyang Chen (Wenzhou-Kean University), Kuan Huang (Kean University), Gaurav Gupta (Wenzhou-Kean University), Guanchao Tong (Wenzhou-Kean University)

17:36 Enhanced U-Net Models with Hybrid Attention Elements for Medical Image Segmentation

Piyushkumar Banugariya (Royal Holloway, University of London), Li Zhang (Royal Holloway, University of London), Yonghong Yu (Nanjing University of Posts and Telecommunications), Vivian Sedov (Royal Holloway, University of London)

17:54 Designing Stress Response Analyzer using Composite Cardiovascular Biomarkers

Daria Zahorska (University of Calgary), Ievgen Nastenka (Igor Sikorsky Kyiv Polytechnic Institute), Svetlana Yanushkevich (University of Calgary)

18:12 Multi-depth transfer learning-based approaches via generative models for foveal avascular zone segmentation in OCTA images

Ángel Regueiro (University of A Coruña), Elena Goyanes (University of A Coruña), José Joaquim Ramos (University of A Coruña), Jorge Novo (University of A Coruña), Marcos Ortega (University of A Coruña)

17:00 – 18:30

LLM-Based Networks I

Room: Botticelli

Session Chair(s): Giovanni Acampora

17:00 Empowering LLMs with Parameterized Skills for Adversarial Long-Horizon Planning

Sijia Cui (Institute of Automation Chinese Academy of Sciences), Shuai Xu (Nanjing University of Information Science & Technology), Aiyao He (Institute of Automation Chinese Academy of Sciences), Yanna Wang (Institute of Automation Chinese Academy of Sciences), Bo Xu (Institute of Automation Chinese Academy of Sciences)

17:18 MeTHanol: Modularized Thinking Language Models with Intermediate Layer Thinking, Decoding and Bootstrapping Reasoning

Ningyuan Xi (Geely AI Lab), Xiaoyu Wang (Geely AI Lab), Yetao Wu (Geely AI Lab), Teng Chen (Geely AI Lab), Qingqing Gu (Geely AI Lab), Luo Ji (Geely AI Lab)

17:36 Model Cascading for Code: A Cascaded Black-Box Multi-Model Framework for Cost-Efficient Code Completion with Self-Testing

Boyuan Chen (New York University Tandon School of Engineering), Mingzhi Zhu (New York University Tandon School of Engineering), Brendan Dolan-Gavitt (New York University Tandon School of Engineering), Muhammad Shafique (New York University Abu Dhabi), Siddharth Garg (New York University Tandon School of Engineering)

17:54 CLEAR-KGQA: Clarification-Enhanced Ambiguity Resolution for Knowledge Graph Question Answering

Liqiang Wen (Peking University), Guanming Xiong (Peking University), Tong Mo (Peking University), Bing Li (University of International Business and Economics), Weiping Li (Peking University), Wen Zhao (Peking University)

18:12 Comparative Analysis of Token Classification and Zero-Shot LLM Approaches for Named Entity Recognition in the Business Domain

Marco Stefanelli (University of Siena), Marco Maggini (University of Siena), Leonardo Rigutini (Expert.ai)

17:00 – 18:12

Trustworthy and Reliable Artificial Intelligence Applications in Healthcare Decision-Making

Room: Belli

Session Chair(s): Ciaran Bench

17:00 Beyond Filtering: Leveraging Instance Hardness for Data-Centric Machine Learning in Healthcare

Maria Gabriela Valeriano (Universidade Estadual de Campinas), Carlos Roberto Veiga Kiffer (Universidade Federal de São Paulo), Ana Carolina Lorena (Instituto Tecnológico de Aeronáutica)

17:18 Trustworthy and Reliable AI for Heart Disease Diagnosis: Advancing Ethical and Explainable Healthcare Decision-Making

Giovanah Gogi (University of Portsmouth), Santosh Gurung (University of Portsmouth), Alexander Gegov (University of Portsmouth), Farzad Arabikhan (University of Portsmouth), Alexandar Ichtev (Technical University of Sofia)

17:36 Trustworthy image-to-image translation: evaluating uncertainty calibration in unpaired training scenarios

Ciaran Bench (National Physical Laboratory), Emir Ahmed (National Physical Laboratory), Spencer Thomas (National Physical Laboratory)

17:54 Dysarthric Speech Classification: A Comparative Analysis of Decision-Support Methods

Davide Lillini (Università Politecnica delle Marche), Lucia Migliorelli (Università Politecnica delle Marche), Stefano Squartini (Università Politecnica delle Marche), Carlo Aironi (Università Politecnica delle Marche), Leonardo Gabrielli (Università Politecnica delle Marche)

17:00 – 18:30

Neuromorphic Systems

Room: Marinetti

Session Chair(s): Luca Patanè

17:00 Exploring Spiking Neural Networks for Binary Classification in Multivariate Time Series at the Edge

James Ghawaly (Louisiana State University), Andrew Nicholson (Oak Ridge National Laboratory), Dalton Diez (Louisiana State University), Catherine Schuman (The University of Tennessee Knoxville), Aaron Young (Oak Ridge National Laboratory), Brett Witherspoon (Oak Ridge National Laboratory)

17:18 Synchronization of embedded FitzHugh-Nagumo motor-neurons through phase reduction theory

Alberto Motta (DIEEI University of Catania), Luca Patanè (University of Messina), Alessia Li Noce (DIEEI University of Catania), Paolo Arena (DIEEI University of Catania)

17:36 SENMap: Multi-objective dataflow mapping & synthesis for hybrid scalable neuromorphic systems

Prithvish Vijaykumar Nembhani (The University of Manchester), Kevin Shidqi (IMEC), Alexandra Dobrita (IMEC), Yingdu Xu (IMEC), kanishkan. Vadivel (IMEC), Manolis Sifalakis (IMEC), Guangzhi Tang (Maastricht University), Mario Konijnenburg (IMEC), Oliver Rhodes (University of Manchester), Gert-Jan Van Schaik (IMEC), Paul Detterer (IMEC), Zaid Al-Ars (Delft University of Technology), Amirreza Yousefzadeh (University of Twente)

17:54 PointLCA-Net: Using Point Clouds for Energy Efficient Sparse Spatio-Temporal Signal Recognition in Neuromorphic Systems

Sanaz Mahmoodi Takaghaj (Penn State University), Jack Sampson (Penn State University)

18:12 The Hodgkin-Huxley Neuristor

Alon Ascoli (Politecnico di Torino), Emanuele Gemo (Politecnico di Torino), Fernando Corinto (Politecnico di Torino), Marco Gilli (Politecnico di Torino), Michele Bonnin (Politecnico di Torino), Pier Paolo Civalieri (Politecnico di Torino), Ronald Tetzlaff (TU Dresden), Ahmet Samil Demirkol (TU Dresden), Ioannis Messaris (TU Dresden), Vasileios Ntinis (TU Dresden), Dimitris Prousalis (TU Dresden), Stefan Slesazek (NaMLab gGmbH), Thomas Mikolajick (TU Dresden), Leon Chua (University of California, Berkeley)

17:00 – 18:30

Neural Networks for Time Series Analysis II

Room: Trilussa

Session Chair(s): Avinash Achar

17:00 SEDX: Seasonal Encoder-Decoder for Forecasting

Avinash Achar (Tata Consultancy Services), Soumen Pachal (Tata Consultancy Services), Subhadeep Banik (Tata Consultancy Services)

17:18 Temporal Window Smoothing of Exogenous Variables for Improved Time Series Prediction

Mustafa Kamal (North South University), Niyaz Bin Hashem (North South University), Robin Krambroeckers (RobotBulls), Nabeel Mohammed (North South University), Shafin Rahman (North South University)

17:36 Evaluating Temporal Plasticity in Foundation Time Series Models for Incremental Fine-tuning

Jia Liu (Sichuan University), Jinguo Cheng (Sichuan University), Zhenyuan Ma (China Electric Power Research Institute), Xia Fang (Sichuan University), Yuankai Wu (Sichuan University)

17:54 Research on Mobile Target Tracking and Positioning in Wide-Area Complex Electromagnetic Environments

Zhuolong Li (Southwest Jiaotong University), Jin Hou (Southwest Jiaotong University)

18:12 PefNet: Injecting Pre-learned Channel Dependence for Time Series Forecasting with Missing Data

Chenyang He (Beijing University Of Posts and Telecomm), Zilong Yan (Beijing University Of Posts and Telecomm), Tianmu Sha (Beijing University Of Posts and Telecomm), Lei Yao (Beijing University Of Posts and Telecomm), Qi Li (Beijing University Of Posts and Telecomm), Zhenyu Zhang (Beijing University Of Posts and Telecomm), Yong Zhang (Beijing University Of Posts and Telecomm), Da Guo (Beijing University Of Posts and Telecomm)

July 3, 2025

9:00 – 10:00

Keynote talk by Luc De Raedt

Room: Leonardo da Vinci

Neurosymbolic AI : combining data with knowledge

Luc De Raedt

KU Leuven and Örebro University

The focus in AI today is very much on using just data for learning, but one should not learn what one already knows. The challenge therefore is to use the available knowledge to guide and constrain the learning, and to reason with the resulting models in a trustworthy manner. This requires the integration of symbolic AI with machine learning, which is the focus of neurosymbolic AI, often touted as the next wave in AI.

I will argue that Neurosymbolic AI = Logic + Probability + Neural Networks. This will allow me to specify a high-level recipe for incorporating background knowledge into any neural network approach. The recipe starts from neural networks, interprets them at the symbol level by viewing them as “neural predicates” (or relations) and adding logical knowledge layers on top of them. The glue is provided by a probabilistic interpretation of the logic. Probability is interpreted broadly, it provides the quantitative differentiable component necessary to connect the symbolic and subsymbolic levels.

9:30 – 18:00

Workshop: VERIMEDIA: International Workshop on Media Verification and Integrity

Room: Montale

Session Chair(s): Mauro Barni, Irene Amerini

09:30 Welcome and opening remarks

09:45 From Face Recognition to Deception: 20 Years in Biometrics and Synthetic Media
(KEYNOTE)

Sébastien Marcel (IDIAP Research Center, Switzerland)

10:30 Coffee break

11:00 AI-GenBench: A New Ongoing Benchmark for AI-Generated Image Detection

Lorenzo Pellegrini (Università di Bologna), Davide Cozzolino (Università degli Studi di Napoli Federico II), Serafino Pandolfini (Università di Bologna), Davide Maltoni (Università di Bologna), Matteo Ferrara (Università di Bologna), Luisa Verdoliva (Università degli Studi di Napoli Federico II), Marco Prati (IdentifAI), Marco Ramilli (IdentifAI)

11:15 WILD: a new in-the-Wild Image Linkage Dataset for synthetic image attribution

Pietro Bongini (University of Siena), Sara Mandelli (Politecnico di Milano), Andrea Montibeller (University of Trento), Mirko Casu (University of Catania), Orazio Pontorno (University of Catania), Claudio Vittorio Ragaglia (University of Catania), Luca Zanchetta (Sapienza University of Rome), Mattia Aquilina (Sapienza University of Rome), Taiba Majid Wani (Sapienza University of Rome), Luca Guarnera (University of Catania), Benedetta Tondi (University of Siena), Giulia Boato (University of Trento), Paolo Bestagini (Politecnico di Milano), Irene Amerini (Sapienza University of Rome), Francesco De Natale (University of Trento), Sebastiano Battiato (University of Catania), Mauro Barni (University of Siena)

11:30 TrueFake: A Real World Case Dataset of Last Generation Fake Images Also Shared on Social Networks

Stefano Dell'Anna (University of Trento), Andrea Montibeller (University of Trento), Giulia Boato (University of Trento)

11:45 Fragile Watermarking for Image Certification Using Deep Steganographic Embedding

Davide Ghiani (University of Cagliari), Jefferson David Rodriguez Chivata (University of Cagliari), Stefano Lilliu (University of Cagliari), Simone Maurizio La Cava (University of Cagliari), Marco Micheletto (University of Cagliari), Giulia Orrù (University of Cagliari), Federico Lama (Dedem S.p.A.), Gian Luca Marcialis (University of Cagliari)

12:00 Multi-agent Deep Reinforcement Learning for Fake News Detection

Yiwen Wu (University of Bristol), Ryan McConville (University of Bristol), Weiru Liu (University of Bristol), Hongbo Bo (University of Bristol), Kevin McAreavey (University of Bristol)

12:15 Multimedia Integrity, Visual Trust and the Ethical Responsibilities of Journalists in the Digital Age (KEYNOTE)

Marco Capovilla (Politecnico di Milano and IULM University)

13:00 Lunch break

14:00 Demo session: Tools for Media Authenticity and Analysis

15:15 The use of AI on photo and video evidence: opportunities, challenges, and regulations (KEYNOTE)

Martino Jerian (CEO and Founder, Amped Software)

16:00 Tea break

16:30 JPEGs Just Got Snipped: Croppable Signatures Against Deepfake Images

Pericle Perazzo (Università di Pisa, Italy), Massimiliano Mattei (Università di Pisa, Italy), Giuseppe Anastasi (Università di Pisa, Italy), Marco Avvenuti (Università di Pisa, Italy), Gianluca Dini (Università di Pisa, Italy), Giuseppe Lettieri (Università di Pisa, Italy), Carlo Vallati (Università di Pisa, Italy)

16:45 Who is driving this deepfake? Beyond Deepfake Detection with Driver Identification

Alexandre Libourel (Eurecom), Jean-Luc Dugelay (Eurecom)

17:00 Training-Free Deepfake Detection: An Identity-Guided Approach Using Facial Embeddings

Mattia Aquilina (Sapienza University of Rome), Taiba Majid (Sapienza University of Rome), Irene Amerini (Sapienza University of Rome)

17:15 End-to-end Audio Deepfake Detection from RAW Waveforms: A RawNet-Based Approach with Cross-Dataset Evaluation

Andrea Di Pierno (IMT Scuola Alti Studi Lucca), Luca Guarnera (University of Catania), Dario Allegra (University of Catania), Sebastiano Battiato (University of Catania)

17:30 Towards Explainable Person-of-Interest-based Audio Synthesis Detection

Alessandro Pianese (University Federico II of Naples), Luca Cuccovillo (Fraunhofer Institute for Digital Media Technology), Giovanni Poggi (University Federico II of Naples), Thomas Le Roux (Fraunhofer Institute for Digital Media Technology), Patrick Aichroth (Fraunhofer Institute for Digital Media Technology)

17:45 Closing remarks

10:00 – 10:30

Coffee Break

Room: Pontifical Gregorian University Hall

10:00 – 13:00

Workshop: Artificial Intelligence for Critical Infrastructure (AICI)

Room: Leopardi

Session Chair(s): Ganesh Kumar Venayagamoorthy

10:00 Artificial Intelligence for Critical Infrastructure Systems: Past, Present and Future

Nelishia Pillay (University of Pretoria), Thambo Nyathi (University of Pretoria), Ganesh Kumar Venayagamoorthy (Clemson University)

10:15 Electric Power Grids Meet High-dimensional Statistics: A Short Survey

Mark Podolskij (University of Luxembourg), Ganesh Kumar Venayagamoorthy (Clemson University)

10:30 Quantum Artificial Intelligence for Critical Infrastructure: A Survey and Vision

Samuel Yen-Chi Chen (Wells Fargo), Kuan-Cheng Chen (Imperial College London)

10:45 Position Paper: Emergent Machina Sapiens Urge Rethinking Multi-Agent Paradigms in Critical Infrastructures

Hepeng Li (University of Maine), Yuhong Liu (Santa Clara University), Jun Yan (Concordia University), Jie Gao (Delft University of Technology), Xiaoou Yang (Santa Clara University)

11:00 A Q-Learning Inspired Context-Aware Dynamic Resource Matchmaking Scheme for Critical Electric Vehicle Infrastructure

Qi An (Deakin University), Frank Jiang (Deakin University), Azadeh Ghari Neiat (The University of Queensland), Mohammad Belayet Hossain (Deakin University), William Yeoh (Hong Kong Metropolitan University), Arkady Zaslavsky (Deakin University), Ashim Kumar Debnath (Deakin University)

11:15 MLP Neural Network Aided Power Plant Controller to Mitigate Oscillations in Renewable Energy Plant

Swakshar Ray (RAY-D-US Renewable Pvt Ltd), Ebin Mathew (IIT Kanpur)

11:30 Data-Driven Learning of Frequency Droop Curves for Critical Power System Infrastructure with Utility-Scale PV Plant

Ali Arzani (Clemson University), Ganesh K. Venayagamoorthy (Clemson University)

11:45 Penetration Testing of Cyber-Physical Attacks in Smart Grids Based on Partially Observable Markov Decision Process

Yuanliang Li (Concordia University), Jun Yan (Concordia University), Mohammed Naili (Ericsson Canada)

12:00 MLP Neural Networks to Identify Different Kinds and Levels of Damage in Bridges from SHM data

Augusto Montisci (Università degli Studi di Cagliari), Francesca Pibi (Università degli Studi di Cagliari), Maria Cristina Porcu (Università degli Studi di Cagliari)

12:15 Panel discussions and future directions

10:00 – 18:00

Workshop: AIMB: Artificial Intelligence in Precision Medicine, Molecular Biology, and Bioinformatics

Room: Loyola

Session Chair(s): Giovanni Cicceri, Marta Lovino, Salvatore Vitabile, Jana Pavlíková Přecechtělová, Giansalvo Cirrincione

10:00 Multimodal data integration in AIDA project (Short dissemination talk)

Marta Lovino (University of Modena and Reggio Emilia)

10:05 Deep learning to predict rules of DNA replication and DNA repair from sequence analysis of cancer genomes (KEYNOTE)

Fran Supek (IRB Barcelona)

10:30 Coffee break

11:00 Improved Brain Tumor Detection in MRI: Fuzzy Sigmoid Convolution in Deep Learning

Muhammad Irfan (University of Turku), Anum Nawaz (University of Turku, Finland), Riku Klén (University of Turku), Abdulhamit Subasi (University at Albany), Tomi Westerlund (University of Turku, Finland), Wei Chen (University of Sydney, Australia)

11:15 Segmentation of Gastrointestinal Tract Cancer using an Enhanced Attention U-Net and MRI Scan

Rotem Levi (Braude College of Engineering), Miri Weiss Cohen (Braude Academic College of Engineering)

11:30 Automatic Detection of Airway Mucus Plugs in CT Scans Using BiVariant Attention and ROI Masking

Yikun Wang (Beijing University of Posts and Telecommunications), Kexin Liu (Wuhan NO.1 hospital), Yudi Zhang (Beijing University of Posts and Telecommunications), Kai Niu (Beijing University of Posts and Telecommunications), Chun Chang (Peking University Third Hospital), Zhiqiang He (Beijing University of Posts and Telecommunications)

11:45 Biologically Informed procedure for Feature Summarization in Spatial Transcriptomics

Matteo Baldan (University of Padova), Giulia Cesaro (University of Padova), Giacomo Baruzzo (University of Padova), Barbara Di Camillo (University of Padova)

12:00 DECSEFE-Org: a hierarchical AI-based framework for automatic DETection, Classification, SEGmentation, and Feature Extraction of Organoids

Giovanni Cicceri (University of Palermo), Carmelo Militello (ICAR-CNR, Italian National Research Council), Salvatore Vitabile (University of Palermo)

12:15 Multi-Modal Medical Image Augmentation for Controlled Heterogeneity and Fair Outcomes

Soo Yong Kim (Seoul National University)

12:30 Lunch

14:00 Can AI understand our feeling? (INVITED TALK)

Harold Szu (Catholic University of America), Shousun Chen (WHO, NICHD NIH), Jeffery Willey (GWU), Hanseok Ko (AI Center, CUA), Hong Yu (CUA), Michael Wardlaw (ONR PM)

14:25 Graph Machine Learning for DNA Classification

Luca Pedrelli (Università di Pisa), Veronica Guerrini (Università di Pisa), Nadia Pisanti (Università di Pisa), Alessio Micheli (Università di Pisa)

14:40 Multi-Channel Learning Framework Based on Relation Aware Transformer for Drug Synergy Prediction

Kaiyuan Zhang (Harbin Institute of Technology), Yifei Huang (National University of Singapore), Tianyi Zang (Harbin Institute of Technology)

14:50 Medical Time-Series Multivariate Interactions Analysis based on Mutual Information

Zhiyuan Xu (Beijing University of Posts and Telecommunications), Kai Niu (Beijing University of Posts and Telecommunications), Xiao Xu (Peking University), Jie Dong (Peking University), Zhiqiang He (Beijing University of Posts and Telecommunications)

15:00 Closing remarks

10:30 – 12:00

Special Track: Human-AI interaction in creative arts and sciences

Room: Leonardo da Vinci

Session Chair(s): Keshav Bhandari

13:30 ImprovNet - Generating Controllable Musical Improvisations with Iterative Corruption Refinement

Keshav Bhandari (Queen Mary University of London), Sungkyun Chang (Queen Mary University of London), Tongyu Lu (Singapore University of Technology and Design), Fareza Rahman Enus (Queen Mary University of London), Louis Bradshaw (Queen Mary University of London), Dorien Herremans (Singapore University of Technology and Design), Simon Colton (Queen Mary University of London)

10:48 FoleyGRAM: Video-to-Audio Generation with GRAM-Aligned Multimodal Encoders

Riccardo Fosco Gramaccioni (Sapienza University of Rome), Christian Marinoni (Sapienza University of Rome), Eleonora Grassucci (Sapienza University of Rome), Giordano Cicchetti (Sapienza University of Rome), Aurelio Uncini (Sapienza University of Rome), Danilo Communiello (Sapienza University of Rome)

11:06 Efficient and Fast Generative-Based Singing Voice Separation Using a Latent Diffusion Model

Genís Plaja-Roglans (Music Technology Group), Yun-Ning Hung (Music.AI), Xavier Serra (Music Technology Group), Igor Pereira (Music.AI)

11:24 TONUS: Neuromorphic human pose estimation for artistic sound co-creation

Jules Lecomte (fortiss GmbH), Konrad Zinner (Hochschule für Musik und Theater München), Michael Neumeier (fortiss GmbH), Axel von Arnim (fortiss GmbH)

11:42 Mamba-Diffusion Model with Learnable Wavelet for Controllable Symbolic Music Generation

Jincheng Zhang (Queen Mary University of London), George Fazekas (Queen Mary University of London), Charalampos Saitis (Queen Mary University of London)

10:30 – 12:00

Special Session on Bayesian Methods for Inference and Learning

Room: Michelangelo

Session Chair(s): Francesco A. N. Palmieri

10:30 Accelerating Simulation-Based Inference with Variational Autoencoders

Mayank Nautiyal (Uppsala University), Andrey Shternshis (Uppsala University), Andreas Hellander (Uppsala University), Prashant Singh (Uppsala University)

10:48 Distilling Calibration via Conformalized Credal Inference

Jiayi Huang (King's College London), Sangwoo Park (King's College London), Nicola Paoletti (King's College London), Osvaldo Simeone (King's College London)

11:06 Meta-level Experience Sharing for Autonomous Systems by Fusing Generative Hierarchical Dynamic Bayesian Networks

Carlo Regazzoni (University of Genoa), Abrham Shiferaw Alemaw (University of Genoa), Pamela Zontone (University of Genoa), Lucio Marcenaro (University of Genoa)

11:24 Particle Propagation for Semantic Path Planning in Continuous Space

Giovanni Di Gennaro (Università degli Studi della Campania), Giovanni Fioretti (Università degli Studi della Campania), Francesco Verolla (Università degli Studi della Campania), Amedeo Buonanno (ENEA, Department of Energy Technologies and Renewable Sources), Francesco A.N. Palmieri (Università degli Studi della Campania), Krishna R. Pattipati (University of Connecticut)

10:30 – 12:00

Special Session on Intelligent Vehicles and Transportation Systems (IVTS)

Room: Raffaello

Session Chair(s): Xihao Wang

10:30 SFCOLA-Net: Spatial-Frequency Collaborative Attention Network for Image Restoration

Hemkant Nehete (IIT Roorkee), Amit Monga (IIT Roorkee), THARUN KUMAR REDDY BOLLU (IIT Roorkee), Raman Balasubramanian (IIT Roorkee)

10:48 OWLed: Outlier-weighted Layerwise Pruning for Efficient Autonomous Driving Framework

Jiaxi Li (University of Surrey), Lu Yin (University of Surrey), Xilu Wang (University of Surrey)

11:06 Drone-UP: Drone-based Unauthorized Parking Detection Method for Edge-devices

Tarun Saini (Indian Institute of Technology, Mandi), Madhumita Guha (Indian Institute of Technology, Mandi), Sachin Kumar Bairwa (Indian Institute of Technology, Mandi), Vandita Dutt (Indian Institute of Technology, Mandi), Kajal Singh (Indian Institute of Technology, Mandi), Dinesh Singh (Indian Institute of Technology, Mandi)

11:04 CL2OD: Class-Incremental Continual Learning for Outdoor 3D Object Detection in Autonomous Driving

Xihao Wang (Technical University of Munich), Xiangzhong Liu (Technical University of Munich)

11:42 Object detection in adverse weather conditions for autonomous vehicles using Instruct Pix2Pix.

Unai Gurbindo (Barcelona Supercomputing Center), Axel Brando (Barcelona Supercomputing Center), Jaume Abella (Barcelona Supercomputing Center), Caroline König (Universitat Politècnica de Catalunya)

10:30 – 12:00

Special Session on Artificial Intelligence for Neural Engineering: Innovations, Applications and Future Directions

Room: Tiziano

Session Chair(s): Nadia Mammone, Cosimo Ieracitano

10:30 Behavior-Reinforced Latent Alignment for Generating Functional Neural Spike Patterns

Shenghui Wu (The Hong Kong University of Science and Technology), Xiang Zhang (The Hong Kong University of Science and Technology), Yiwen Wang (The Hong Kong University of Science and Technology)

10:48 Genetic Predictors of Social and Cognitive Outcomes in People with Ultra-High-Risk of Psychosis Using Spiking Neural Networks

Zohreh Doborjeh (Auckland University of Technology), Balkaran Singh (Auckland University of Technology), Alexander Sumich (Nottingham Trent University), Maryam Doborjeh (Auckland University of Technology), Wilson Wen Bin Goh (Nanyang Technological University), Nikola Kasabov (Auckland University of Technology)

11:06 Movie-ing the EEG: a Hybrid CNN-Transformer-based Framework for decoding EEG signals for BCI applications

Muhammad Suffian (Mediterranea University of Reggio Calabria), Cosimo Ieracitano (Mediterranea University of Reggio Calabria), Francesco Carlo Morabito (Mediterranea University of Reggio Calabria), Nadia Mammone (Mediterranea University of Reggio Calabria)

11:24 Patch-Based Graph Neural Network for Autism Classification via Eye Gaze Analysis

Alessio Verdone (Sapienza University of Rome), Federica Colonnese (Sapienza University of Rome), Antonello Rosato (Sapienza University of Rome), Massimo Panella (Sapienza University of Rome)

11:42 Integrating Cognitive Processing Signals into Language Models: A Review of Advances, Applications and Future Directions

Angela Lopez-Cardona (Universitat Politècnica de Catalunya), Sebastian Idesis (Telefónica Scientific Research), Ioannis Arapakis (Telefónica Scientific Research)

10:30 – 12:00

Special Session on Machine Learning in Complex Energy Systems and Future Sustainability

Room: Botticelli

Session Chair(s): Francesco Grimaccia

10:30 Contextual Pooling for Multiple-Instance Learning-based Non-Intrusive Load Monitoring

Giulia Tanoni (Università Politecnica delle Marche), Emanuele Principi (Università Politecnica delle Marche), Paolo Vitulli (Università Politecnica delle Marche), Luigi Mandolini (MAC srl), Stefano Squartini (Università Politecnica delle Marche)

10:48 Joint Optimisation of Electric Vehicle Routing and Scheduling: A Deep Learning-Driven Approach for Dynamic Fleet Sizes

Jun Kang Yap (Monash University Malaysia), Vishnu Monn Baskaran (Monash University Malaysia), Wen Shan Tan (Monash University Malaysia), Zeyang Ding (Monash University Malaysia), Hao Wang (Monash University Australia), David L. Dowe (Monash University Australia)

11:06 A Bidirectional Gated Recurrent Unit Model for PUE Prediction in Data Centers

Dhivya Dharshini Kannan (National University of Singapore), Anupam Trivedi (National University of Singapore), Dipti Srinivasan (National University of Singapore)

11:24 Multivariate Load Interval Prediction Considering Dispatch Costs for Integrated Coal Mine Energy Systems

Xiaoxuan Xing (China University of Mining and Technology), Dunwei Gong (Qingdao University of Science and Technology), Yong zhang (China University of Mining and Technology), Xiaoyan Sun (Jiangnan University), Jing Sun (Qingdao University of Science and Technology), Yongde Guo (City University of Macau)

11:42 MS-YOLO: Infrared Object Detection for Edge Deployment via MobileNetV4 and SlideLoss

Jiali Zhang (Missouri University of Science and Technology), Thomas White (Missouri University of Science and Technology), Haoliang Zhang (The University of Oklahoma), Wenqing Hu (Missouri University of Science and Technology), Donald Wunsch II (Missouri University of Science and Technology), Jian Liu (Missouri University of Science and Technology)

10:30 – 12:00

Special Session on Machine Learning and Deep Learning Methods applied to Vision and Robotics (MLDLMVR)

Room: Caravaggio

Session Chair(s): Jose Garcia-Rodriguez

10:30 HierADL: Automatic Hierarchical Structures to Improve Daily Activity Recognition

Manuel Benavent-Lledo (University of Alicante), David Ortiz-Perez (University of Alicante), David Mulero-Pérez (University of Alicante), Pablo Ruiz-Ponce (University of Alicante), Jose Garcia-Rodriguez (University of Alicante)

10:48 Autonomous Generation of Sub-goals for Lifelong Learning in Robots

Emanuel Fallas-Hernández (Universidade da Coruña), Sergio Martínez-Alonso (Universidade da Coruña), Alejandro Romero (Universidade da Coruña), José Antonio Becerra (Universidade da Coruña), Richard J. Duro (Universidade da Coruña)

11:06 Obj3Dify: Occlusion-Invariant 3D Reconstruction of Hand-Held Objects

David Mulero-Pérez (University of Alicante), Pablo Ruiz-Ponce (University of Alicante), Manuel Benavent-Lledo (University of Alicante), David Ortiz-Perez (University of Alicante), Jose Garcia-Rodriguez (University of Alicante)

11:24 Improving Face Recognition Methods Using Generative Models

Héctor Penadés (Universidad de Alicante, UA), Felix Escalona (Universidad de Alicante, UA), Miguel Cazorla (Universidad de Alicante, UA)

11:42 Including Semantic Information via Word Embeddings for Skeleton-based Action Recognition

Dustin Aganian (Ilmenau University of Technology), Erik Franze (Ilmenau University of Technology), Markus Eisenbach (Ilmenau University of Technology), Horst-Michael Gross (Ilmenau University of Technology)

10:30 – 12:30

Poster #3A: Image Processing and Computer Graphics

Room: Manzoni

Session Chair(s): Jacopo Daputo

1. Harmonize the Concealment and Saliency: Adaptive Camouflage Synthesizing Network for Camouflage Images Generation

Yuhang Qian (Nanjing University of Aeronautics and Astronautics), Haiyan Chen (Nanjing University of Aeronautics and Astronautics), Dongni Lu (Nanjing University of Aeronautics and Astronautics), Longwu Yang (Nanjing University of Aeronautics and Astronautics), Xinyu Jiang

(Nanjing University of Information Science & Technology), Jie Qin (Nanjing University of Aeronautics and Astronautics)

2. Neural Surface Priors for Editable Gaussian Splatting

Jakub Szymkowiak (Adam Mickiewicz University), Weronika Jakubowska (Wrocław University of Science and Technology), Dawid Malarz (Jagiellonian University), Weronika Smolak-Dyżewska (Jagiellonian University), Maciej Zięba (Wrocław University of Science and Technology), Wojtek Pałubicki (Adam Mickiewicz University), Przemysław Musiański (New Jersey Institute of Technology), Przemysław Spurek (Jagiellonian University)

3. Style-Consistent 3D Indoor Scene Synthesis with Decoupled Objects

Yunfan Zhang (Nanyang Technological University), Hong Huang (The Hong Kong University of Science and Technology (Guangzhou)), Zhiwei Xiong (Nanyang Technological University), Zhiqi Shen (Nanyang Technological University), Guosheng Lin (Nanyang Technological University), Hao Wang (The Hong Kong University of Science and Technology (Guangzhou)), Nicolas Vun (Nanyang Technological University)

4. Uncertainty-Aware 2D Gaussian Splatting for Mesh Reconstruction Under Restricted Views

Yuandong Li (beihang university), Qinglei Hu (beihang university), Zhenchao Ouyang (beihang university), Pengyu Guo (beihang university), Cuicui Jiang (The University of Hongkong)

5. Improving Human Pose Estimation in Low-Resolution Thermal Images through Adaptive Data Augmentation

Juan F. Sanjuan Estrada (Universidad de Almería), Marcos Lupión Lorente (Universidad de Almería), Vicente González Ruiz (Universidad de Almería), Pilar M. Ortigosa (Universidad de Almería)

6. Disentangled representations of microscopy images

Jacopo Daputo (Università degli studi di Genova), Vito Paolo Pastore (Università degli studi di Genova), Nicoletta Noceti (Università degli studi di Genova), Francesca Odone (Università degli studi di Genova)

7. Towards Reliable X-ray Security: SCE-DETR for Detection and Occlusion Handling

Ziyi Wang (Macau University of Science and Technology), Yangrui Fan (Macau University of Science and Technology), Ben Ye (Macau University of Science and Technology)

8. MAF-DETR: Defect Detection with Multi-Scale Adaptive Feature Fusion

chao zhang (Inner Mongolia University of Technology), wenhong wu (Inner Mongolia University of Technology), hengmao niu (Inner Mongolia Technical College of Construction), bao shi (Inner Mongolia University of Technology), nier wu (Inner Mongolia University of Technology), shuo wang (Inner Mongolia University of Technology)

9. CharDetNet: Lightweight Ancient Character Detection with Mixed Attention

yucheng song (Beijing University of Posts and Telecommunications), chuang zhang (Beijing University of Posts and Telecommunications), ming wu (Beijing University of Posts and Telecommunications)

10. SUNet: A Semantic-Driven Framework for Universal Image Enhancement

Zhijie Li (Xi'an University of Architecture and Technology), Yingjie Zhang (Xi'an University of Architecture and Technology), Chaoqun Wang (Jining Polytechnic), Yuan Sun (Xi'an University of Architecture and Technology), Dawei Yan (Xi'an University of Architecture and Technology), Tianyu Wang (Xi'an University of Architecture and Technology), Ghulam Mohi-ud-din (Zhejiang University), Marcin Woźniak (Silesian University of Technology), Wei Dong (Xi'an University of Architecture and Technology)

11. Flexible Source-free Domain Generalization via Domain Prompt-Discriminator Collaborative Learning

Yu Mitsuzumi (NTT Corporation / Kyoto University), Akisato Kimura (NTT Corporation), Hisashi Kashima (Kyoto University)

10:30 – 12:30

Poster #3B: Image Processing and Computer Vision

Room: Manzoni

Session Chair(s):

12. FDSI-RTDETR: A Lightweight Unmanned Aerial Vehicle (UAV) Aerial Image Small Object Detection Network

Tianyu Guo (Tiangong University), Qingzeng Song (Tiangong University), Yongjiang Xue (Tiangong University), Fei Qiao (Tsinghua University)

13. SCProtoNet: Spatial and Channel Reconstruction Prototype Network for Real Time Instance Segmentation

Zhou Fang (Beijing University of Posts and Telecommunications), Hai Huang (Beijing University of Posts and Telecommunications), Hong Chen (Beijing University of Posts and Telecommunications), Shan Yue (Beijing University of Posts and Telecommunications), Zhenqi Tang (Beijing University of Posts and Telecommunications)

14. Integrating Torsion Features into Semantic Segmentation for Remote Sensing Images

Xingjie Sun (Chongqing University), Shangbo Zhou (Chongqing University), Juwei Mu (Chongqing University), Yijia Chen (Chongqing University)

15. Wavelet Transform and Convolution Combined Network for Unsupervised Anomaly Detection

Yujie Wang (Inner Mongolia University of Technology), Xufei Zhuang (Inner Mongolia University of Technology), Ziheng Li (Inner Mongolia University of Technology), Ting Du (Inner Mongolia University of Technology), Qing-Dao-Er-Ji Ren (Inner Mongolia University of Technology),

Xiaoqiang Wang (Inner Mongolia University of Technology), Na Liu (Inner Mongolia University of Technology), Nier Wu (Inner Mongolia University of Technology)

16. *SFD-Net: Synergizing Feature Fusion with HQ-Depth Maps for RGB-D Salient Object Detection*

Zifeng Yan (Beijing University of Posts and Telecommunications), Binbin Yan (Beijing University of Posts and Telecommunications), Shuo Chen (Beijing University of Posts and Telecommunications)

17. *ContourFormer: Real-Time Contour-Based End-to-End Instance Segmentation Transformer*

Weiwei Yao (Zhuzhou CRRC Times Electric Co.,Ltd.), Chen Li (Zhuzhou CRRC Times Electric Co.,Ltd.), Minjun Xiong (Zhuzhou CRRC Times Electric Co.,Ltd.), Wenbo Dong (Zhuzhou CRRC Times Electric Co.,Ltd.), Hao Chen (Zhuzhou CRRC Times Electric Co.,Ltd.), Xiong Xiao (Zhuzhou CRRC Times Electric Co.,Ltd.)

18. *FSC-MOT: Fusion and Shake Compensation for Robust Multi-Object Tracking*

Yangrui Fan (Macau University of Science and Technology), Ziyi Wang (Macau University of Science and Technology), Ben Ye (Macau University of Science and Technology)

19. *MastSAM: Solving Multi-view Inconsistency Segmentation by Sequence Matched 3D Coordinates*

Yuetong Chen (The Chinese University of Hong Kong (Shenzhen)), Yihan Fang (The Chinese University of Hong Kong (Shenzhen)), Yunyan Wang (The Chinese University of Hong Kong (Shenzhen)), Jiayue Dai (The Chinese University of Hong Kong (Shenzhen)), Kenneth Xu (University of Michigan), Butian Xiong (University of Southern California)

20. *ORSA-T: Multi-View Object-Centric Scene Representation Learning with Slot Attention and Transformer*

Henri Placek (City, University of London), Chris Child (City, University of London), Tillman Weyde (City, University of London)

21. *LDFC-YOLO: A Detector for Electron Microscope Images of Cashmere and Wool*

Haiteng Xu (Inner Mongolia University of Technology), Yatu Ji (Inner Mongolia University of Technology), Qing-Dao-Er-Ji Ren (Inner Mongolia University of Technology), Min Lu (Inner Mongolia University of Technology)

22. *YOLO-DYN: An Improved YOLOv8 Model for Multi-Scale Object Detection*

Xu Liu (Inner Mongolia University), Chao Zhang (Inner Mongolia University), Xiang Li (Inner Mongolia University), Ming Ma (Inner Mongolia University)

10:30 – 12:30

Poster #3C: Image and Video Processing

Room: Manzoni

Session Chair(s): Vito Recchia

23. Learning a Discriminative Grassmannian Neural Network for Visual Classification

Yusheng Bao (Jiangnan University), Rui Wang (Jiangnan University), Tianyang Xu (Jiangnan University), Xiao-jun Wu (Jiangnan University), Umapada Pal (Indian Statistical Institute, Kolkata), Josef Kittler (University of Surrey)

24. RSAM-UNETR: Transformers for Road Segmentation for self driving cars using Residual Spatial Attention Module

Alicja Polowczyk (Silesian University of Technology), Agnieszka Polowczyk (Silesian University of Technology), Marcin Wozniak (Silesian University of Technology)

25. Deep Change Vector Analysis to Map Bark Beetle Outbreaks in Open Sentinel-2 Data

Giuseppina Andresini (University of Bari Aldo Moro), Annalisa Appice (University of Bari Aldo Moro), Donato Malerba (University of Bari Aldo Moro), Vito Recchia (University of Bari Aldo Moro)

26. A Few-Shot Learning Approach for Sim2Real Martian Imagery Classification

Hicham Bouchana (DICEAM Department. Mediterranean University of Reggio Calabria.), Alessandro Campolo (DICEAM Department. Mediterranean University of Reggio Calabria.), Cosimo Ieracitano (DICEAM Department. Mediterranean University of Reggio Calabria.), Nadia Mammone (DICEAM Department. Mediterranean University of Reggio Calabria.), Gabriele Berardi (Thales Alenia Space), Piergiorgio Lanza (Thales Alenia Space), Francesco Carlo Morabito (DICEAM Department. Mediterranean University of Reggio Calabria.)

27. Enhancing Synthetic Image Realism with Controlled Diffusion Models

Iqra Nosheen (University of Galway), Muhammad Ali Farooq (University of Galway), Peter M. Corcoran (University of Galway), Cathy Ennis (Technological University Dublin), Michael G. Madden (University of Galway)

28. Automated Machine Learning for Enhanced Digital Image Forgery Detection

Tayasan Gedara (IMT Lucca), Radwa El Shawi (Tartu University), Vincenzo Loia (University of Salerno), Stefania Tomasiello (University of Salerno)

29. GridNet: Vision-based Mitigation of GPS Attacks for Aerial Vehicles

Nian Xue (New York University), Zhen Li (Shandong University of Technology), Xianbin Hong (University of Liverpool), Christina Pöpper (New York University Abu Dhabi)

30. SymFace: Additional Facial Symmetry Loss for Deep Face Recognition

Pritesh Prakash (Central Research Lab, Bharat Electronics Limited), Koteswar Rao Jerripathula (IT Kanpur), Ashish Jacob Sam (Central Research Lab, Bharat Electronics Limited), Prinsh Kumar Singh (Central Research Lab, Bharat Electronics Limited), S Umamaheswaran (Central Research Lab, Bharat Electronics Limited)

31. ViPro-2: Unsupervised State Estimation via Integrated Dynamics for Guiding Video Prediction

Patrick Takenaka (Hochschule der Medien), Johannes Maucher (Hochschule der Medien), Marco F. Huber (University of Stuttgart)

32. Global and Local CNN Attention Mechanisms for Video Summarization

Yujie Li (Guilin University of Electronic Technology), Haonan Jia (Guilin University of Electronic Technology), Jiayi Wang (Guilin University of Electronic Technology), Jie Ren (Guilin University of Electronic Technology), Benying Tan (Guilin University of Electronic Technology)

33. Detecting Cross-domain Deepfake Videos with Contrastive Prototype Learning

Yi Li (Lancaster University), Plamen Angelov (Lancaster University)

34. HR-OTTA: Robust Online Test-Time Adaptation with Hybrid Fine-Tuning

Jixiang Lei (Graz University of Technology), Franz Pernkopf (Graz University of Technology)

11:00 – 18:00

Artistic Exhibition

Room: Trilussa

Organizer: Axel von Arnim

11:00 – 12:30

Meeting: AI for Finance Section Meeting

Room: Alfieri

11:00 – 12:30

Meeting: AI Industry Panel

Room: Marinetti

12:00 – 13:00

Keynote talk by Ruiqi Gao

Room: Leonardo da Vinci

Building generative world models: progress and challenges

Ruiqi Gao

Google DeepMind

Equipping AI models with the ability to imagine, reason, and act in the physical world is a crucial step toward achieving Artificial General Intelligence (AGI). Generative world models, which simulate our world with high fidelity, offer a promising avenue for training and evaluating these embodied AI agents.

In this talk, I will present recent progress in this field. I will begin by covering the latest advancements in video generation models and how they can be controlled through various actions, marking a key milestone in developing large-scale world models. Next, I will discuss how these video models can be integrated to interact with other modalities, such as audio and text. Finally, I will address the critical limitations of current video-based world models, such as ensuring long-term consistency and interactivity, and propose potential solutions to overcome these challenges.

13:00 – 14:00

Lunch

Room: Pontifical Gregorian University Hall

13:00 – 14:30

Meeting: Neural Networks Journal Editorial Board Luncheon

Room: Belli

14:00 – 15:30

Neural Networks for Critical Infrastructures

Room: Leonardo da Vinci

Session Chair(s): Markus Vieth

14:00 Neurocontrol of Triple Coupled Inductor Based Multi-Channel LED Driver

Halleluyah Kupolati (University of Pretoria), Ganesh Venayagamoorthy (Clemson University), Njoroge Gitau (University of Pretoria), Raj Naidoo (University of Pretoria)

14:18 MoE-FTR: A Mixture of Experts Framework for Turbofan engines Remaining Useful Life Estimation

Mattia Limone (Leonardo S.p.A.), Corinna Marchili (Leonardo S.p.A.), Luigi Ciolli (Leonardo S.p.A.)

14:36 Scalable and Robust Physics-Informed Graph Neural Networks for Water Distribution Systems.

Inaam Ashraf (Bielefeld University), André Artelt (Bielefeld University), Barbara Hammer (Bielefeld University)

14:54 Optimization of Sparse Phased Arrays Using Deep Learning

Jackson Earls (University of California, Irvine), Pierre Baldi (University of California, Irvine), Amir Boag (Tel Aviv University), Lior Maman (Tel Aviv University), David Lu (University of California, Irvine)

15:12 Exploring the Feasibility of End-to-End Large Language Model as a Compiler

Hongbin Zhang (Institute of Software, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Shihao Gao (Institute of Software, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Yang Liu (Institute of Software, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Mingjie Xing (Institute of Software, Chinese Academy of Sciences), Yanjun Wu (Institute of Software, Chinese Academy of Sciences), Chen Zhao (Institute of Software, Chinese Academy of Sciences)

14:00 – 15:30

Neural Networks for Image and video processing III

Room: Michelangelo

Session Chair(s): Kejun Li

14:00 RAVM-ULM: Exploring Resolution-Aware Detection and Vision-Mamba Imaging for Ultrasound Localization Microscopy

Kejun Li (Capital Normal University), Haitao Wan (Capital Normal University), Jinpeng Jiang (Capital Normal University), Miaomiao Zhang (Capital Normal University), Na Jiang (Capital Normal University)

14:18 Few-shot Object Detection for Remote Sensing Images with Multi-scale Enhancement Fusion and Direction-aware Attention-RPN

fuping yang (Chongqing University of Posts and Telecommunications), yuru zhong (Chongqing University of Posts and Telecommunications), zhiqing zhang (Chongqing Planning and Natural Resources Information Center), xu zhang (Chongqing University of Posts and Telecommunications)

14:36 IllumiCurveNet: Low-Light Image Enhancement of Lunar Permanently Shadowed Regions Using a Self-Guided Loss Framework

Saksham Jain (Delhi Technological University), Sparsh Jain (Delhi Technological University), Ashish Prajapati (Delhi Technological University), Garvit Singh (Delhi Technological University), Dinesh Kumar Vishwakarma (Delhi Technological University)

14:54 Mitigating Long-Tailed Anomaly Score Distributions with Importance Weighted Loss

Jungi Lee (ELROILAB Inc.), Jungkwon Kim (ELROILAB Inc.), Chi Zhang (ELROILAB Inc.), Sangmin Kim (ELROILAB Inc.), Kwangsun Yoo (ELROILAB Inc.), Seok-Joo Byun (ELROILAB Inc.)

15:12 FreeSeg-Diff: Training-Free Open-Vocabulary Segmentation with Diffusion Models

Barbara Toniella Corradini (Università degli Studi di Siena), Mustafa Shukor (Sorbonne University), Paul Couairon (Sorbonne University), Guillaume Couairon (Sorbonne University), Franco Scarselli (Università degli Studi di Siena), Matthieu Cord (Sorbonne University)

14:00 – 15:30

Autonomous Vehicles and Intelligent Transportation Systems I

Room: Raffaello

Session Chair(s): Eduardo Fraga Da Silva, Ruobing Huang

14:00 Resource Allocation for V2V Communications Using Multi-Agent Reinforcement Learning

Lili Jiang (Tsinghua University), Lifeng Sun (Tsinghua University), Wenwu Zhu (Tsinghua University)

14:18 A Deep Learning-Based Intrusion Detection System for Safeguarding ROS 2-Powered Unmanned Ground Vehicles Against DoS Attacks

Eduardo Fraga Da Silva (Charles Sturt University), Fendy Santoso (Charles Sturt University), Lihong Zheng (Charles Sturt University)

14:36 MATIBL: Multi-level Augmented Trajectory Imputation via Bootstrapping Learning

wenhu Zhang (Beihang University), Tianxi Liao (Beihang University), Yi Xu (Beihang University), Jian Huang (Beihang University)

14:54 AIS Data-Driven Maritime Monitoring Based on Transformer: A Comprehensive Review

Zhiye Xie (-), Enmei Tu (Shanghai Jiao Tong University)

15:12 Cognitive Support in Aviation Operations Utilizing Multimodal Large Language Models

Ruobing Huang (Hong Kong Polytechnic University), Shanshan Feng (Centre for Frontier AI Research, ASTAR), Fan Li (Hong Kong Polytechnic University), Caishun Chen (Centre for Frontier AI Research, ASTAR), Yew Soon Ong (Nanyang Technological University)

14:00 – 15:30

Special Session on Leveraging Foundation Models for Efficiently Developing Generative Models

Room: Tiziano

Session Chair(s): Takashi Shibuya

14:00 A Simple but Strong Baseline for Sounding Video Generation: Effective Adaptation of Audio and Video Diffusion Models for Joint Generation

Masato Ishii (Sony AI), Akio Hayakawa (Sony AI), Takashi Shibuya (Sony AI), Yuki Mitsufuji (Sony AI / Sony Group Corporation)

14:18 Why Lift so Heavy? Slimming Large Language Models by Cutting Off the Layers

Shuzhou Yuan (TU Dresden), Ercong Nie (Ludwig-Maximilians-Universität München), Bolei Ma (LMU Munich), Michael Färber (TU Dresden)

14:36 Quaternion Wavelet-Conditioned Diffusion Models for Image Super-Resolution

Luigi Sigillo (Sapienza University of Rome), Christian Bianchi (Sapienza University of Rome), Aurelio Uncini (Sapienza University of Rome), Danilo Comminiello (Sapienza University of Rome)

14:54 Efficiency without Compromise: CLIP-aided Text-to-Image GANs with Increased Diversity

Yuya Kobayashi (Sony AI), Yuhta Takida (Sony AI), Takashi Shibuya (Sony AI), Yuki Mitsufuji (Sony AI)

15:12 Multi-Party Supervised Fine-tuning of Language Models for Multi-Party Dialogue Generation

Xiaoyu Wang (Geely AI Lab), Ningyuan Xi (Geely AI Lab), Qingqing Gu (Geely AI Lab), Luo Ji (Geely AI Lab)

14:00 – 15:30

Special Session on Self-organizing Clustering for Continual Learning and its Applications

Room: Botticelli

Session Chair(s): Yuichiro Toda, Naoki Masuyama

14:00 Remembering Transformer for Continual Learning

Yuwei Sun (Araya / RIKEN AIP), Ippei Fujisawa (Araya Research), Arthur Juliani (Microsoft Research), Jun Sakuma (Tokyo Institute of Technology/ RIKEN AIP), Ryota Kanai (Araya Research)

14:18 AiGAS-dEVL-RC: An Adaptive Growing Neural Gas Model for Recurrently Drifting Unsupervised Data Streams

Maria Arostegi (Tecnalia Research & Innovation), Miren Nekane Bilbao (UPV/EHU), Jesus L. Lobo (Tecnalia Research & Innovation), Javier Del Ser (Tecnalia Research & Innovation)

14:36 Online Learning Approach for Rough Set C-Means Clustering Using Nodes Approximating the Data Distribution

Seiki Ubukata (Osaka Metropolitan University), Ryoga Hanafusa (Osaka Prefecture University), Katsuhiro Honda (Osaka Metropolitan University)

14:54 A Clustering-based Sample Selection Method for Improving Replay Buffer Quality in Continual Self-Supervised Learning

Naoki Masuyama (Osaka Metropolitan University), Ryosuke Fujii (Osaka Prefecture University), Takato Kinoshita (Osaka Metropolitan University), Yusuke Nojima (Osaka Metropolitan University)

15:12 Stream Clustering Robust to Concept Drift

Felix Iglesias (TU Wien), Simon Konzett (TU Wien), Tanja Zseby (TU Wien), Albert Bifet (University of Waikato)

14:00 – 15:30

Meeting: Mentoring and Skills Development Sub-Committee meeting

Room: Caravaggio

14:00 – 18:00

Workshop: Computational Intelligence for Sustainable Energy Management in Microgrids and Renewable Energy Communities (CISEM 2025)

Room: Leopardi

Session Chair(s): Antonello Rizzi, Enrico De Santis, Antonino Capillo

14:00 Workshop introduction

14:05 Unlocking the potential of industrial non-intrusive load monitoring and future opportunities (TUTORIAL)

Giulia Tanoni (Università Politecnica delle Marche)

14:55 Break

15:10 Optimization model combining sparse nonlinear dynamic identification and neural network: Research based on battery capacity prediction

Quanxi Guo (Politecnico di Milano), Francesco Grimaccia (Politecnico di Milano), Alessandro Niccolai (Politecnico di Milano)

15:30 Graph-Aug LSTM with Weighted Loss for Enhanced Energy Forecasting

Sabereh Taghdisi Rastkar (Sapienza University of Rome), Saeid Jamili (Sapienza University of Rome), Enrico De Santis (Sapienza University of Rome), Antonello Rizzi (Sapienza University of Rome)

15:50 A KAN-SHAP Framework for Fault Detection and Analysis in Smart Grids

Enrico De Santis (Sapienza University of Rome), Gianluca Ferro (Sapienza University of Rome), Antonello Rizzi (Sapienza University of Rome)

14:30 – 16:00

Meeting: AI for Critical Infrastructure Section Meeting

Room: Alfieri

14:30 – 16:00

Meeting: Explainable AI Section Meeting

Room: Belli

14:30 – 16:00

Meeting: AI for Neural Engineering Section Meeting

Room: Marinetti

16:00 – 16:30

Tea Break

Room: Pontifical Gregorian University Hall

16:00 – 18:00

Poster #3D: AI for Critical Infrastructures and Manufacturing I

Room: Manzoni

Session Chair(s): Marco Ricci

1. WTBFlaw-YOLO: YOLO Network for Surface Defect Detection of Wind Turbine Blades

MengFan Yuan (Inner Mongolia University), Bing Jia (Inner Mongolia University), BaoQi Huang (Inner Mongolia University), Winston Seah (Victoria University of Wellington)

2. Enhanced YOLOv8 for Road Defect Detection in Complex Scenarios

Jun Hu (Southwest University of Science and Technology), Yuan Jia (Southwest University of Science and Technology)

3. An Approach to Heterogeneous Task Offloading in Resource-Constrained Intelligent Manufacturing Environment

Li Zudong (Southern university of science and technology), YONGSHENG MA (Southern university of science and technology)

4. DML Mask R-CNN: addressing Dependent Multi-Label defect detection with severity estimation in manufacturing

Thomas Mignot (Michelin), François Ponchon (Michelin), Alexandre Derville (Michelin), Stefan Duffner (LIRIS), Christophe Garcia (LIRIS)

5. Surrogate Modeling of Refrigerant Circuits Using Machine Learning

Naoto Naka (Hiroshima University), Bisser Raytchev (Hiroshima University), Takumi Uemura (Mazda Motor Corporation), Mikimasa Kawaguchi (Mazda Motor Corporation), Kenta Kobayashi (Mazda Motor Corporation), Yoshiharu Ueki (Mazda Motor Corporation), Yoshitaka Wada (Mazda Motor Corporation), Toru Higaki (Hiroshima University), Kazufumi Kaneda (Hiroshima University)

6. Optimized YOLO11 for Accurate Wind Turbine Blade Defect Detection

Chengxu Liu (Inner Mongolia University of Technology, Hohhot, China), Na Liu (Inner Mongolia University of Technology), Xufei Zhuang (Inner Mongolia University of Technology, Hohhot, China), Yi Li (Inner Mongolia University of Technology, Hohhot, China), Bingheng Huo (Inner Mongolia University of Technology, Hohhot, China), Wenshuo Shang (Inner Mongolia University of Technology, Hohhot, China), Guiping Liu (Inner Mongolia University of Technology, Hohhot, China)

7. YOLO-FEE: An Improved Fabric Defect Detection Model Based on YOLOv11s

Zhenyu Wen (Zhejiang University of Technology), Wei Pan (Zhejiang University of Technology), Zhanshuo Dong (Zhejiang University of Technology), Junxia Wang (Zhejiang University of Technology), Jie Su (Zhejiang University of Technology), Fanghong Guo (Zhejiang University of Technology), Xiang Wu (Zhejiang University of Technology), Yejian Zhou (Zhejiang University of Technology)

8. Ensemble broad learning approaches applied to modeling of level bearing vibration in vehicle

Luiz Eduardo Thomaz (UFPR), Alan Lopes (NTN Rolamentos do Brasil), Mateus F. A. de Oliveira (UFPR), Leandro Coelho (UFPR), Viviana Mariani (UFPR)

9. Online Learning of a Real-World Quadcopter Attitude Dynamics using a Self-Organizing RBF Network

Teo Protoulis (University of West Attica), Alex Alexandridis (University of West Attica)

10. Deep Learning Based Captioning of Toys in a Smart Monitoring System

Kritika Jindal (Vellore Institute of Technology Chennai), Govind Agarwal (Vellore Institute of Technology Chennai), Abishi Chowdhury (Vellore Institute of Technology Chennai), Vishal Krishna Singh (University of Essex, Colchester Campus), Rahmat Ullah (University of Essex, Colchester Campus), Mujeeb Ur Rehman (Institute of Artificial Intelligence, De Montfort University), Amrit Pal (Vellore Institute of Technology Chennai)

16:00 – 18:00

Poster 3E: AI for Critical Infrastructures and Manufacturing II

Room: Manzoni

Session Chair(s): Marco Ricci

11. Force of Attraction-Based Distribution Calibration for Enhancing Minority Class Representation

Priyobrata Mondal (Indian Statistical Institute), Faizanuddin Ansari (Indian Statistical Institute), Swagatam Das (Indian Statistical Institute), Pourya Shamsolmoali (School of Communication, East China Normal University, Shanghai, China)

12. Lightweight segmentation neural network for infrastructure maintenance in industrial digital twins

Katarzyna Prokop (Silesian University of Technology), Adam Zielonka (Silesian University of Technology), Dawid Połap (Silesian University of Technology)

13. Topological Mapping based on Multi-Layer Growing Neural Gas for Topological Twin

Mahiro Watanabe (Tokyo Metropolitan University), Takenori Obo (Tokyo Metropolitan University), Siow Chyan Zheng (Tokyo Metropolitan University), Naoyuki Kubota (Tokyo Metropolitan University)

14. Groundwater Seepage Modeling in a River-Canal System based on Physics-Informed Neural Networks

Chong Chen (China University of Petroleum - Beijing), Yifan Li (China University of Petroleum - Beijing), Zongyu Han (China University of Petroleum - Beijing), Yixiao Niu (China University of Petroleum - Beijing), Xiaoyu Zhu (China University of Petroleum - Beijing), Yaru Xue (China University of Petroleum - Beijing)

15. Hybrid machine learning models applied to daily urban water consumption prediction

Ramon Gomes da Silva (PUCPR), Luis Fernando Agottani (UFPR), Anderson Schamne (SANEPAR), Andre Silva (SANEPAR), Gustavo Rafael Collere Possetti (SANEPAR), Leandro Coelho (UFPR), Viviana Mariani (UFPR)

16. Optimized random vector functional link network approach applied to gas turbine emissions prediction

Leandro Coelho (UFPR), Viviana Mariani (UFPR)

17. Domain Adaptation Using Adversarial Neural Network with Correlation Alignment Loss for Household Appliance Classification

Mohammed Ayub (King Fahd University of Petroleum and Minerals), El-Sayed El-Alfy (King Fahd University of Petroleum and Minerals)

18. SSA-UNet: Advanced Precipitation Nowcasting via Channel Shuffling

Marco Turzi (Utrecht University), Siamak Mehrkanon (Utrecht University)

19. The impact of Sensing Parameters on Vibration Anomaly Detection Using Tiny DNNs

Federica Zonzini (University of Bologna), Edoardo Ragusa (University of Genoa), Luca De Marchi (University of Bologna), Paolo Gastaldo (University of Genoa)

20. Efficient Ultrasonic Data Processing for Crack Detection in Concrete Structures

Pietro Burrascano (University of Perugia), Francesco Medaglia (University of Calabria), Stefano Laureti (University of Calabria), Marco Ricci (University of Calabria), Giovanni Angiulli (University "Mediterranea" of Reggio Calabria), mario Versaci (University "Mediterranea" of Reggio Calabria)

21. Improving the Identification of Residential Loads Using Deep Transfer Learning Feature Extraction: A Comparative Analysis

Juan Corrêa (University of São Paulo), Diego Cavalca (Federal University of São Carlos), Ricardo Fernandes (University of Sao Paulo)

16:00 – 18:00

Poster #3F: Quantum Machine Learning and Sustainable AI

Room: Manzoni

Session Chair(s): Owais Ishtiaq Siddiqui

22. Securing ROS Network Traffic Data Against Node Isolation Attacks Using a Deep Learning CNN: An Empirical Study on an Unmanned Ground Vehicle

Fendy Santoso (Charles Sturt University), Anthony Finn (University of South Australia)

23. SuperFC: Selective Data Utilization for a Sustainable and Effective Function-Calling Agent

Xinhua Yang (Northeastern University), Yilun Liu (Huawei), Shimin Tao (Huawei), Chunguang Zhao (Huawei), Weibin Meng (Huawei), Minggui He (Huawei), Chang Su (Huawei), Rongrong Liu (Huawei), Hongxia Ma (Huawei), Li Zhang (Huawei), Jingzhou Du (Huawei), Duan Li (Huawei), Jian Gao (Huawei), Hao Yang (Huawei), Boxing Chen (Huawei), Chuanwen Li (Northeastern University)

24. TQ-DiT: Efficient Time-Aware Quantization for Diffusion Transformers

Younghye Hwang (KAIST), Hyojin Lee (KAIST), Joonhyuk Kang (KAIST)

25. VICount: Device-free Crowd Counting System Using WiFi Signals

Ying Zhang (Inner Mongolia University), Baoqi Huang (Inner Mongolia University), Bing Jia (Inner Mongolia University)

26. Noisy HQNNs: A Comprehensive Analysis of Noise Robustness in Hybrid Quantum Neural Networks

Tasnim Ahmed (New York University Abu Dhabi), Alberto Marchisio (New York University Abu Dhabi), Muhammad Kashif (New York University Abu Dhabi), Muhammad Shafique (New York University Abu Dhabi)

27. Quantum Bayesian Networks for Machine Learning in Oil-Spill Detection

Owais Ishtiaq Siddiqui (COMSATS University Islamabad), Nouhaila Innan (New York University Abu Dhabi), Alberto Marchisio (New York University Abu Dhabi), Mohamed Bennai (Hassan II University of Casablanca), Muhammad Shafique (New York University Abu Dhabi)

16:00 – 18:00

Poster #3G: Machine Learning Theory and Applications

Room: Manzoni

Session Chair(s): George Cavalcanti

28. EHSF: Enhanced Hybrid Supervision Framework for surface-defect detection

Benying Tan (Guilin University of Electronic Technology), Beibei Ren (Guilin University of Electronic Technology), Jie Lin (Guilin University of Electronic Technology), Yujie Li (Guilin University of Electronic Technology), Xiao Qin (Guilin University of Electronic Technology), Shuxue Ding (Guilin University of Electronic Technology)

29. Reshaping Cross-Entropy Non-Convex Properties through Normalized Risk-Averse Loss

Weihao Xia (Harbin Engineering University), Huachuan Wang (Harbin Engineering University), Yuhang Sun (Harbin Engineering University), Enshuo Yan (Harbin Engineering University), Jims Lo (University of Maryland, Baltimore County)

30. TPOT-Clustering

Matheus Camilo da Silva (University of Trieste), Gabriel Marques Tavares (LMU Munich), Sylvio Barbon Junior (University of Trieste)

31. PIPES: A Meta-dataset of Machine Learning Pipelines

Cynthia Maia (ufpe), Lucas de Amorim (UFPE/UFAL), George Cavalcanti (UFPE), Rafael Cruz (Ecole de Technologie Supérieure)

32. Kernelized Low Rank Matrix Recovery: Application In Collaborative Representation Based Classification

Subhajit Saha (TCG CREST), Angshul Majumdar (IIIT Delhi), Swagatam Das (Indian Statistical Institute), Avisek Gupta (TCG CREST)

33. Accelerating Grid Search by Pruning

Shigeo Abe (Kobe University)

34. Attention-SSM Network for Predicting Springback Error in Single Point Incremental Forming

Du Chen (University of Liverpool), Anh Nguyen (University of Liverpool), Frans Coenen (University of Liverpool), Mariluz Penalva Oscoz (Tecnalia), Ander Martin Rebe (Tecnalia), Hai Yang (Nanjing EITRI)

35. Data Driven Derivative-based Regularization for Regression

Enrico Lopedoto (City University London), Kizito Salako (City University London), Maksim Shekhunov (City University London), Vitaly Aksenov (City University London), Tillman Weyde (City University London)

16:30 – 18:00

Position Papers III

Room: Leonardo da Vinci

Session Chair(s): Christos Plachouras

16:30 Position Paper: Rethinking Privacy in RL for Sequential Decision-making in the Age of LLMs

Flint Xiaofeng Fan (National University of Singapore), Cheston Tan (CFAR, ASTAR), Roger Wattenhofer (ETH Zurich), Yew-Soon Ong (CFAR, ASTAR)

16:48 Position Paper: Towards a Unified Representation Evaluation Framework Beyond Downstream Tasks

Christos Plachouras (Queen Mary University of London), Julien Guinot (Queen Mary University of London), George Fazekas (Queen Mary University of London), Elio Quinton (Universal Music Group), Emmanouil Benetos (Queen Mary University of London), Johan Pauwels (Queen Mary University of London)

17:06 Position Paper: The Environmental Cost of Deep Learning: A Call for Sustainable AI Practices

Rahma Fourati (ReGIM-Lab)

17:24 Position Paper: Quantum Neural Networks - A Paradigm Shift in AI or a Theoretical Promise?

Muhammad Kashif (New York University Abu Dhabi), Muhammad Shafique (New York University Abu Dhabi)

16:30 – 18:00

Generative Models III

Room: Michelangelo

Session Chair(s):

16:30 Protein structure generation using a variational autoencoder with Lévy noise and quantum graph transformer

Eric Paquet (National Research Council), Herna Lydia Viktor (University of Ottawa), Wojtek Michalowski (University of Ottawa)

16:48 Improving Vector-Quantized Image Modeling with Latent Consistency-Matching Diffusion

Bac Nguyen (Sony AI), Chieh-Hsin Lai (Sony AI), Yuta Takida (Sony AI), Naoki Murata (Sony AI), Toshimitsu Uesaka (Sony AI), Stefano Ermon (Stanford University), Yuki Mitsufuji (Sony AI, Sony Group Corporation)

17:06 Multi-view Geometry-Aware Diffusion Transformer for Novel View Synthesis of Indoor Scenes

Xueyang Kang (The University of Melbourne, KU Leuven), Zhengkang Xiang (The University of Melbourne), Zezheng Zhang (The University of Melbourne), Kourosh Khoshelham (The University of Melbourne)

17:24 Fashion-RAG: Multimodal Fashion Image Editing via Retrieval-Augmented Generation

Fulvio Sanguigni (University of Modena and Reggio Emilia), Davide Morelli (University of Modena and Reggio Emilia), Marcella Cornia (University of Modena and Reggio Emilia), Rita Cucchiara (University of Modena and Reggio Emilia)

17:42 MagicGS++: Efficient 2D supervision for High-quality 3D Content Generation

jie li (ZhengZhou University), runfeng lv (ZhengZhou University), zhenqiang li (ZhengZhou University), liang liu (ZhengZhou University), lijie jia (ZhengZhou University), yangjie cao (ZhengZhou University)

16:30 – 18:00

Special Session on Tiny Machine Learning

Room: Raffaello

Session Chair(s): Massimo Pavan

16:30 Can LLMs Revolutionize the Design of Explainable and Efficient TinyML Models?

Christophe EL ZEINATY (Univ. Rennes, INSA Rennes, CNRS, IETR - UMR 6164, Rennes), Wassim Hamidouche (KU 6G Research Center, Khalifa University, Abu Dhabi), Glenn Herrou (Univ. Rennes, INSA Rennes, CNRS, IETR - UMR 6164, Rennes), Daniel Menard (Univ. Rennes, INSA Rennes, CNRS, IETR - UMR 6164, Rennes), Merouane Debbah (KU 6G Research Center, Khalifa University, Abu Dhabi)

16:48 Automated Graph-level Passes for TinyML Fault Tolerance

Johannes Kappes (TU Wien), Johannes Geier (Technical University of Munich), Philipp van Kempen (Technical University of Munich), Daniel Mueller-Gritschneider (TU Wien), Ulf Schlichtmann (Technical University of Munich)

17:06 NanoHydra: Energy-Efficient Time-Series Classification at the Edge

Cristian Cioflan (ETH Zurich), Jose Fonseca (ETH Zurich), Xiaying Wang (ETH Zurich), Luca Benini (ETH Zurich)

17:24 TinyCL: An Efficient Hardware Architecture for Continual Learning on Autonomous Systems

Eugenio Ressa (Politecnico di Torino), Alberto Marchisio (New York University Abu Dhabi), Maurizio Martina (Politecnico di Torino), Guido Masera (Politecnico di Torino), Muhammad Shafique (New York University Abu Dhabi)

17:42 Benchmarking Energy and Latency in TinyML: A Novel Method for Resource-Constrained AI

Pietro Bartoli (Politecnico di Milano), Christian Veronesi (Politecnico di Milano), Andrea Giudici (Politecnico di Milano), David Siorpaes (STMicroelectronics), Diana Trojaniello (Essilorluxottica), Franco Zappa (Politecnico di Milano)

16:30 – 18:00

Neural Networks for Audio and Speech

Room: Tiziano

Session Chair(s): Stefano Squartini

16:30 Fine-grained Voice Customization via Intensity Guided Latent Space Exploration

Kwan Yeung Wong (Hong Kong Polytechnic University), Fu-lai Chung (Hong Kong Polytechnic University)

16:48 SMRU-Lite: Efficient Low-Complexity Speech Enhancement Model with Uncertainty Estimation

Zhiyu Zhang (Southeast University), Tong Lei (Nanjing University), Zhihang Sun (Tencent AI Lab), Feiran Yang (Institute of Acoustics, Chinese Academy of Sciences), Rilin Chen (Tencent AI Lab), Chunguo Li (Southeast University)

17:06 A Deep reinforcement Learning Agent for Sound-Based Fighting Games

Yan Zhuang (Politecnico di Milano), Daniele Loiacono (Politecnico di Milano), Pier Luca Lanzi (Politecnico di Milano)

17:24 StereoSync: Spatially-Aware Stereo Audio Generation from Videos

Christian Marinoni (Sapienza University of Rome), Riccardo Fosco Gramaccioni (Sapienza University of Rome), Kazuki Shimada (Sony AI), Takashi Tak Shibuya (Sony AI), Yuki Mitsufuji (Sony), Danilo Comminiello (Sapienza University of Rome)

17:42 JamendoMaxCaps: A Large Scale Music-caption Dataset with Imputed Metadata

Abhinaba Roy (SUTD), Renhang Liu (SUTD), Tongyu Lu (SUTD), Dorien Herremans (SUTD)

16:30 – 18:00

Neural Networks for Healthcare and life sciences III

Room: Botticelli

Session Chair(s): Giovanni Cicceri

16:30 Attention to EEG signals: a transformer-based architecture for the prognosis of patients in coma

João Barbosa (Universidade Federal de Uberlândia), Murillo Carneiro (Universidade Federal de Uberlândia), Sergio Baldo Junior (Universidade de São Paulo), Renato Tinós (Universidade de São Paulo), Donghong Ji (Wuhan University), Zhao Liang (Universidade de São Paulo), João Destro Filho (Universidade Federal de Uberlândia)

16:48 Improving Multileaf Collimator Segment Predictions by Neural Networks with Well-Conditioned Data

Owen Clancey (NYU Langone Hospital-Long Island), Matthew Witten (NYU Langone Hospital-Long Island)

17:06 ASD-Chat: An Innovative Dialogue Intervention System for Children with Autism based on LLM and VB-MAPP

Chengyun Deng (Zhejiang University), Shuzhong Lai (Zhejiang University), Chi Zhou (Zhejiang University), Mengyi Bao (Children's Hospital of Zhejiang University School of Medicine), Jingwen Yan (Beijing IngCare Technology Co.Ltd.), Haifeng Li (Children's Hospital of Zhejiang University School of Medicine), Lin Yao (Zhejiang University), Yueming Wang (Zhejiang University)

17:24 Data-driven Approach for Fatigue Assessment in Swimming Athletes

João Cardoso (University of Aveiro), Hugo Veríssimo (University of Aveiro), Petia Georgieva (University of Aveiro)

17:42 Masked strategies for images with small objects

H. Martin Gillis (Dalhousie University), Ming Hill (Boston University), Paul Hollensen (Alentic Microscience), Alan Fine (Dalhousie University), Thomas Trappenberg (Dalhousie University)

16:30 – 18:00

Physics-Informed Neural Networks

Room: Caravaggio

Session Chair(s): Enrico Aymerich

16:30 Direct-Modelling in Nuclear Fusion by Combining Data-Integration and Physics-Informed Neural Networks

Riccardo Rossi (Università degli Studi di Roma 2 Tor Vergata), Michela Gelfusa (Università degli Studi di Roma 2 Tor Vergata), Novella Rutigliano (Università degli Studi di Roma 2 Tor Vergata), Pasqualino Gaudio (Università degli Studi di Roma 2 Tor Vergata), Andrea Murari (Consorzio RFX)

16:48 Image-to-Image estimation of Heat Flux in STRIKE tiles Using Convolutional Neural Networks

Lorenzo Milia (University of Cagliari), Enrico Aymerich (University of Cagliari), Rita Delogu (Consorzio RFX), Antonio Pimazzoni (Consorzio RFX), Gianluigi Serianni (Consorzio RFX), Alessandra Fanni (University of Cagliari), Giuliana Sias (University of Cagliari)

17:06 Modelling of Underwater Vehicles using Physics-Informed Neural Networks with Control

Abdelhakim Amer (Aarhus University), David Felsager (Aarhus University), Yury Brodskiy (EIVA a/s), Andriy Sarabakha (Aarhus University)

17:24 Physics-Informed Neural Networks for Modeling Traveling Waves in Nonlinear Lattices

Faris Chaudhry (Imperial College London), Akira Wan (Imperial College London), Maxim Vassiliev (Imperial College London), Theodore Gottfried Van Cromphaut (Imperial College London)

17:42 Photovoltaic Module Single-Diode-Model Identification by a Physics-Informed Neural Network

Nikta Shamsmohammadi (Salerno University), Giovanni Spagnuolo (Salerno University)

16:30 – 18:00

8th WOSDETC Drone-vs-Bird Detection Grand Challenge

Room: Alfieri

Session Chair(s): Angelo Coluccia

16:30 The Drone-vs-Bird Detection Grand Challenge at IJCNN 2025

Angelo Coluccia (University of Salento), Alessio Fascista (Politecnico di Bari), Anastasios Dimou (Centre for Research and Technology Hellas), Dimitrios Zarpalas (Centre for Research and Technology Hellas), Lars Sommer (Carl Zeiss AG), Arne Schumann (Fraunhofer IOSB), Emanuele Mele (University of Salento)

16:48 WRN-YOLO: An Improved YOLO for Drone Detection using Wide ResNet

Yi Jie Wong (Universiti Tunku Abdul Rahman), Wingates Voon (Universiti Tunku Abdul Rahman), Mau-Luen Tham (Universiti Tunku Abdul Rahman), Ban-Hoe Kwan (Universiti Tunku Abdul Rahman), Yoong Choon Chang (Universiti Tunku Abdul Rahman), Yan Chai Hum (Universiti Tunku Abdul Rahman)

17:06 Tiny Drone Detection from Videos with Tracking-Based Temporal Lost Compensation

Azusa Sawada (NEC Corporation), Takuya Ogawa (NEC Corporation), Kyota Higa (NEC Corporation)

17:24 Improving Small Drone Detection Through Multi-Scale Processing and Data Augmentation

Rayson Laroca (Pontifical Catholic University of Paraná (PUCPR)), Marcelo dos Santos (Federal University of Paraná), David Menotti (Federal University of Paraná)

17:42 Robust Drone Detection Amidst Birds Using YOLOv8 for Enhanced Surveillance (SHORT PAPER)

Megha Kataria (Indian Institute of Technology Delhi)

16:30 – 18:00

Special Session on Distributed Learning and Intelligent Systems: Advancing Privacy and Scalability for IoT and Edge Networks

Room: Belli

Session Chair(s): Wadii Boulila, Maha Driss

16:30 An Integrated Approach to Mitigate Poisoning Attacks in Federated Learning Frameworks

Shahid Latif (University of the West of England), Djamel Djenouri (University of the West of England), Andrew Adamatzky (University of the West of England)

16:48 A Novel Feature-Aware Chaotic Image Encryption Scheme For Data Security and Privacy in IoT and Edge Networks

Muhammad Shahbaz Khan (Edinburgh Napier University), Ahmed Al-Dubai (Edinburgh Napier University), Jawad Ahmad (Prince Mohammad Bin Fahd University), Nikolaos Pitropakis (Edinburgh Napier University), Baraq Ghaleb (Edinburgh Napier University)

17:06 A Novel Secure Federated Learning Framework for Decentralized Data Processing in IoT Edge Cloud Networks

Qurat-ul-ain Mastoi (University of the west of England, Bristol), Abdullah Lakhan (Dawood University of Engineering and Technology), Nada Alasbali (Department of Informatics and Computer Systems, College of Computer Science, King Khalid University)

17:24 A Comparative Analysis of Artificial Intelligence Methods for Breast Cancer Interpretation

Ijaz Ahmad (Telematic University "Leonardo da Vinci"), Alessia Amelio (University "G. d'Annunzio" Chieti-Pescara), Farman Ali (Sungkyunkwan University), Arcangelo Merla (University of Chieti-Pescara), Francesca Scozzari (University of Chieti-Pescara), Nadeem Ahmad (Iqra University)

17:42 FPE-Net: Face Privacy-Enhancing Method Using Biometric Encryption

Donghua Jiang (School of Computer Science and Engineering, Sun Yat-sen University), Jiangqun Ni (School of Cyber Science and Technology, Sun Yat-sen University), Qingliang Liu (School of Mathematics and Physics, Qingdao University of Science and Technology), Jawad Ahmad (Cybersecurity Center, Prince Mohammad Bin Fahd University), Wadii Boulila (Robotics and Internet-of-Things Laboratory, Prince Sultan University)

16:30 – 18:00

LLM-Based Networks II

Room: Marinetti

Session Chair(s): Enrico De Santis

16:30 Accelerated Dropout: A Bitmask Approach to Speed Up Model Training

Jincheng Xie (Tsinghua University), Hao Shi (Tsinghua University), Sicheng Xu (Tsinghua University), Yan Zhang (Tsinghua University), Zhongyi Huang (Tsinghua University), Zhenyu Ming (Theory Lab)

16:48 GA-LoftQ: Gradient-Aware Alternating Least Squares Framework for LoRA Fine-Tuning Quantization

Jiaxun Xu (Southwest Petroleum University), Jiachen Dang (Southwest Petroleum University), Bo Peng (Southwest Petroleum University)

17:06 Show Less, Instruct More: Enriching Prompts with Definitions and Guidelines for Zero-Shot NER

Andrew Zamai (Universite de Bordeaux), Andrea Zugarini (ExpertAI), Leonardo Rigutini (ExpertAI), Marco Ernandes (ExpertAI), Marco Maggini (University of Siena)

17:24 Less but Better: Parameter-Efficient Fine-Tuning of Large Language Models for Personality Detection

Lingzhi Shen (University of Southampton), Yunfei Long (University of Essex), Xiaohao Cai (University of Southampton), Imran Razzak (University of New South Wales), Guanming Chen (University of Southampton), Shoaib Jameel (University of Southampton)

17:42 End-to-End Text-to-SQL with Dataset Selection: Leveraging LLMs for Adaptive Query Generation

Anurag Tripathi (IIT Delhi), Vaibhav Patle (Infoorigin Inc Pvt Ltd), Abhinav Jain (Infoorigin Inc Pvt Ltd), Ayush Pundir (Infoorigin Inc Pvt Ltd), Sairam Menon (Johnson & Johnson), Ajeet Kumar Singh (Infoorigin Inc Pvt Ltd), Dorien Herremans (Singapore University of Technology and Design)

19:30 – 23:00

Banquet dinner (including Award ceremony)

Location: Orto Botanico, Largo Cristina di Svezia, 24

July 4, 2025

9:30 – 10:30

Keynote talk by Sepp Hochreiter

Room: Leonardo da Vinci

xLSTM: LSTM is so back

Sepp Hochreiter

JKU Linz, NXAI GmbH

Long Short-Term Memory (LSTM) networks have withstood the test of time, forming the foundation of many early deep learning breakthroughs—including the first generation of Large Language Models (LLMs). However, the rise of Transformers has since overshadowed LSTMs, establishing them as the dominant architecture for LLMs.

We revisited the potential of LSTMs and ask: Can LSTMs be scaled up to compete with Transformers?

We introduce xLSTM, a significantly enhanced version of LSTM featuring exponential gating and a novel matrix memory with covariance-based updates. Our kernel implementations of xLSTM adheres to scaling laws and demonstrates faster training than Transformers. More crucially, xLSTM has linear-time inference in the number of produced tokens, in stark contrast to the quadratic complexity of attention mechanisms, making it highly efficient for deployment.

A 7-billion parameter xLSTM model achieves comparable performance to state-of-the-art Transformer models, while offering significantly faster inference. We are currently developing distilled xLSTM variants from large Transformer models with accelerated inference. Additionally, xLSTM time-series foundation models are constructed, which already outperform leading approaches such as Chronos (Amazon), TimesFM (Google), and Moirai (Salesforce).

xLSTM is already seeing real-world adoption: companies like Spleenlab and Festo have successfully integrated it into commercial products.

10:00 – 18:30

Workshop: Deep Learning Techniques for Observable Smart Grid and Sustainable Energy Systems (DLT-4-OSGE)

Room: Michelangelo

Session Chair(s): Giulia Tanoni, Djordje Batic, Stavros Sykiotis, Emanuele Principi, Lina Stankovic, Vladimir Stankovic, Anastasios Doulamis

10:00 Welcome

10:05 Edge-Optimized Non-Intrusive Load Monitoring Using Dependency Graph-Based Structural Pruning

Sotirios Athanasoulas (National Technical University of Athens), Nikos Temenos (National Technical University of Athens), Ioannis Rallis (National Technical University of Athens), Nikolaos Bakalos (National Technical University of Athens), Nikolaos Doulamis (National Technical University of Athens)

10:20 Seasonal-Trend Transformer-based Diffusion Model for Non-Intrusive Load Monitoring

Francesco Sudoso (Sapienza Università di Roma), Redemptor Jr Taloma (Sapienza Università di Roma), Patrizio Pisani (Unidata S.p.A.), Danilo Communiello (Sapienza Università di Roma)

10:35 Coffee break

10:55 Cellular Computational Networks for Distributed Intelligence in Smart Grids (KEYNOTE)

Ganesh Kumar Venayagamoorthy (Clemson University)

11:45 Predictive Maintenance for Hydroelectric Power Plants (TUTORIAL)

Edoardo L'Aurora (ENEL)

13:00 Lunch break

14:00 From Algorithms to Downstream Applications: The Case of Forecasting in Power Systems (KEYNOTE)

Lucas Pereira (Universidade de Lisboa)

14:50 Real-World Energy Management Data from a Smart Building for Optimization and Machine Learning (TUTORIAL)

Andrea Castellani (Honda Institute Research)

15:50 Tea break

16:20 Machine Learning techniques for Predictive Maintenance, energy efficiency and Industry 5.0 applications (TUTORIAL)

Antonello Rizzi (Sapienza University of Rome), Enrico de Santis (Sapienza University of Rome)

17:00 Leveraging Reinforcement Learning for Micro-grid Optimal Control (SHORT PAPER)

Davide Salaorni (Politecnico di Milano), Francesco Trovò (Politecnico di Milano), Federico Bianchi (Ricerca sul Sistema Energetico (RSE)), Marcello Restelli (Politecnico di Milano)

17:15 Multi-Objective Battery Dispatching using an Enhanced SAC Algorithm

Danial Zendeheel (Sapienza University of Rome), Enrico De Santis (Sapienza University of Rome), Antonino Capillo (Sapienza University of Rome), Philip Odonkor (Department of Systems and Enterprises Stevens Institute of Technology), Antonello Rizzi (Sapienza University of Rome)

17:30 Decision Focused Forecasting for Smart Grid Energy Management Systems

Gianluca Ferro (Sapienza University of Rome), Enrico De Santis (Sapienza University of Rome), Antonino Capillo (Sapienza University of Rome), Antonello Rizzi (Sapienza University of Rome)

17:45 On a Fast and Explainable REC HEMS Based on Kolmogorov-Arnold Networks

Antonino Capillo (Sapienza University of Rome), Enrico De Santis (Sapienza University of Rome), Antonello Rizzi (Sapienza University of Rome)

18:00 Closing remarks

10:00 – 18:30

Workshop: Eyes Of The Future: Integrating Artificial Intelligence in Smart Eyewear (IAISE)

Room: Tiziano

Session Chair(s): Francesca Palermo, Simone Mentasti, Giulio Marano, Alberto Pettenella, Hazem Hesham Yousef Shalby, Manuel Roveri, Luca Merigo, Diana Trojaniello

10:00 Opening remarks

10:15 First keynote (KEYNOTE)

Chaira Bartolozzi (IIT)

10:50 Second keynote (KEYNOTE)

Cristina Palermo (King's College London)

11:25 Third keynote (KEYNOTE)

Mihai Bâce (KU Leuven)

THE FOLLOWING SIX PAPERS ARE ARRANGED IN SESSION “POSTER #4E” (16:30 – 18:30)

12:00 Adaptive Tint Control for Smart Electrochromic Eyewear (SHORT PAPER)

Simon Weinberger (ERIC), Jairo Cugliari (ERIC)

12:04 TactiLE: Tiny Active Learning for wearable devices

Massimo Pavan (POLITECNICO DI MILANO), Claudio Galimberti (Politecnico di Milano), Manuel Roveri (Politecnico di Milano)

12:08 Maximizing Eye Segmentation Accuracy with YOLO

Arianna De Vecchi (Politecnico di Milano), Sabrina Azzi (Politecnico di Milano), Pietro Bartoli (Politecnico di Milano), Marco Paracchini (Politecnico di Milano), Diana Trojaniello (EssilorLuxottica), Federica Villa (Politecnico di Milano)

12:12 A Comparative Study of Lightweight Vision Models on Embedded Accelerator Devices (SHORT PAPER)

Greta Corti (Politecnico di Milano), Christian Veronesi (Politecnico di Milano), Pietro Bartoli (Politecnico di Milano), Sara Pidò (Politecnico di Milano), Andrea Giudici (Politecnico di Milano), Francesca Palermo (EssilorLuxottica), Diana Trojaniello (EssilorLuxottica), Matteo Matteucci (Politecnico di Milano), Simone Mentasti (Politecnico di Milano)

12:16 Neuromorphic eye tracking: a survey

Simone Mentasti (Polimi), Andrea Simpsi (Polimi), Andrea Aspesi (Luxottica), Aaron Tognoli (Polimi), Luca Merigo (Luxottica), Matteo Matteucci (Polimi)

12:20 Energy-efficient management of AI applications for Smart Eyewears with tensor quantization

Abednego WAMUHINDO KAMBALE (Politecnico di Milano), Samin Shokrivahed (Politecnico di Milano), Giacomo Verticale (Politecnico di Milano), Francesca Palermo (EssilorLuxottica), Diana Trojaniello (EssilorLuxottica), Danilo Ardagna (Politecnico di Milano)

12:30 Fourth keynote (KEYNOTE)

Michele Magno (ETH Zurich)

13:05 Lunch break

14:00 Fifth keynote (KEYNOTE)

Roberto Vezzani (University of Modena and Reggio Emilia)

14:35 Sixth keynote (KEYNOTE)

Daniele Nardi (Sapienza University of Rome)

15:10 Seventh keynote (KEYNOTE)

Raffaele Capoccia (Meta)

15:45 Eighth keynote (KEYNOTE)

Daniele Perrone (Prophesee)

16:20 Tea break and poster session

16:55 Ninth keynote (KEYNOTE)

Antonino Furnari (University of Catania)

17:25 Awards ceremony and closing remarks

10:30 – 11:00

Coffee Break

Room: Pontifical Gregorian University Hall

11:00 – 13:00

Workshop: AI Applications for “Social Goods”

Room: Loyola

Session Chair(s): Giovanni Di Gennaro, Amedeo Buonanno, Anna Esposito, Francesco A.N. Palmieri, Gennaro Cordasco, Eros Pasero

11:00 Introduction

11:15 First Talk (INVITED)

Alexandre Massoud Alahi (EPFL - Ecole Polytechnique Fédérale de Lausanne)

12:00 Machine Learning for Speech & Language Technology: from Small to Large Language Models

Hermann Ney (RWTH Aachen University)

12:45 Concluding remarks

ALL THE FOLLOWING PAPERS ARE ARRANGED IN SESSION “POSTER #4D” (16:30 – 18:30)

16:30 The Trade-off between Efficiency, Sustainability and Explainability: A Comparative Study on the Quality Control of Laboratory Consumables

Paolo Pagliuca (Institute of Cognitive Sciences and Technologies (ISTC) - National Research Council (CNR)), Meriam Zribi (Department of Basic and Applied Sciences for Engineering - Università degli Studi di Roma La Sapienza), Giulia Tufo (Department of Basic and Applied Sciences for Engineering - Università degli Studi di Roma La Sapienza), Francesca Pitolli (Department of Basic and Applied Sciences for Engineering - Università degli Studi di Roma La Sapienza)

16:30 Incorporating Distributed Invariants in Autonomous Cybersecurity Knowledge Graphs: Approach Using GNNs and LLMs

Nader Belhadj (ENSI)

16:30 Graphs to the Rescue: Revealing Hidden Relationships in Survey Data

Bruno M. F. Resende (USP), Alexandre C. B. Delbem (USP), Eric K. Tokuda (Usp)

16:30 Simulation-based psychological training and assessment using large language models to improve mental health practitioner training: a narrative review

Ciara Mallon (Pneuma Healthcare), Teresa Murphy (Pneuma Healthcare), Sophy McFarlane (Pneuma Healthcare), Maurice Mulvenna (Ulster University), Colin Gorman (Pneuma Healthcare), James Gorman (Pneuma Healthcare), Michael McTear (Ulster University), Raymond Bond (Ulster University), Edel Ennis (Ulster University)

16:30 Frontal Alpha Asymmetry as an Index of Willingness to Interact with Virtual Agents in Users with Depressive Symptoms

Rosa Milo (Università degli Studi della Campania Luigi Vanvitelli), Terry Amorese (Università degli Studi della Campania Luigi Vanvitelli), Marialucia Cuciniello (Università degli Studi della Campania Luigi Vanvitelli), Antonio Perna (Università degli Studi della Campania Luigi Vanvitelli), Gennaro Cordasco (Università degli Studi della Campania Luigi Vanvitelli), Anna Esposito (Università degli Studi della Campania Luigi Vanvitelli)

16:30 GExSent: Gated Experts for Robust Sentiment Analysis Across Modalities

Subhanshu Sethi (Delhi Technological University), Divij Saini (Delhi Technological University), Sarthak Singh (Delhi Technological University), Chhavi Dhiman (Delhi Technological University), Bharat Bhushan (Delhi Technological University)

16:30 Evolutionary Algorithms for Enhanced Public Health Mapping

Gesiel R. Lopes (Universidade de São Paulo), Eric K. Tokuda (University of São Paulo), Alexandre C. B. Delbem (Universidade de São Paulo), Roberto F. da Silva (Universidade de São Paulo), Karina J. Pelarigo (Universidade Federal de São Carlos), Mellina Yamamura (Universidade Federal de São Carlos), Cláudio B. Junior (Universidade Federal de São Carlos), Sérgio H. V. L. de Mattos (Universidade Federal de São Carlos), Denise Scatolini (Center for Disease Control and Prevention, São Carlos Municipality), Antônio M. Saraiva (Universidade de São Paulo)

16:30 FMR-DBv2: an Improved Database for Mask and Respirator Type and FFP Protection Level Recognition Through Deep Learning

Antonio Marceddu (Politecnico di Torino), Nicola Dilillo (Politecnico di Torino), Luigi Di Sergio (Politecnico di Torino), Pietro Ruiu (Università degli Studi di Sassari), Andrea Lagorio (Università degli Studi di Sassari), Filippo Casu (Università degli Studi di Sassari), Enrico Grosso (Università degli Studi di Sassari), Renato Ferrero (Politecnico di Torino), Bartolomeo Montrucchio (Politecnico di Torino)

16:30 Unsupervised Defect Detection in Automotive Quality Inspection with Convolutional Autoencoder

Alessandro Casella (Politecnico di Torino), Vincenzo Randazzo (Politecnico di Torino), Eros Pasero (Politecnico di Torino)

16:30 Graph Attention Networks for Gait-Based Autism Spectrum Disorder Detection and Interpretability

Simone Colella (Sapienza University of Rome), Federica Colonnese (Sapienza University of Rome), Francesco Di Luzio (Sapienza University of Rome), Antonello Rosato (Sapienza University of Rome), Alessio Fioravanti (Sapienza University of Rome), Massimo Panella (Sapienza University of Rome)

11:00 – 12:30

Neural Networks for Image and video processing IV

Room: Raffaello

Session Chair(s): Rui Mao

11:00 MFWNet: Optimizing UAV-based Detection of Wheat Fusarium Head Blight Using Multi-Scale Feature Fusion and Wavelet Convolution

Rui Mao (Northwest A&F University), Jialin Li (Northwest A&F University), Feilong Li (Northwest A&F University), Dongxiang Li (Northwest A&F University), Mingchen Feng (Northwest A&F University), Ben Gu (Northwest A&F University), Ziqi Liu (Northwest A&F University), Jiange Wang (Northwest A&F University)

11:18 A Weighting Loss Approach for Transformer-Based Object Detection

Matthaios Tzimas (Aristotle University of Thessaloniki), Vasileios Mygdalis (Aristotle University of Thessaloniki), Ioannis Pitas (Aristotle University of Thessaloniki)

11:36 A Novel Multi-Directional and Multi-Scenario Radar-Based Human Activity Recognition System

Lun Ma (Chang'an University), Yue Yang (Chang'an University), Zongyi Zhang (Chang'an University), Yanqi Zhao (Chang'an University), Yuhuan Niu (Chang'an University)

11:54 DiffWR: Diffusion for Watermark Removal

Lingli Tang (Wuhan University of Technology, Wuhan, Hubei), Tian Qin (Wuhan University of Technology, Wuhan, Hubei), Yanchun Ma (Wuhan Vocational College of Software and Engineering, Wuhan, Hubei), Qing Xie (Wuhan University of Technology, Wuhan, Hubei), Anshu Hu (Wuhan University of Technology, Wuhan, Hubei), Wenbo Jiang (University of Electronic Science and Technology of China, Chengdu, Sichuan)

12:12 CGMSF-SAR:Context-Guided and Multi-Scale Fusion Lightweight SAR Ship Detection Model

Meng Chen (Anhui University of Science and Technology), Shunxiang Zhang (Anhui University of Science and Technology), Guangli Zhu (Anhui University of Science and Technology), Yang Xu (Anhui University of Science and Technology), Liang Sun (Anhui University of Science and Technology), Jiaqi Liu (Anhui University of Science and Technology)

11:00 – 12:30

Special Session on Deep Learning for Digital Twin Models (DLDTM)

Room: Botticelli

Session Chair(s): Marcin Woźniak

11:00 Learning Text Document Representations by One-Class Glial Neural Networks

Jakub Nowak (Czestochowa University of Technology), Marcin Korytkowski (Czestochowa University of Technology), Slava Voloshynovskiy (University of Geneva), Rafal Scherer (Czestochowa University of Technology)

11:18 Digital Twin-Based Deep Q-Learning Strategy for Smart Handover Optimization in 5G/6G Networks

Carlos Hidalgo-Luque (University of Jaén), Rocío Pérez de Prado (University of Jaén), Mohammad Shojafar (University of Surrey), José Enrique Muñoz-Expósito (University of Jaén), Chuan Foh (University of Surrey), Ángel Cifuentes (Future Connections)

11:36 Custom Sequential Neural Network for Inverse Kinematic Regression

Jakub Silka (Silesian university of technology), Michał Wieczorek (Silesian University of Technology)

11:54 Digital Camera Representations for Forensic Identification

Jarosław Bernacki (Częstochowa University of Technology), Rafał Scherer (Częstochowa University of Technology)

12:12 One-shot Deep Learning Pressure Solver for 2D Eulerian Smoke Simulation Application

Michał Wieczorek (Silesian University of Technology), Jakub Siłka (Silesian University of Technology), Katarzyna Wiltos (Silesian University of Technology)

11:00 – 12:30

Special Session on Collaborative Learning of Trustworthy Computational Intelligence Systems (CLOTHES 2025)

Room: Alfieri

Session Chair(s): Michela Fazzolari

11:00 Security Threats to Explainable Classifiers in Federated Learning

Mattia Daole (University of Pisa), Pietro Ducange (University of Pisa), Francisco Herrera (Universidad de Granada), Francesco Marcelloni (University of Pisa), Alessandro Renda (University of Pisa), Nuria Rodríguez-Barroso (Universidad de Granada)

11:18 Improving Krum's Byzantine Resilience in Federated Learning via layerwise aggregation

Mario García-Márquez (Universidad de Granada), Nuria Rodríguez-Barroso (Universidad de Granada), M. Victoria Luzón (Universidad de Granada), Francisco Herrera (Universidad de Granada)

11:36 Transformer-based Poisoning Detection using Concept Drift Analysis

Mario Luca Bernardi (University of Sannio), Marta Cimitile (Unitelma Sapienza), Muhammad Usman (University of Sannio), Anna Vacca (Unitelma Sapienza)

11:54 Differentially Private FastSHAP for Federated Learning Model Explainability

Valerio Bonsignori (Unipisa), Luca Corbucci (Unipisa), Francesca Naretto (Unipisa), Anna Monreale (Unipisa)

12:12 Leveraging Explainability of AI-Based Intrusion Detection Systems in a Federated Environment

Pietro Ducange (University of Pisa), Michela Fazzolari (CNR - Italy), Francesco Marcelloni (University of Pisa), Giustino Claudio Miglionico (University of Pisa)

11:00 – 12:30

Special Session on Neural methods for IR and RecSys

Room: Belli

Session Chair(s): Giulia Di Teodoro

11:00 GATSY: Graph Attention Network for Music Artist Similarity

Andrea Giuseppe Di Francesco (Sapienza University of Rome), Giuliano Giampietro (Sapienza University of Rome), Indro Spinelli (Sapienza University of Rome), Danilo Comminiello (Sapienza University of Rome)

11:18 A Theoretical Analysis of Recommendation Loss Functions under Negative Sampling

Giulia Di Teodoro (University of Pisa), Federico Siciliano (Sapienza University of Rome), Nicola Tonellotto (University of Pisa), Fabrizio Silvestri (Sapienza University of Rome)

11:36 Are Convolutional Sequential Recommender Systems Still Competitive? Introducing New Models and Insights

Federico Siciliano (Sapienza University of Rome), Filippo Betello (Sapienza University of Rome), Antonio Purificato (Sapienza University of Rome), Nicola Tonellotto (University of Pisa), Fabrizio Silvestri (Sapienza University of Rome)

11:54 Decision Evaluation Network driven by User Preferences and Dynamic Interests for Click-Through Rate Prediction

Gang Hua (Wuhan University of Technology), Qing Xie (Wuhan University of Technology), Yuhan Wang (Wuhan University of Technology), Lin Li (Wuhan University of Technology), Mengzi Tang (Wuhan University of Technology), Yongjian Liu (Wuhan University of Technology)

12:12 Research Paper Recommender System by Considering Users' Information Seeking Behaviors

Zhelin Xu (University of Tsukuba), Shuhei Yamamoto (University of Tsukuba), Hideo Joho (University of Tsukuba)

11:00 – 12:30

Brain-Inspired and Cognitive Models

Room: Marinetti

Session Chair(s): Lucie Fontaine

11:00 Improved Accuracy of Robot Localization Using 3-D LiDAR in a Hippocampus-Inspired Model

Andrew Gerstenslager (University of Cincinnati), Bekarys Dukenbaev (University of Cincinnati), Ali Minai (University of Cincinnati)

11:18 A General Closed-loop Predictive Coding Framework for Auditory Working Memory

Zhongju Yuan (Ugent), Geraint Wiggins (AI Lab, Vrije Universiteit and EECS, Queen Mary University of London), Dick Botteldooren (Ugent)

11:36 Semantic and episodic memories in a predictive coding model of the neocortex

Lucie Fontaine (Université de Bordeaux), Frederic Alexandre (Inria)

11:54 Understanding cognitive training from chaotic neural networks and phase space

Jinhang Li (Zhejiang University), Guiyang Lv (Taizhou University), Ping Zhu (Zhejiang University), Feiyan Chen (Zhejiang University), Guoguang He (Zhejiang University)

12:12 A Neuromorphic Model of Learning Meaningful Sequences with Long-Term Memory

Laxmi Iyer (Comenius University), Ali Minai (University of Cincinnati)

11:00 – 12:30

Neural Networks for Urban environments and Navigation

Room: Trilussa

Session Chair(s): Inaam Ashraf

11:00 Efficient Feature Fusion for UAV Object Detection

Xudong Wang (East China Normal University), Yaxin Peng (Shanghai University), Chaomin Shen (East China Normal University)

11:18 LaMDEN: Addressing Elevator-based Navigation with Large Language Models and 3D Scene Graphs

Huzhenyu Zhang (Moscow Institute of Physics and Technology), Dmitry Yudin (Moscow Institute of Physics and Technology)

11:36 VFCAnet: Voxel-wise Fusion and Channel-wise Attention Network for 3D Semantic Occupancy Prediction in Autonomous Driving

Hejiu Lu (Kookmin University), Sang Hun Lee (Kookmin University)

11:54 Fine Grained Urban Grids Clustering of Mobile Phone Metadata with Deep Spatial Temporal Clustering

Zhaobo Hu (Telecom SudParis), Chuan Li (LIPADE, Université Paris Cité, Paris, France), Vincent Gauthier (SAMOVAR, Telecom SudParis, Institut Polytechnique de Paris, France), Hassine Moun gla (LIPADE, Université Paris Cité, Paris, France)

12:12 Assessing Urban Environments with Vision-Language Models: A Comparative Analysis of AI-Generated Ratings and Human Volunteer Evaluations

Felipe Moreno (FGV), Jorge Luis Poco Medina (FGV)

11:00 – 12:30

Neural Networks for Sciences

Room: Montale

Session Chair(s): Otavio Feitosa

11:00 Atmospheric Data Compression and Reconstruction Using Spherical GANs

Otavio Feitosa (INPE/CEMPA), Haroldo Velho (INPE), Saulo Freitas (INPE), Juliana Anochi (INPE), Angel Chovert (INPE/CEAGRE)

11:18 Enhancing Stress-Strain Predictions with Seq2Seq and Cross-Attention based on Small Punch Test

Zhengni Yang (Xi'an Jiaotong-Liverpool University), Rui Yang (Xi'an Jiaotong-Liverpool University), Weijian Han (Materials Academy JITRI), Qixin Liu (Xi'an Jiaotong-Liverpool University)

11:36 Dynamic Scheduling of Airport Flights with Graph Neural Networks

Siyu Sun (Purdue University), Xinyi Zhou (Concordia University)

11:54 Checking extracted rules in Neural Networks

Adrian Wurm (BTU Cottbus-Senftenberg)

12:12 Exploiting Double Representation and Gated Multi-Head Cross-Attention for Polymers Properties Prediction

Paolo Sortino (University of Palermo), Salvatore Contino (University of Palermo), Fabio Villa (University of Palermo), Luca Cruciata (University of Palermo), Roberto Pirrone (University of Palermo)

11:00 – 12:30

Special Session on Systems-Theoretic Approaches to Learning II: Applications to System Identification, State Estimation and Control

Room: Leopardi

Session Chair(s): Avimanyu Sahoo, Vignesh Narayanan

11:00 Online Continual Reinforcement Learning-based Optimal Output Tracking Control of Nonlinear Systems Using Multilayer Observer

Irfan Ahmad Ganie (Missouri University of Science and Technology), Jagannathan Sarangapani (Missouri University of Science and Technology)

11:18 REAL-PINN: Physics-Informed Neural Network with Real-Time Adaptive Learning for Lithium-Ion Battery Health Prediction

MD Sazzad Hossen (The University of Alabama in Huntsville), Avimanyu Sahoo (The University of Alabama in Huntsville)

11:36 A Deep Reservoir Computing Architecture for Dynamic Generative Modeling

Wei Zhang (Washington University in St. Louis), Yuan-Hung Kuan (Washington University in St. Louis), Su-Hsin Chang (Washington University School of Medicine), Jr-Shin Li (Washington University in St. Louis)

11:54 A Bilevel Optimization Framework for Dynamically Correcting Imbalance in Two-class Classification Problems

Karen Medlin (University of North Carolina at Chapel Hill), Sven Leyffer (Argonne National Laboratory), Krishnan Raghavan (Argonne National Laboratory)

12:12 Enhanced Multi-class Classification and Triage of Security Alerts Using Contrastive Learning in Cloud Environment

MD SAZZAD Hossen (University of Alabama in Huntsville), Avimanyu Sahoo (University of Alabama in Huntsville)

13:00 – 14:00

Lunch

Room: Pontifical Gregorian University Hall

13:00 – 15:00

Meeting: IEEE CIS NNTC Meeting

Room: Leopardi

14:00 – 15:00

Keynote talk by Andrzej Cichocki

Room: Leonardo da Vinci

Tensor Networks for AGI, Deep Neural Networks and Machine Learning

Andrzej Cichocki

Systems Research Institute of Polish Academy of Science

Tensors and tensor networks are powerful mathematical tools that expand upon the idea of vectors, and matrices to multiway arrays, which allow efficiently handling and manipulating multidimensional data. Tensors are the essential building blocks of today's leading machine learning and deep neural networks frameworks. In fact, modern Machine Learning methods are using tensor representations to power the next generation of AI algorithms. Due to their versatility and efficiency in handling large scale data, they play a crucial role in popular machine learning frameworks such as Tensorflow, PyTorch/TensorLy-Torch and are kernels in GPUs and TPUs (Tensor Processing Units), specifically designed for parallelizing and accelerating matrix/tensor operations. Moreover, tensor networks will be crucial for Artificial General Intelligence (AGI) because they offer a powerful and versatile framework for representing and processing complex, multi-modal, high-dimensional data, which is essential for building multi-intelligence AGI systems that would possess the ability to reason, adapt to new situations, and solve problems across various domains. Their ability to capture intricate complex correlations and patterns within multi-modal data, along with their potential for efficient computation, makes them a promising direction for AGI research. I will critically overview fundamental low-rank tensor decompositions and tensor networks. Special emphasis will be given to tensorization and quantization. I will discuss their applications to compress deep neural networks, optimize multimodal attentions and generate lightweight neural networks for specific tasks, like image/video reconstruction, super resolution, time series forecasting and brain computer interfaces.

14:00 – 18:30

Workshop: AI for a Cooler Planet: Tackling Environmental Challenges with Neural Networks

Room: Loyola

Session Chair(s): Maria Sofia Bucarelli, Francesco Caso, Andrea Drago, Christian Giannetti, Pietro Liò, Andrea Marinoni, Fabrizio Silvestri

14:00 Welcome and opening remarks

14:10 Neural Networks in the study of climate (KEYNOTE)

Emily Shuckburgh (University of Cambridge)

15:00 AI for Monitoring of corporate GHG emissions (INVITED TALK)

Kasia Tokarska (CarbonPool)

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15:20 Artificial Intelligence for Climate Predictability and Attribution (INVITED TALK)

Antonios Mamalakis (University of Virginia)

15:40 Tea break

16:00 A Foundation Model for the Earth System (INVITED TALK)

Cristian Bodnar (Silurian AI)

16:20 How to Enhance Trust in AI and Climate Explanations (INVITED TALK)

Michail Mamalakis (University of Cambridge)

ALL THE FOLLOWING PAPERS ARE ARRANGED IN SESSION “POSTER #4F” (16:40 – 17:20)

16:40 Quaternion Gated Recurrent Units for Renewable Energy: Improving Power Forecasting
(SHORT PAPER)

Gianfranco Di Marco (Sony), Danilo Comminiello (Sapienza), Aurelio Uncini (Sapienza), Michele Scarpiniti (Sapienza)

16:40 Environmental Spatiotemporal prediction with a Conditioned Diffusion-based Graph Attention model

Angelo Casolaro (University Parthenope of Naples), Vincenzo Capone (University Parthenope of Naples), Massimiliano Giordano Orsini (University Parthenope of Naples), Francesco Camastra (University Parthenope of Naples)

16:40 A Novel Spatio-Temporal Approach for the Environmental Monitoring of Large Areas
(SHORT PAPER)

Leonardo Silveira (Aeronautics Institute of Technology), Claudio A. S. Lelis (Aeronautics Institute of Technology), Ana C. Lorena (Aeronautics Institute of Technology), Johnny Marques (Aeronautics Institute of Technology), Cesar A. C. Marcondes (Aeronautics Institute of Technology), Filipe A. N. Verri (Aeronautics Institute of Technology), Valério Rosset (Aeronautics Institute of Technology)

16:40 Applications of SNN at low energy consumption (SHORT PAPER)

Matteo Scarpone (Università della Svizzera Italiana), Claudio Zandron (Università degli studi Milano Bicocca)

16:40 CARE: Confidence-Aware Regression Estimation of building density fine-tuning EO Foundation Models

Nikolaos Dionelis (ESA), Jente Bosmans (European Space Agency (ESA)), Nicolas Longepe (European Space Agency (ESA))

16:40 An AutoML Framework using AutoGluonTS for Forecasting Seasonal Extreme Temperatures

Pablo Rodríguez-Bocca (Facultad de Ingeniería, Universidad de la República), Guillermo Pereira (Facultad de Ingeniería, Universidad de la República), Diego Kiedanski (Facultad de Ingeniería, Universidad de la República), Soledad Collazo (Faculty of Exact and Natural Sciences, UBA), Sebastian Basterrech (Department of Applied Mathematics and Computer Science, Technical University of Denmark, Denmark), Gerardo Rubino (INRIA-Rennes)

17:20 Panel discussion (all the speakers)

18:00 Closing remarks

15:00 – 16:30

Interpretable and Explainable AI I

Room: Leonardo da Vinci

Session Chair(s): Michele Marchetti

15:00 Why Are You Wrong? Counterfactual Explanations for Language Grounding with 3D Objects

Tobias Preintner (Leiden University), Weixuan Yuan (BMW Group), Qi Huang (Leiden University), Adrian König (BMW Group), Thomas Bäck (Leiden University), Elena Raponi (Leiden University), Niki van Stein (Leiden University)

15:18 Integrating Gradient and Mask-based Approaches for Vision Transformer Explainability

Michele Marchetti (Università Politecnica delle Marche), Davide Traini (Università di Modena e Reggio Emilia), Domenico Ursino (Università Politecnica delle Marche), Luca Virgili (Università Politecnica delle Marche)

15:36 Do Point Cloud Models Learn Object Contour Features?

Hanxiao Tan (TU Dortmund University)

15:54 Causal SHAP: Feature Attribution with Dependency Awareness through Causal Discovery

Woon Yee Ng (Nanyang Technological University), Li Rong Wang (Nanyang Technological University), Siyuan Liu (Nanyang Technological University), Xiuyi Fan (Nanyang Technological University)

16:12 Transformation of audio embeddings into interpretable, concept-based representations

Alice Zhang (The University of Texas at Austin), Edison Thomaz (The University of Texas at Austin), Lie Lu (Dolby Laboratories)

15:00 – 16:30

Special Session on Complex- and Hypercomplex-Valued Neural Networks

Room: Raffaello

Session Chair(s): Marcos Eduardo Valle, Sven Buchholz

15:00 Learning Characteristics of Reverse Quaternion Neural Network

Shogo Yamauchi (Asahi Shinbun Company), Tohru Nitta (Tokyo Woman's Christian University), Takaaki Ohnishi (Rikkyo University)

15:18 Evolutionary Weight Optimization for Variational Quantum Classifiers

Matheus Costa (UFPE), Fernando Neto (UFPE)

15:36 V-EfficientNets: Vector-Valued Efficiently Scaled Convolutional Neural Network Models

Guilherme Neto Vieira (UNICAMP), Marcos Valle (UNICAMP)

15:54 A Comparative Study of Quaternion-Based Fusion Filtering Under Two Packet Dropout Models with Properness Conditions

Felicidad Gutiérrez-Trujillo (Universidad de Jaén), José D. Jiménez-López (University of Jaén), Rosa M. Fernández-Alcalá (University of Jaén), Jesús Navarro-Moreno (University of Jaén), Juan C. Ruiz-Molina (University of Jaén)

16:12 Torchcvnn: A PyTorch-based library to easily experiment with state-of-the-art Complex-Valued Neural Networks

Jérémy Fix (CentraleSupélec), Quentin Gabot (CentraleSupélec), Huy Nguyen (CentraleSupélec), Joana Frontera Pons (ONERA), Chengfang Ren (CentraleSupélec), Jean-Philippe Ovarlez (ONERA)

15:00 – 16:30

Special Session on Domain Adaptation for Complex Situations: Theories, Algorithms and Applications

Room: Botticelli

Session Chair(s): Guangquan Zhang, Jie Lu

15:00 MiDream: Multi-Domain Retrieval Enhancement with Mixture-of-Experts

Kehui Tan (South China Normal University), Wenjing Pang (South China Normal University), Jiayang Yao (South China Normal University), Tianqi Pang (South China Normal University), Xiangyang Liu (South China Normal University), Chenyou Fan (South China Normal University)

15:18 Deep Joint Distribution Optimal Transport for Universal Domain Adaptation on Time Series

Romain Mussard (LITIS, Univ Rouen Normandie), Fannia Pacheco (LITIS, Univ Rouen Normandie), Maxime Berar (LITIS, Univ Rouen Normandie), Gilles Gasso (LITIS, INSA Rouen Normandie), Paul Honeine (LITIS, Univ Rouen Normandie)

15:36 MPN: A Multimodal Prototypical Part Network for Enhanced Dermatological Diagnosis and Decision Support

Jingwei Zhang (Institute of Computing Technology, Chinese Academy of Sciences), Xiaodong Yang (Institute of Computing Technology, Chinese Academy of Sciences), Ting Li (Department of Graduate, Hebei North University), He Yuan (Institute of Computing Technology, Chinese Academy of Sciences), Hongying Liu (Medical School of Tianjin University)

15:54 Parameter Transfer for Single-Task Reinforcement Learning

Matthew Landers (University of Virginia), Afsaneh Doryab (University of Virginia)

16:12 McCann's Interpolation for Gradual Domain Adaptation on the Wasserstein Geodesic

Mourad El Hamri (Université Paris Cité), Issam Falih (Université Clermont-Auvergne), Yves Rozenholc (Université Paris Cité)

15:00 – 16:30

Data Analytics and Visualization

Room: Alfieri

Session Chair(s): Mauricio Soto Gomez

15:00 Distill the Best, Ignore the Rest: A Study in Latent Dataset Distillation on Core-Sets

Brian Moser (DFKI), Federico Raue (DFKI), Tobias Nauen (DFKI), Tobias Nauen (DFKI), Andreas Dengel (DFKI)

15:18 Biasing second-order random walk sampling for heterogeneous graph embedding

Mauricio Soto Gomez (Università degli Studi di Milano), Carlos Cano (University of Granada), Justin Reese (Lawrence Berkeley National Laboratory), Peter N. Robinson (Berlin Institute of Health - Charité), Giorgio Valentini (Università degli Studi di Milano), Elena Casiraghi (Università degli Studi di Milano)

15:36 AW-GATCN: Adaptive Weighted Graph Attention Convolutional Network for Event Camera Data Joint Denoising and Object Recognition

Haiyu Li (The university of Sheffield), Charith Abhayaratne (The university of Sheffield)

15:54 Local Sensitivity Analysis of Highly Robust Regression Estimators

Jan Kalina (The Czech Academy of Sciences, Institute of Computer Science)

16:12 Instance space analysis of the capacitated vehicle routing problem

Alessandra Gouvêa (ITA), Nuno Prado (ITA), Eduardo Uchoa (UFF), Mariá Nascimento (ITA)

15:00 – 16:30

Knowledge Representation and Reasoning

Room: Belli

Session Chair(s): Simona Doboli

15:00 Prompt Engineering Techniques for Context-dependent Text-to-SQL in Arabic

Saleh Almohaimeed (University of central Florida), May Alsofyani (University of central Florida), Saad Almohaimeed (University of central Florida), Mansour Al Ghanim (University of central Florida), Liqiang Wang (University of central Florida)

15:18 Decoding Brain Function: Mapping the Conceptual Structure of C. elegans' Sensorium

Emma Reyner-Fuentes (Universidad Carlos III de Madrid), Carmen Peláez-Moreno (Universidad Carlos III de Madrid), Francisco José Valverde-Albacete (Universidad Rey Juan Carlos)

15:36 Using Knowledge Graph Dynamics to Describe Group Ideation Effectiveness in Problem Solving

Mason Malone (Hofstra University), Simona Doboli (Hofstra University), Alexa Doboli (Stony Brook University), Jared Kenworthy (The University of Texas at Arlington)

15:54 Knowledge Probing on Decoder-Only Models in Medical Domain

TING ZENG (University of Malaya), Chu Kiong Loo (Universiti Malaya), Nurul Japar (Universiti Malaya)

16:12 Towards Robust Neurosymbolic Relational Learning

Thais Luca (Universidade Federal do Rio de Janeiro), Aline Paes (Universidade Federal Fluminense), Gerson Zaverucha (Universidade Federal do Rio de Janeiro), Artur d'Avila Garcez (City, University of London)

15:00 – 16:30

Privacy and Security II

Room: Marinetti

Session Chair(s): Marco Viviani

15:00 Leveraging RAG for Privacy Violation Detection and Explainability

Stefano Locci (University of Turin), Davide Audrito (University of Turin, Faculty of Law, Autonomous University of Barcelona (UAB)), Giovanni Livraga (University of Milan), Marco Viviani (University of Milano-Bicocca), Luigi Di Caro (University of Turin)

15:18 Vanishing Privacy: Fast Gradient Leakage Threat to Federated Learning

Yingzhao Jiang (Szu), Yinhao Liu (Szu), Qiao Yan (Szu)

15:36 Effect of Obfuscation on Human Pose Estimation Models: Can We Balance Privacy and Accuracy?

Matteo Mugnai (University of Pisa), Francesco Pistolesi (University of Pisa), Beatrice Lazzerini (University of Pisa)

15:54 ShrinkBox: Backdoor Attack on Object Detection to Disrupt Collision Avoidance in Machine Learning-based Advanced Driver Assistance Systems

Muhammad Zaeem Shahzad (New York University Abu Dhabi), Muhammad Abdullah Hanif (New York University Abu Dhabi), Bassem Ouni (Technology Innovation Institute (TII)), Muhammad Shafique (New York University Abu Dhabi)

16:12 TG-Transformer: A Graph Transformer for Token Transaction Risk Detection with Bi-level Attention

Jiayue Zhou (Shanghai Jiao Tong University), Shiyao Wang (Shanghai Jiao Tong University), Jianan Hong (Shanghai Jiao Tong University), Wenjun Zhu (Shanghai Jiao Tong University), Cunqing Hua (Shanghai Jiao Tong University)

15:00 – 16:30

Dynamic and Recurrent Neural Networks

Room: Trilussa

Session Chair(s): Jérémie Cabessa

15:00 Generative System Dynamics in Recurrent Neural Networks

Michele Casoni (University of Siena), Tommaso Guidi (University of Florence), Alessandro Betti (IMT Scuola Alti Studi), Stefano Melacci (University of Siena), Marco Gori (University of Siena)

15:18 Attractor Regimes of Boolean Recurrent Neural Networks subject to STDP and Global Plasticity

Jérémie Cabessa (University of Versailles - Paris Saclay), Alessandro Villa (University of Lausanne)

15:36 Dynamic Generative Adaptation for Data-Efficient GAN

Divya Saxena (The Hong Kong Polytechnic University), Jiannong Cao (The Hong Kong Polytechnic University), Tarun Kulshrestha (The Hong Kong Polytechnic University), Yuqing Zhao (The Hong Kong Polytechnic University)

15:54 DYNAMAX: Dynamic computing for Transformers and Mamba based architectures

Miguel Nogales (Universidad de Sevilla), Matteo Gambella (Politecnico di Milano), Manuel Roveri (Politecnico di Milano)

15:00 – 16:30

LLM-Based Networks III

Room: Montale

Session Chair(s): Jen-Tzung Chien

15:00 VIS-Llama: Automated Visualization of Food Cold Chain Data Leveraging the Large Language Model

Li Wang (Beijing Technology and Business University), Yi Chen (Beijing Technology and Business University), Cheng Lv (Northeast Normal University), Qinghui Zhang (Beijing Technology and Business University), Yuqing Yang (Beijing Technology and Business University), Christy Jie Liang (University of Technology Sydney)

15:18 Scalability Matters: Overcoming Challenges in InstructGLM with Similarity-Degree-Based Sampling

Hyun Lee (Trinity College), Chris Yi (Trinity College), Maminur Islam (Trinity College), B. D. S. Aritra (Trinity College)

15:36 ICLR: Coupling In-Context Learning with Refiner for Aspect Term Extraction

Chaoqun Liu (Soochow University), Yu Hong (Soochow University), Qingting Xu (Soochow University), Jianmin Yao (Soochow University)

15:54 Dynamic Knowledge Elicitation: Leveraging Student Feedback For Improved Language Model Distillation

Reuven Müller (Kennesaw State University), Ying Xie (Kennesaw State University), Linh Le (Kennesaw State University), Shaoen Wu (Kennesaw State University)

16:12 Reinforced Retrieval-Augmented Generation in Large Language Models

Jen-Tzung Chien (National Yang Ming Chiao Tung University), Zhi-Xuan Tai (National Yang Ming Chiao Tung University)

16:30 – 17:00

Tea Break

Room: Pontifical Gregorian University Hall

16:30 – 18:30

Poster #4A: Hypercomplex and Efficient Neural Networks

Room: Manzoni

Session Chair(s): Florian Eilers

1. Initializing Complex-Valued Neural Networks from their Pretrained Real-Valued Counterparts

Florian Eilers (University of Münster), Xiaoyi Jiang (University of Münster)

2. CVKAN: Complex-Valued Kolmogorov-Arnold Networks

Matthias Wolff (University of Münster), Florian Eilers (University of Münster), Xiaoyi Jiang (University of Münster)

3. Equivariant Neural Networks with Geometric Algebras: A New Approach

Ekaterina Filimoshina (HSE University), Dmitry Shirokov (HSE University)

4. Pruning Everything, Everywhere, All at Once

Gustavo do Nascimento (Universidade de São Paulo), Ian Pons (Universidade de São Paulo), Anna Reali (Universidade de São Paulo), Artur Jordao (Universidade de São Paulo)

5. ICE-Pruning: An Iterative Cost-Efficient Pruning Pipeline for Deep Neural Networks

Wenhao Hu (University of Glasgow), Paul Henderson (University of Glasgow), Jose Cano (University of Glasgow)

6. Adaptive Weight Learning with PSO for Filter Pruning in Deep Learning Models

Jihene Tmamna (ReGIM-Lab), Rahma Fourati (ReGIM-Lab), Hela Ltifi (ReGIM-Lab)

7. Always-Sparse Training by Growing Connections with Guided Stochastic Exploration

Mike Heddes (University of California, Irvine), Narayan Srinivasa (Intel), Tony Givargis (University of California, Irvine), Alex Nicolau (University of California, Irvine)

8. Efficient LLMs with AMP: Attention Heads and MLP Pruning

Leandro Mugnaini (Universidade de São Paulo), Bruno Lopes Yamamoto (Universidade de São Paulo), Lucas Lauton de Alcantara (Universidade de São Paulo), Victor Zacarias (Universidade de São Paulo), Edson Bollis (Instituto de Ciência e Tecnologia Itaú), Lucas Pellicer (Instituto de Ciência e Tecnologia Itaú), Anna Reali (Universidade de São Paulo), Artur Jordao (Universidade de São Paulo)

9. Generalization-Aware Zero-Shot Neural Architecture Search for Self-Supervised Transformers

Jun-Hua Ko (National Taiwan University), Tzi-Dar Chiueh (National Taiwan University)

16:30 – 18:30

Poster #4B: Lightweight and Scalable Neural Networks

Room: Manzoni

Session Chair(s): Andrea Terlizzi

10. Event Prediction and Quality-adaptive Attention for Energy and Data Efficient Dynamic Visual Sensing

Yiming Bu (Syracuse University), Simon Khan (Air Force Research Laboratory), Jiayang Liu (Syracuse University), Qinru Qiu (Syracuse University)

11. RSDiX: Lightweight and Data-Efficient VLMs for Remote Sensing through Self-Distillation

Andrea Terlizzi (University of Salerno), Angelo Nazzaro (University of Salerno), Lorenzo Bernardi (NAIS Solutions), Francesco Bardozzo (University of Salerno), Roberto Tagliaferri (University of Salerno)

12. Directed Perturbations for Efficient Learning of Surrogate Losses

Timothy Cargan (University of Nottingham), Dario Landa-Silva (University of Nottingham), Isaac Triguero (University of Granada)

13. Investigation of Training-free Metrics for Multi-objective Neural Architecture Search

Tianye Shu (Southern University of Science and Technology), Hisao Ishibuchi (Southern University of Science and Technology), Andy Song (Royal Melbourne Institute of Technology), Yang Nan (Southern University of Science and Technology), Lie Meng Pang (Southern University of Science and Technology)

14. DASViT: Differentiable Architecture Search for Vision Transformer

Pengjin Wu (University of Surrey), Ferrante Neri (University of Surrey), Zhenhua Feng (Jiangnan University)

15. MONAS: Efficient Zero-Shot Neural Architecture Search for MCUs

Ye Qiao (University of California, Irvine), Haocheng Xu (University of California, Irvine), Yifan Zhang (University of California, Irvine), Sitao Huang (University of California, Irvine)

16. Exploring the Trade-Off between Model Complexity and Numerical Precision for Efficient Edge AI Inference

Yannick Malot (CEA), Yannick Malot (CEA)

17. GraNNite: Enabling High-Performance Execution of Graph Neural Networks on Resource-Constrained Neural Processing Units

Arghadip Das (Purdue University), Shamik Kundu (Intel Corporation), Arnab Raha (Intel Corporation), Soumendu Ghosh (Intel Corporation), Deepak Mathaikutty (Intel Corporation), Vijay Raghunathan (Purdue University)

18. Mapping at First Sense: A Lightweight Neural Network-Based Indoor Structures Prediction Method for Robot Autonomous Exploration

Haojia Gao (Beijing University of Technology), Haohua Que (Tsinghua University), Kunrong Li (Beijing University of Technology), Weihao Shan (Tsinghua University), Mingkai Liu (Peking University), Rong Zhao (Tsinghua University), Lei Mu (Southwest Minzu University), Xinghua Yang (Beijing Forestry University), Qi Wei (Tsinghua University), Fei Qiao (Tsinghua University)

19. Lite Mongolian-Chinese Neural Machine Translation: Dynamic Convolution with Long-Range Attention

Chen Zhao (Inner Mongolia University of Technology), Yatu Ji (Inner Mongolia University of Technology), Qing-Dao-Er-Ji Ren (Inner Mongolia University of Technology), Min Lu (Inner Mongolia University of Technology)

20. *Neuro-LIFT: A Neuromorphic, LLM-based Interactive Framework for Autonomous Drone Flight at the Edge*

Amogh Joshi (Purdue University), Sourav Sanyal (Purdue University), Kaushik Roy (Purdue University)

16:30 – 18:30

Poster #4C: Reservoir Computing

Room: Manzoni

Session Chair(s): Simon Brown

21. *Structuring Multiple Simple Cycle Reservoirs with Particle Swarm Optimization*

Ziqiang Li (International Research Center for Neurointelligence), Robert Simon Fong (School of Computer Science, University of Birmingham), Kantaro Fujiwara (Department of Mathematical Informatics, Graduate School of Information Science and Technology, The University of Tokyo), Kazuyuki Aihara (International Research Center for Neurointelligence, The University of Tokyo), Gouhei Tanaka (Department of Computer Science, Graduate School of Engineering, Nagoya Institute of Technology)

22. *Slow Feature Oscillation Enhances Reservoir Computing for Learning Long-Period Patterns*

Yuji Kawai (Osaka University), Shinya Fujii (Keio University), Minoru Asada (Osaka University)

23. *Enhancement of Short-Term Memory with Tilted External Magnetic Field for Spin-Wave Reservoir Computing*

Zhuocheng Yang (The University of Tokyo), Jiaxuan Chen (The University of Tokyo), Akira Hirose (The University of Tokyo)

24. *Speaker Recognition and Braille Classification with a Physical Reservoir Computing System*

Simon Brown (University of Canterbury)

25. *The Role of Brain Connectivity Patterns in Applying Connectome-Based Reservoir Computing to Neuroscience Tasks*

Atsuko Takahashi (Hiroshima University), Ling Zhu (East China Normal University), Makoto Fukushima (Hiroshima University)

26. *Advancing RFI-Detection in Radio Astronomy with Liquid State Machines*

Nicholas Pritchard (University of Western Australia), Andreas Wicenec (University of Western Australia), Richard Dodson (University of Western Australia), Mohammed Bennamoun (University of Western Australia)

16:30 – 18:30

Poster #4D: Workshop: AI Applications for “Social Goods”

Room: Manzoni

Session Chair(s): Giovanni Di Gennaro

27. The Trade-off between Efficiency, Sustainability and Explainability: A Comparative Study on the Quality Control of Laboratory Consumables

Paolo Pagliuca (Institute of Cognitive Sciences and Technologies (ISTC) - National Research Council (CNR)), Meriam Zribi (Department of Basic and Applied Sciences for Engineering - Università degli Studi di Roma La Sapienza), Giulia Tufo (Department of Basic and Applied Sciences for Engineering - Università degli Studi di Roma La Sapienza), Francesca Pitolli (Department of Basic and Applied Sciences for Engineering - Università degli Studi di Roma La Sapienza)

28. Incorporating Distributed Invariants in Autonomous Cybersecurity Knowledge Graphs: Approach Using GNNs and LLMs

Nader Belhadj (ENSI)

29. Graphs to the Rescue: Revealing Hidden Relationships in Survey Data

Bruno M. F. Resende (USP), Alexandre C. B. Delbem (USP), Eric K. Tokuda (Usp)

30. Simulation-based psychological training and assessment using large language models to improve mental health practitioner training: a narrative review

Ciara Mallon (Pneuma Healthcare), Teresa Murphy (Pneuma Healthcare), Sophy McFarlane (Pneuma Healthcare), Maurice Mulvenna (Ulster University), Colin Gorman (Pneuma Healthcare), James Gorman (Pneuma Healthcare), Michael McTear (Ulster University), Raymond Bond (Ulster University), Edel Ennis (Ulster University)

31. Frontal Alpha Asymmetry as an Index of Willingness to Interact with Virtual Agents in Users with Depressive Symptoms

Rosa Milo (Università degli Studi della Campania Luigi Vanvitelli), Terry Amorese (Università degli Studi della Campania Luigi Vanvitelli), Marialucia Cuciniello (Università degli Studi della Campania Luigi Vanvitelli), Antonio Perna (Università degli Studi della Campania Luigi Vanvitelli), Gennaro Cordasco (Università degli Studi della Campania Luigi Vanvitelli), Anna Esposito (Università degli Studi della Campania Luigi Vanvitelli)

32. GExSent: Gated Experts for Robust Sentiment Analysis Across Modalities

Subhanshu Sethi (Delhi Technological University), Divij Saini (Delhi Technological University), Sarthak Singh (Delhi Technological University), Chhavi Dhiman (Delhi Technological University), Bharat Bhushan (Delhi Technological University)

33. Evolutionary Algorithms for Enhanced Public Health Mapping

Gesiel R. Lopes (Universidade de São Paulo), Eric K. Tokuda (University of São Paulo), Alexandre C. B. Delbem (Universidade de São Paulo), Roberto F. da Silva (Universidade de São Paulo), Karina J. Pelarigo (Universidade Federal de São Carlos), Mellina Yamamura (Universidade Federal de São Carlos), Cláudio B. Junior (Universidade Federal de São Carlos), Sérgio H. V. L. de Mattos (Universidade Federal de São Carlos), Denise Scatolini (Center for Disease Control and Prevention, São Carlos Municipality), Antônio M. Saraiva (Universidade de São Paulo)

34. FMR-DBv2: an Improved Database for Mask and Respirator Type and FFP Protection Level Recognition Through Deep Learning

Antonio Marceddu (Politecnico di Torino), Nicola Dilillo (Politecnico di Torino), Luigi Di Sergio (Politecnico di Torino), Pietro Ruiu (Università degli Studi di Sassari), Andrea Lagorio (Università degli Studi di Sassari), Filippo Casu (Università degli Studi di Sassari), Enrico Grosso (Università degli Studi di Sassari), Renato Ferrero (Politecnico di Torino), Bartolomeo Montrucchio (Politecnico di Torino)

35. Unsupervised Defect Detection in Automotive Quality Inspection with Convolutional Autoencoder

Alessandro Casella (Politecnico di Torino), Vincenzo Randazzo (Politecnico di Torino), Eros Pasero (Politecnico di Torino)

36. Graph Attention Networks for Gait-Based Autism Spectrum Disorder Detection and Interpretability

Simone Colella (Sapienza University of Rome), Federica Colonnese (Sapienza University of Rome Sapienza), Francesco Di Luzio (Sapienza University of Rome), Antonello Rosato (Sapienza University of Rome), Alessio Fioravanti (Sapienza University of Rome), Massimo Panella (Sapienza University of Rome)

16:30 – 18:30

Poster #4E: Workshop: Eyes of the Future: Integrating Artificial Intelligence in Smart Eyewear (IAISE)

Room: Manzoni

Session Chair(s): Francesca Palermo

37. Adaptive Tint Control for Smart Electrochromic Eyewear (SHORT PAPER)

Simon Weinberger (ERIC), Jairo Cugliari (ERIC)

38. TActiLE: Tiny Active LEarning for wearable devices

Massimo Pavan (POLITECNICO DI MILANO), Claudio Galimberti (Politecnico di Milano), Manuel Roveri (Politecnico di Milano)

39. Maximizing Eye Segmentation Accuracy with YOLO

Arianna De Vecchi (Politecnico di Milano), Sabrina Azzi (Politecnico di Milano), Pietro Bartoli (Politecnico di Milano), Marco Paracchini (Politecnico di Milano), Diana Trojaniello (EssilorLuxottica), Federica Villa (Politecnico di Milano)

40. A Comparative Study of Lightweight Vision Models on Embedded Accelerator Devices (SHORT PAPER)

Greta Corti (Politecnico di Milano), Christian Veronesi (Politecnico di Milano), Pietro Bartoli (Politecnico di Milano), Sara Pidò (Politecnico di Milano), Andrea Giudici (Politecnico di Milano), Francesca Palermo (EssilorLuxottica), Diana Trojaniello (EssilorLuxottica), Matteo Matteucci (Politecnico di Milano), Simone Mentasti (Politecnico di Milano)

41. Neuromorphic eye tracking: a survey

Simone Mentasti (Polimi), Andrea Simpsi (Polimi), Andrea Aspesi (Luxottica), Aaron Tognoli (Polimi), Luca Merigo (Luxottica), Matteo Matteucci (Polimi)

42. Energy-efficient management of AI applications for Smart Eyewears with tensor quantization (SHORT PAPER)

Abednego WAMUHINDO KAMBALE (Politecnico di Milano), Samin Shokrivahed (Politecnico di Milano), Giacomo Verticale (Politecnico di Milano), Francesca Palermo (EssilorLuxottica), Diana Trojaniello (EssilorLuxottica), Danilo Ardagna (Politecnico di Milano)

16:30 – 18:30

Poster #4F: Workshop: AI for a Cooler Planet: Tackling Environmental Challenges with Neural Networks

Room: Manzoni

Session Chair(s): Maria Sofia Bucarelli

43. Quaternion Gated Recurrent Units for Renewable Energy: Improving Power Forecasting (SHORT PAPER)

Gianfranco Di Marco (Sony), Danilo Comminiello (Sapienza), Aurelio Uncini (Sapienza), Michele Scarpiniti (Sapienza)

44. Environmental Spatiotemporal prediction with a Conditioned Diffusion-based Graph Attention model

Angelo Casolaro (University Parthenope of Naples), Vincenzo Capone (University Parthenope of Naples), Massimiliano Giordano Orsini (University Parthenope of Naples), Francesco Camastra (University Parthenope of Naples)

45. A Novel Spatio-Temporal Approach for the Environmental Monitoring of Large Areas
(SHORT PAPER)

Leonardo Silveira (Aeronautics Institute of Technology), Claudio A. S. Lelis (Aeronautics Institute of Technology), Ana C. Lorena (Aeronautics Institute of Technology), Johnny Marques (Aeronautics Institute of Technology), Cesar A. C. Marcondes (Aeronautics Institute of Technology), Filipe A. N. Verri (Aeronautics Institute of Technology), Valério Rosset (Aeronautics Institute of Technology)

46. Applications of SNN at low energy consumption **(SHORT PAPER)**

Matteo Scarpone (Università della Svizzera Italiana), Claudio Zandron (Università degli studi Milano Bicocca)

47. CARE: Confidence-Aware Regression Estimation of building density fine-tuning EO Foundation Models

Nikolaos Dionelis (ESA), Jente Bosmans (European Space Agency (ESA)), Nicolas Longepe (European Space Agency (ESA))

48. An AutoML Framework using AutoGluonTS for Forecasting Seasonal Extreme Temperatures

Pablo Rodríguez-Bocca (Facultad de Ingeniería, Universidad de la República), Guillermo Pereira (Facultad de Ingeniería, Universidad de la República), Diego Kiedanski (Facultad de Ingeniería, Universidad de la República), Soledad Collazo (Faculty of Exact and Natural Sciences, UBA), Sebastian Basterrech (Department of Applied Mathematics and Computer Science, Technical University of Denmark, Denmark), Gerardo Rubino (INRIA-Rennes)

17:00 – 18:30

AI for Education

Room: Raffaello

Session Chair(s): Yi Chen

17:00 Backward Design-Driven Modular Retrieval-Augmented Generation Framework for Automated Instructional Design in Chinese Language Education

Wang Ruan (Beijing Normal University), Tengda Qi (Beijing Normal University), Bo Sun (Beijing Normal University), He Jun (Beijing Normal University), Guomin zheng (Beijing Normal University)

17:18 Using Domain Adapter and Prompt Learner for Few-shot Teaching Action Recognition in videos

Feixiang Ge (Shanghai University of International Business and Economics), xinlei li (Shanghai University of International Business and Economics), Yan Rong (The Hong Kong University of Science and Technology (Guangzhou)), Jiawen Liu (Shanghai University of International Business and Economics), Linqiang Hu (Institute of AI & Robotics, Fudan University, Shanghai, China)

17:36 Distribution-Guided Extraction for Cross-Platform Educational Knowledge Graph Construction

Youyi Huang (Shenzhen University), Honglong Chen (Shenzhen University), Junhui Kuang (Shenzhen University), Jianye Fu (Shenzhen University), Shubin Cai (Shenzhen University), Zhong Ming (Laboratory of Artificial Intelligence and Digital Economy (Shenzhen))

17:54 CDE-CCL: A Classroom Dialogue Evaluation Framework for Chinese Core Literacy via LLM

Mingxuan Wang (Beijing Normal University), Yifan Zhao (Beijing Normal University), Mingyang Yue (Beijing Normal University), Guomin Zheng (Beijing Normal University), Jun He (Beijing Normal University), Bo Sun (Beijing Normal University)

17:00 – 18:30

Multimodal Neural Networks

Room: Botticelli

Session Chair(s): Alejandro Guerra Manzanares

17:00 MILES: Modality-Informed Learning Rate Scheduler for Balancing Multimodal Learning

Alejandro Guerra Manzanares (New York University Abu Dhabi), Farah E. Shamout (New York University Abu Dhabi)

17:18 Tactile-Visual Class-Continual Learning via Temporal Attention Interaction

Lina Wei (Hangzhou City University), Yuhang Ma (Hangzhou City University), Zhongsheng Lin (Hangzhou City University), Xinru Ying (Hangzhou City University), Canghong Jin (Hangzhou City University), Fangfang Wang (Hangzhou Normal University)

17:36 Multi-Scale Sequence Fusion Model for Multimodal Sentiment Analysis: Leveraging Image-Text Interaction and Sequence Modeling

Zhang Yulei (Anhui University of Science and Technology), Zhu Guangli (Anhui University of Science and Technology), Zhang Jixu (Anhui University of Science and Technology), Liu Jiajia (Anhui University of Science and Technology), Wang Zhunqing (Anhui University of Science and Technology), Zhang Shunxiang (Anhui University of Science and Technology)

17:54 Seeing is Believing? Enhancing Vision-Language Navigation using Visual Perturbations

Xuesong Zhang (Hefei University of Technology), Jia Li (Hefei University of Technology), Yunbo Xu (Hefei University of Technology), Zhenzhen Hu (Hefei University of Technology), Richang Hong (Hefei University of Technology)

18:12 HyDRA: Hierarchical and Dynamic Rank Adaptation for Mobile Vision Language Model

Yuanhao Xi (University of Goettingen), Xiaohuan Bing (Liaoning Technical University, University of Goettingen), Ramin Yahyapour (Gesellschaft für Wissenschaftliche Datenverarbeitung mbH Göttingen, University of Goettingen)

17:00 – 18:30

Feature Selection and Extraction

Room: Alfieri

Session Chair(s): Valerie Vaquet

17:00 Robust Individual Sensor Placement by Means of Domain-informed Adversarial Training

Markus Vieth (Bielefeld University), Barbara Hammer (Bielefeld University)

17:18 Few-Shot High-Dimensional Feature Selection with Lagrange Programming Neural Networks

Nourane Fradi (MAPSFA), Jérémie Cabessa (UVSQ), Anis Zeglaoui (ENISo)

17:36 Hierarchical Semantic Matching Model

Shengbo Wu (Wu Shengbo), Tao Zhang (Xinjiang University), Liang Zhong (Xinjiang University)

17:54 Author-Specific Linguistic Patterns Unveiled: A Deep Learning Study on Word Class Distributions

Patrick Krauss (University of Erlangen), Achim Schilling (University of Erlangen)

17:00 – 18:30

Computational Neuroscience II

Room: Belli

Session Chair(s): Daniel Casanueva-Morato

17:00 ECoG-Based Movement Classification and Limbs 3D Translation Prediction: A Deep Learning Study

Quentin Ferdinand (CEA), Rémi Souriau (CEA), Lucas Struber (CEA), Henri Lorach (EPFL), Philippe Ciuciu (CEA), Marina Reyboz (CEA), Tetiana Aksenova (CEA)

17:18 Synthesizing Images on Perceptual Boundaries of ANNs for Uncovering Human Perceptual Variability on Facial Expressions

Haotian Deng (Southern University of Science and Technology), Chi Zhang (Southern University of Science and Technology), Chen Wei (University of Birmingham), Quanying Liu (Southern University of Science and Technology)

17:36 Space-Time Smooth Control of Closed-Loop Neuromorphic Robotic Arms Using Spiking Neural Networks

Daniel Casanueva-Morato (Universidad de Sevilla), Chenxi Wu (SynSense AG Corporation), Giacomo Indiveri (University of Zurich and ETH Zurich), Juan Pedro Dominguez-Morales (Universidad de Sevilla), Alejandro Linares-Barranco (Universidad de Sevilla)

17:54 Predicting behaviors with minimal units elucidates neural coding

Risako Morikawa (Kwansei Gakuin University), Takuya Hiroshima (Kwansei Gakuin University), Hokto Kazama (RIKEN), Keiji Miura (Kwansei Gakuin University)

18:12 Direction of motion decoding in mouse V1: Neuron predictive power relates to functional connectivity organization

Mario Alexio Savaglio (University of Crete, FORTH), Christina Brozi (University of Crete, FORTH), Eleftheria Psilou (University of Crete, FORTH), Chryssalena Koumpouzi (FORTH), Marianna Papadostefanaki (Archimedes Research Unit, ATHENA RC, National Technical University of Athens), Christos Vasilakos (University of Ioannina), Spyros Nesis (University of Ioannina), Emmanouil Smyrnakis (FORTH, University of Ioannina), Vasileios Akoutas (University of Ioannina), Georgios Keliris (FORTH, Harvard Medical School), Ganna Palagina (Harvard Medical School), Stelios Smirnakis (Harvard Medical School), Maria Papadopouli (University of Crete, FORTH, Archimedes Research Unit, ATHENA RC)

17:00 – 18:30

Reinforcement Learning II

Room: Marinetti

Session Chair(s): Davide Salaorni

17:00 OCMDP: Observation-Constrained Markov Decision Process

Taiyi Wang (Powersense Technology Limited), Jianheng Liu (University College London), Bryan Lee (Powersense Technology Limited), Zhihao Wu (University of Edinburgh), Yu Wu (University of Cambridge)

17:18 Personalized Observation Normalization for Federated Reinforcement Learning in Simulation Environments with Heterogeneity

Yiran Pang (Florida Atlantic University), Zhen Ni (Florida Atlantic University), Xiangnan Zhong (Florida Atlantic University)

17:36 Single Pass Uncertainty Estimation in Q-Learning via Dropout Distillation

Nikolaos Kaparinos (Aristotle University of Thessaloniki), Nikolaos Passalis (Aristotle University of Thessaloniki), Anastasios Tefas (Aristotle University of Thessalonik)

17:54 MARL-HE: An Improved Multi-Agent Reinforcement Learning-based Fire Evacuation Guidance Pathfinding Method

Ke Zhang (Waseda University), Dandan Zhu (China University of Petroleum (Beijing)), Xiaoning Zhao (Waseda University), Cherry Sun (Waseda University), Yosuke Fujisawa (Waseda University), Toshiharu Sugawara (Waseda University)

18:12 A Reinforcement Learning Approach for Optimal Control in Microgrids

Davide Salaorni (Politecnico di Milano), Federico Bianchi (RSE), Marcello Restelli (Politecnico di Milano), Francesco Trovò (Politecnico di Milano)

17:00 – 18:30

Spiking Neural Networks

Room: Trilussa

Session Chair(s):

17:00 Threshold Modulation for Online Test-Time Adaptation of Spiking Neural Networks

Kejie Zhao (Southern University of Science and Technology), Wenjia Hua (Southern University of Science and Technology), Aiersi Tuerhong (Chongqing University), Luziwei Leng (Huawei Technologies Co., Ltd.), Yuxin Ma (Southern University of Science and Technology), Qinghai Guo (Huawei Technologies Co., Ltd.)

17:18 On the Privacy-Preserving Properties of Spiking Neural Networks with Unique Surrogate Gradients and Quantization Levels

Ayana Moshruha (George Mason University), Shay Snyder (George Mason University), Hamed Poursiami (George Mason University), Maryam Parsa (George Mason University)

17:36 Persistent Representation of Event Camera Output Using Spiking Neural Networks

Bernard Maacaron (Istituto Italiano di Tecnologia), Arren Glover (Istituto Italiano di Tecnologia), Simon F. Müller-Cleve (Istituto Italiano di Tecnologia), Chiara Bartolozzi (Istituto Italiano di Tecnologia)

17:54 Balanced and Efficient Spiking Neural Networks

Tim Stadtmann (IDS, RWTH Aachen University), Janek Paessens (IDS, RWTH Aachen University), Tobias Gemmeke (IDS, RWTH Aachen University)

18:12 Exploiting Synaptic Traces for Online Weight Adaptation in Spiking Autoencoder Networks

Enrico Catalfamo (University of Messina), Fabrizio De Vita (University of Messina), Rawan Nawaiseh (University of Messina), Dario Bruneo (University of Messina)

17:00 – 18:30

Transformers and Attention-Based Networks I

Room: Montale

Session Chair(s): Nicolò Navarin

17:00 Rosetta: Enhancing Neural Machine Translation through Multilingual-PLMs and Semantic Constraints

Pengfei Pi (Tiangong University), Rize Jin (Tiangong University), Xiaohan Ma (Ajou University), Tae-Sun Chung (Ajou University)

17:18 GAC-DETR: A Transformer-Based Model for Small Target Detection in UAV Imagery

Hai Yang Gu (Southwest University of Science and Technology), Yue Tang (Southwest University of Science and Technology), Huihui Yang (Southwest University of Science and Technology), Jun Hu (Southwest University of Science and Technology), Yuan Jia (Southwest University of Science and Technology)

17:36 TensorLLM: Tensorising Multi-Head Attention for Enhanced Reasoning and Compression in LLMs

Yuxuan Gu (Imperial College London), Wuyang Zhou (Imperial College London), Giorgos Iacovides (Imperial College London), Danilo Mandic (Imperial College London)

17:54 QSViT: A Methodology for Quantizing Spiking Vision Transformers

Rachmad Vidya Wicaksana Putra (New York University (NYU) Abu Dhabi), Saad Iftikhar (New York University (NYU) Abu Dhabi), Muhammad Shafique (New York University (NYU) Abu Dhabi)

18:12 RGB-Event Fusion with Self-Attention for Collision Prediction

Pietro Bonazzi (ETH Zurich), Christian Vogt (ETH Zurich), Michael Jost (ETH Zurich), Haotong Qin (ETH Zurich), Lyes Khacef (Sony Inc.), Federico Paredes-Valles (Sony Inc.), Michele Magno (ETH Zurich)

July 5, 2025

9:00 – 10:30

Neural Networks for Image and video processing V

Room: Leonardo da Vinci

Session Chair(s): Markus Vieth

09:00 RSEND: Retinex-based Squeeze and Excitation Network with Dark Region Detection for Efficient Low Light Image Enhancement

JINGCHENG LI (University of California-San Diego), Ye Qiao (University of California-Irvine), Haocheng Xu (University of California-Irvine), Sitao Huang (University of California-Irvine)

09:18 Knowledge-enhanced N2N: Learning SEM Images Denoising with No Clean Data

Yi Fang (USTC), Chun Wang (USTC), Tian Lan (USTC), Sihai Zhang (USTC)

09:36 Research on driving fatigue detection method based on fNIRS data and Facial Features

Lingqiu Zeng (Chongqing University), li zhong (Chongqing University), Qingwen Han (Chongqing University), Lei Ye (Chongqing University), Kun Zhou (Chongqing University), Shiyu Sun (Chongqing University)

09:54 IDF: Individual Difference-aware Framework for Cross-Patient Image Segmentation

Zibo Ma (Beijing University of Posts and Telecommunications), Jianfei Huo (Beijing University of Posts and Telecommunications), Guanchun Yin (Beijing University of Posts and Telecommunications), Zheng Zhang (Beijing University of Posts and Telecommunications), Bo Zhang (Beijing University of Posts and Telecommunications), Wendong Wang (Beijing University of Posts and Telecommunications)

10:12 EETnet: a CNN for Gaze Detection and Tracking for Smart-Eyewear

Andrea Aspesi (Luxottica), Andrea Simpsi (Polimi), Aaron Tognoli (Polimi), Simone Mentasti (Polimi), Luca Merigo (Luxottica), Matteo Matteucci (Polimi)

9:00 – 10:30

Transformers and Attention-Based Networks II

Room: Michelangelo

Session Chair(s):

09:00 A Bidirectional Selective State Space Model with Multi-scale Convolution and Additive Gated Attention for Cross-Subject Emotion Recognition

Zhelong Chen (Donghua University), Yuchen Wu (Donghua University), Wenqian Zhang (Donghua University), Guanglin Zhang (Donghua university)

09:18 Achieving 3D Attention via Triplet Squeeze and Excitation Block

Maan Alhazmi (University of Leeds), Abdulrahman Altahhan (University of Leeds)

09:36 Towards Explainable Skin Cancer Diagnosis: A Vision Transformer Approach with Grad-CAM Visualization

Sonia Bouzidi (REGIM Lab), Imen JDEY (REGIM Laboratory), Fadoua Drira (REGIM Lab)

09:54 FM-EVT:Feedforward Neural Network and Multilayer Perceptron Classifier Enhanced Event Transformer

Yudan Liu (Capital Normal University), Li Su (Capital Normal University), Lei Zhang (Capital Normal University)

9:00 – 10:30

Special Session on Hyperdimensional Computing and Vector Symbolic Architectures for Neural Networks and Artificial Intelligence

Room: Raffaello

Session Chair(s): Antonello Rosato

09:00 Hey Pentti, We Did (More of) It!: A Vector-Symbolic Lisp With Residue Arithmetic

Connor Hanley (Carleton University), Eilene Tomkins-Flanagan (Carleton University), Mary Alexandria Kelly (Carleton University)

09:18 HD-CB_BIN: A Lightweight Approach for Contextual Bandit Learning in Real-Time Applications

Marco Angioli (Sapienza University Of Rome), Antonello Rosato (Sapienza University Of Rome), Rocco Martino (Sapienza University Of Rome), Marcello Barbirotta (Sapienza University Of Rome), Andrea Marcelli (Sapienza University Of Rome), Antonio Mastrandrea (Sapienza University Of Rome), Mauro Olivieri (Sapienza University Of Rome)

09:36 Novel Quantum Approaches to Hyperdimensional Computing for Neural Networks

Leonardo Lavagna (Sapienza University of Rome), Andrea Ceschini (Sapienza University of Rome), Antonello Rosato (Sapienza University of Rome), Massimo Panella (Sapienza University of Rome)

09:54 On the choice of Vector Symbolic Architectures for Time Series Classification with HDC-MiniROCKET

Marcel Unger (TU Chemnitz), Kenny Schlegel (TU Chemnitz), Peter Protzel (TU Chemnitz), Peer Neubert (Universität Koblenz)

10:12 DisQu: Investigating the Impact of Disorder in Quantum Generative Models

Yannick Werner (DFKI), Jasmin Frkatovic (RPTU Kaiserslautern-Landau), Vitor Fortes Rey (DFKI), Matthias Tschöpe (DFKI), Sungho Suh (DFKI), Paul Lukowicz (DFKI), Nikolaos Palaodimopoulos (DFKI), Maximilian Kiefer-Emmanouilidis (DFKI)

9:00 – 10:30

Special Session on NeuroCAS: Neuromorphic Computing for Intelligent Autonomous Systems

Room: Tiziano

Session Chair(s): Alberto Marchisio, Muhammad Shafique

09:00 Sparse Convolutional Recurrent Learning for Efficient Event-based Neuromorphic Object Detection

Shenqi Wang (Delft University of Technology), Yingfu Xu (imec), Amirreza Yousefzadeh (University of Twente), Sherif Eissa (Eindhoven University of Technology), Henk Corporaal (Eindhoven University of Technology), Federico Corradi (Eindhoven University of Technology), Guangzhi Tang (Maastricht University)

09:18 TESS: A Scalable Temporally and Spatially Local Learning Rule for Spiking Neural Networks

Marco Apolinario (Purdue University), Kaushik Roy (Purdue University), Charlotte Frenkel (Delft University of Technology)

09:36 Energy-Efficient Autonomous Aerial Navigation with Dynamic Vision Sensors: A Physics-Guided Neuromorphic Approach

Sourav Sanyal (Purdue University), Amogh Joshi (Purdue University), Manish Nagaraj (Purdue University), Rohan Kumar Manna (Purdue University), Kaushik Roy (Purdue University)

09:54 Enabling Efficient Processing of Spiking Neural Networks with On-Chip Learning on Commodity Neuromorphic Processors for Edge AI Systems

Rachmad Vidya Wicaksana Putra (New York University (NYU) Abu Dhabi), Pasindu Wickramasinghe (New York University (NYU) Abu Dhabi), Muhammad Shafique (New York University (NYU) Abu Dhabi)

10:12 Evolving Collective Robot Swarm Behavior in Neuromorphic Systems

Drew Friend (University of Tennessee), Meghan Brandt (University of Tennessee), Luke McCombs (University of Tennessee), James Plank (University of Tennessee), Catherine Schuman (University of Tennessee)

9:00 – 10:30

Supervised Learning

Room: Loyola

Session Chair(s): Gabriele Greco

09:00 StyleLTC: Style-Infused Liquid Neural Network-based Lightweight Architecture for Automated Claim Identification

Diya Saha (TCS Research), Tirthankar Dasgupta (TCS Research), Manjira Sinha (TCS Research)

09:18 Optimizing View Generation in Classification Datasets

Victor Faria (Aeronautics Institute of Technology), Rafael Cruz (École de Technologie Supérieure), Robert Sabourin (École de Technologie Supérieure), Ana Carolina Lorena (Aeronautics Institute of Technology)

09:36 Bounding the Worst-class Error: A Boosting Approach

Yuya Saito (Kyushu university), Shinnosuke Matsuo (Kyushu university), Seiichi Uchida (Kyushu university), Daiki Suehiro (Kyushu university)

09:54 A Meta-learning-based Method for Dynamic Selection of Combination Methods in Classifier Ensembles

Jesaías Silva (UFRN), Anne Magaly de Paula Canuto (UFRN), Araken de Medeiros Santos (UFERSA)

10:12 Fault injection analysis of Real NVP normalising flow model for satellite anomaly detection

Gabriele Greco (Politecnico di Torino), Carlo Cena (Politecnico di Torino), Umberto Albertin (Politecnico di Torino), Mauro Martini (Politecnico di Torino), Marcello Chiaberge (Politecnico di Torino)

9:00 – 10:30

Optimization Algorithms for Neural Networks

Room: Alfieri

Session Chair(s):

09:00 Adaptive Gradient Algorithm with Momentum based on Spatiotemporal Second-Order Dynamical Model

Shahrzad Mahboubi (Shonan Institute of Technology), Hiroshi Ninomiya (Shonan Institute of Technology)

09:18 Applying Center Loss to Neural Networks for Sequence Prediction: A Study for Handwriting Recognition

Simon Corbillé (LTU), Elisa Barney Smith (LTU)

09:36 Beyond Backpropagation: Optimization with Multi-Tangent Forward Gradients

Katharina Flügel (Karlsruhe Institute of Technology), Daniel Coquelin (Karlsruhe Institute of Technology), Marie Weiel (Karlsruhe Institute of Technology), Charlotte Debus (Karlsruhe Institute of Technology), Achim Streit (Karlsruhe Institute of Technology), Markus Götz (Karlsruhe Institute of Technology)

09:54 TinyHAR-NAS: Tuning Lightweight Attention Networks for Human Activity Recognition on the Edge

Urmi Jana (Tata Consultancy Services), Shalini Mukhopadhyay (Tata Consultancy Services), Swarnava Dey (Tata Consultancy Services), Arijit Mujherjee (Tata Consultancy Services), Arpan Pal (Tata Consultancy Services)

10:12 Neural Velocity for hyperparameter tuning

Gianluca Dalmasso (Università degli Studi di Torino), Andrea Bragagnolo (LINKS Foundation), Enzo Tartaglione (LTCl, Télécom Paris, Institut Polytechnique de Paris), Attilio Fiandrotti (Università degli Studi di Torino), Marco Grangetto (Università degli Studi di Torino)

9:00 – 10:30

Unsupervised Learning and Clustering

Room: Belli

Session Chair(s):

09:00 Fed-SMTDA: A Novel Framework for Federated Source-Free Multi-Target Domain Adaptation Using Feature Clustering and Adaptive Aggregation

Challapalli Phanindra Revanth (Indian Institute of Technology Hyderabad), Sumohana Channappayya (Indian Institute of Technology Hyderabad), C. Krishna Mohan (Indian Institute of Technology Hyderabad)

09:18 Dual Boost-Driven Graph-Level Clustering Network

Renda Han (Hainan University), Wenxuan Tu (Hainan University), Junlong Wu (Hainan University), Wenxin Zhang (University of Chinese Academy of Science), Jingxin Liu (Hainan University), Haotian Wang (Hainan University), Jieren Cheng (Hainan University), Huajie Lei (Hainan University), Guangzhen Yao (Northeast Normal University), Lingren Wang (Hainan University), Mengfei Li (Hainan University), Yu Li (Hubei University)

09:36 Evolving Neuro-Fuzzy Systems in Federated Regression

Igor Škrjanc (University of Ljubljana), Miha Ožbot (Faculty of Electrical Engineering, University of Ljubljana)

09:54 Towards a More Efficient Sinkhorn Distance Computation in Neural Topic Models

Pierre Dardouillet (University Savoie Mont-Blanc), Faiza Loukil (University Savoie Mont-Blanc), Herve Verjus (University Savoie Mont-Blanc), David Telisson (University Savoie Mont-Blanc), Olivier Le Van (Cegedim), Kave Salamatian (University Savoie Mont-Blanc)

10:12 Effective Graph and Rank-based Contextual Embeddings for Textual and Multimedia Data

Thiago Almeida (UNESP), Gustavo Rosseto Leticio (UNESP), Lucas Pascotti Valem (University of São Paulo (USP)), André Freitas (University of Manchester), Daniel Pedronette (UNESP)

9:00 – 10:30

Convolutional Neural Network Applications

Room: Marinetti

Session Chair(s): Ryan Griffiths

09:00 Robust Deepfake Speech Algorithm Recognition: Classifying Generative Algorithms via Speaker X-Vectors and Deep Learning

Harry Maltby (University of East London), Julie Wall (University of West London), Mansour Moniri (University of East London), Iwa Salami (University of East London), Roman Shrestha (Intelligent Voice), Cornelius Glackin (Intelligent Voice), Nigel Cannings (Intelligent Voice)

09:18 Conceptualizing Multi-scale Wavelet Attention and Ray-based Encoding for Human-Object Interaction Detection

Quan Bi Pay (Monash University Malaysia), Vishnu Monn Baskaran (Monash University Malaysia), Junn Yong Loo (Monash University Malaysia), KokSheik Wong (Monash University Malaysia), Simon See (NVIDIA AI Technology Center, NVIDIA)

09:36 MAE2-Net: An Efficient Multi-Scale Adaptive Enhanced Network for Skin Lesion Segmentation

Yamin Li (hubei university), Wen Xiang (hubei university), Liu Duan (hubei university), Chen Zeng (hubei university), Qifeng Wu (hubei university), Yu Duan (hubei university)

09:54 Towards an Unsupervised Deep Representations for Plant Species Recognition

Diego Henrique Presner (Universidade Estadual de Ponta Grossa (DCA/UEPG)), Andre Hochuli (Pontificia Universidade Católica do Paraná (PPGIA/PUCPR)), Alceu de Souza Britto Jr (Pontificia Universidade Católica do Paraná (PPGIA/PUCPR))

10:12 Adapting CNNs for Fisheye Cameras without Retraining

Ryan Griffiths (University of Sydney), Donald Dansereau (University of Sydney)

10:00 – 13:00

Workshop: ForgtAI: International Workshop on Forging Trust in Artificial Intelligence 2025

Room: Trilussa

Session Chair(s): Alexandros Iosifidis, Nistor Grozavu, Aikaterini Tzompanaki, Corina Besliu, Nicoleta Rogovski

10:00 Opening remarks

10:05 Towards Explainable-by-design Detection of Bugs in IID and Sequence Datasets (KEYNOTE)

Vassilis Christophides (Ecole Nationale Supérieure de l'Electronique et de ses Applications (ENSEA) and ETIS lab)

10:50 UGCE: User-Guided Incremental Counterfactual Exploration

Christos Fragkathoulas (University of Ioannina, Athena Research Center), Evaggelia Pitoura (University of Ioannina, Athena Research Center)

11:10 Cascade Adversarial Attack Search

Ziwen Wang (Anhui University), Daoli Shen (Anhui University), Xiangkun Sun (Anhui University), Shangshang Yang (Anhui University), Xiaoshan Yu (Anhui University), Ye Tian (Anhui University)

11:20 Break

11:40 Trustworthiness in AI and Autonomous Systems (KEYNOTE)

Anastasios Tefas (Aristotle University of Thessaloniki)

12:25 Trustworthy High-Resolution Pose Estimation Through Active Perception Using Vision Transformers (SHORT PAPER)

Emmanouil Eleftheriadis (Aristotle University of Thessaloniki), Theodoros Manousis (Aristotle University of Thessaloniki), Nikolaos Passalis (Aristotle University of Thessaloniki), Anastasios Tefas (Aristotle University of Thessaloniki)

12:35 A conformal prediction framework for natural language ambiguity detection in surgical robot instructions (SHORT PAPER)

Ana Davila (Nagoya University), Jacinto Colan (Nagoya University), Yasuhisa Hasegawa (Nagoya University)

July 5, 2025

12:45 What should GAN in AI stand for? (SHORT PAPER)

Dipankar Dasgupta (The University of Memphis), Arunava Roy (The University of Memphis)

12:55 Closing remarks

9:30 – 13:00

Workshop: Deep Learning for Biometrics

Room: Montale

Session Chair(s): Larbi Boubchir, Boubaker Daachi

9:30 – 13:00

Workshop: Scalable and deep Graph Learning and Mining

Room: Leopardi

Session Chair(s): Wissem Inoubli, Haithem Mezni, Sabeur Aridhi, Engelbert Mephu Nguifo

09:30 Welcome and opening remarks

09:40 HT-Graph: Heterogeneous Continuous-Time Dynamic Graph Representation Learning using Neighbor-store with Restart

Nilanjana Debnath (Indian Institute of Technology Palakkad), Unnikrishnan Cheramangalath (Indian Institute of Technology Palakkad)

10:00 Assessing the Few-Shot Learning Capabilities of Large Language Models for Graph-Based Novel Molecule Generation (SHORT PAPER)

Bishal Lakha (Boise State University), Alessio Barboni (Boise State University), Massimiliano Lupo Pasini (Oak Ridge National Laboratory), Janet Layne (Boise State University), Edoardo Serra (Boise State University), Prasanna Balaprakash (Oak Ridge National Laboratory)

10:20 TrackGAE: Tracking Dynamic Community Evolution with Graph Autoencoders (SHORT PAPER)

Mohamed Bouguessa (Université du Québec à Montréal), Maroun Haddad (Université du Québec à Montréal)

10:40 Discussion

11:30 Closing remarks

10:30 – 11:00

Coffee Break

Room: Pontifical Gregorian University Hall

10:30 – 12:30

Poster #5A: Poster Track (PT – No published in proceedings)

Room: Manzoni

Session Chair(s): Giordano Cicchetti

1. Long-Tailed Visual Recognition Based on Attention-guided Feature Distillation (PT)

Wanyi He (Guangdong University of Technology), Hai-Lin Liu (Guangdong University of Technology)

2. Symmetric Cross-Attention U-net model for Semantic Segmentation (PT)

Chunbo Yang (Guangdong University of Technology), Hai-Lin Liu (Guangdong University of Technology)

3. A RU-net architecture evolutionary approach based on GNN (PT)

Runjia Wu (Guangdong University of Technology), Hai-Lin Liu (Guangdong University of Technology)

4. Navigating Abstraction Levels in Graph Self-Supervision: A Geometric Approach to Mitigating Latent Space Distortions (PT)

Mohamed Bouguessa (Université du Québec à Montréal), Nairouz Mrabah (Université du Québec à Montréal), Youssef Amdouni (Université du Québec à Montréal)

5. Reward-Guided Many-Shot Jailbreaking (PT)

Yongkang Chen (Institute of Systems Engineering, Academy of Military Sciences), Hu Li (Institute of Systems Engineering, Academy of Military Sciences), Zhendong Wu (Institute of Systems Engineering, Academy of Military Sciences), Huayang Cao (Institute of Systems Engineering, Academy of Military Sciences), Zibin Wang (Institute of Systems Engineering, Academy of Military Sciences), Xiaohui Kuang (Institute of Systems Engineering, Academy of Military Sciences)

6. Reimagining Urban Riverfront Revitalization: Extracting Pasig River's Common Landscape Characteristics on Instagram for GenAI Prompt Engineering (PT)

Ruben Jr. Felizarte (University of the Philippines Diliman), Nappy Navarra (University of the Philippines Diliman)

7. A Novel Ergodic Sequential Logic Spiking Neural Network with Actor-Critic Reinforcement Learning and its Efficient VLSI Implementation (PT)

Yuki Matsushima (Hosei University), Hiroyuki Torikai (Hosei University)

8. Transferring LSTM Dynamics to ReLU Recurrent Neural Networks for Enhanced Phase-Space Interpretability (PT)

Oleg Maslennikov (Institute of Applied Physics of the Russian Academy of Sciences), Roman Kononov (Institute of Applied Physics of the Russian Academy of Sciences), Vladimir Nekorkin (Institute of Applied Physics of the Russian Academy of Sciences)

9. *ARGCN An Android Malware Detection Model Based on Relational Graph Convolutional Network* (PT)

Zhiqiang Wang (Beijing Electronic Science and Technology Institute), Qianli Huang (Beijing Electronic Science and Technology Institute), Yujia Yin (Beijing Electronic Science and Technology Institute), Ying Liu (Beijing Electronic Science and Technology Institute), Ke Zhang (Beijing Electronic Science and Technology Institute)

10. *Leveraging Re-Synthesis for Robust Attribution of Diffusion Model-Generated Images* (PT)

Meiling Li (Fudan University), Zhenxing Qian (Fudan University), Xinpeng Zhang (Fudan University), Benedetta Tondi (University of Siena), Mauro Barni (University of Siena)

11. *Quantum Neural Networks for Image Classification of Archaeological Artifacts* (PT)

Bruno Guingo (LNCC)

12. *Musical Encoding for Artistic Image Generation* (PT)

Alfredo Baione (University of Salerno), Giuseppe Rizzo (LINKS foundation), Luca Barco (LINKS foundation), Angelica Urbanelli (LINKS foundation), Genoveffa Tortora (University of Salerno), Luigi DI Biasi (University of Salerno)

13. *No Free Lunch from Audio Pretraining in Bioacoustics: A Benchmark of Embeddings* (PT)

Chenggang Chen (Johns Hopkins University), Zhiyu Yang (Johns Hopkins University)

14. *Multiview Fake News Detection method based on graph neural network* (PT)

Zhiqiang Wang (Beijing Electronic Science and Technology Institute), Qianli Huang (Beijing Electronic Science and Technology Institute), Kaixin Wang (Beijing Electronic Science and Technology Institute), Junlai Luo (Beijing Electronic Science and Technology Institute), Zhenguo Dong (Beijing Electronic Science and Technology Institute)

15. *Energy disaggregation of appliances considering simultaneous activation using dictionary learning* (PT)

Dr. Malik Intisar Ali Sajjad (University of Engineering & Technology, Taxila, Pakistan), Muhammad Faisal Nadeem Khan (University of Engineering and Technology Taxila, Pakistan)

16. *VampPrior VAE with Coded Hierarchical Inputs* (PT)

Daisuke Kaji (DENSO CORPORATION), Kazuho Watanabe (Toyohashi University of Technology), Masahiro Kobayashi (Toyohashi University of Technology)

17. *Sentiment-Augmented Randomized Neural Networks for Tourism Stock Trend Prediction* (PT)

Pablo A. Henríquez (Universidad Diego Portales), Nando Verelst (Universidad Diego Portales)

18. *Enhancing Object Detection Robustness: Detecting and Restoring Confidence in the Presence of Adversarial Patch Attacks* (PT)

Roie Kazoom (Ben Gurion University), Raz Birman (Ben Gurion University), Ofer Hadar (Ben Gurion University)

19. Inertial Cubic Regularized Newton for Acceleration of Second-Order Optimization Algorithm (PT)

Shahrzad Mahboubi (Shonan Institute of Technology), Hiroshi Ninomiya (Shonan Institute of Technology)

20. Privacy-Aware Deep RL for Sequential Coalition Formation under Uncertainty (PT)

Gerasimos Koresis (Technical University of Crete), Stergios Plataniotis (Technical University of Crete), Charilaos Akasiadis (Technical University of Crete & NCSR 'Demokritos'), Georgios Chalkiadakis (Technical University of Crete)

21. Poster : Robust Text Classification: a Multi-Feature Adversarial Defense Strategy (PT)

Salim Khemis (Ecole Militaire Polytechnique), Amara Yacine (Ecole Militaire Polytechnique), Benatia Ohamed Akrem (Ecole Militaire Polytechnique)

22. Hardware-Friendly Diffusion Models with Fixed-Size Reusable Structures for Image Generation (PT)

Sanchar Palit (IIT Bombay)

23. Deep Learning Based Automated Segmentation of Trauma-Affected Abdominal Organs for Improved Diagnosis (PT)

Darshan Dathiya (Institute of Chemical Technology, Mumbai), Narayana Darapaneni (Northwestern University SPS), Ajit Kumar (Institute of Chemical Technology, Mumbai)

24. Assigning scientific texts to existing ontologies (PT)

Lukas Korel (Faculty of Information Technology, Czech Technical University), Martin Holeňa (Institute of Computer Science, The Czech Academy of Sciences)

25. Detection of Adversarial Attacks Through SVD-based Intermediate Activation Analysis (PT)

Lorenzo Capelli (University of Bologna)

26. ProFed: a Benchmark for Proximity-Aware Non-IID Federated Learning (PT)

Davide Domini (University of Bologna), Gianluca Aguzzi (University of Bologna), Mirko Viroli (University of Bologna)

27. Poster - Exploring the Impact of Temperature on Large Language Models: Hot or Cold? (PT)

Lujun LI (University of Luxembourg), Lama Sleem (University of Luxembourg), Niccolo' Gentile (Foyer S.A.), Geoffrey Nichil (Foyer S.A.), Radu State (University of Luxembourg)

28. Solving the Dynamic Volatility Fitting Problem: A Deep Reinforcement Learning Approach (PT)

Emmanuel Gnabeyeu Mbiada (Sorbonne Université and Université Paris Cité)

29. Classifying Digits with a Single Spiking Neuron and Kolmogorov Complexity (PT)

Ludvine Lasserre (Université des Antilles), Andrei Doncescu (Université des Antilles), Francis Faux (Université Paul Sabatier)

30. A Low-Cost and High-Accuracy Softmax Approximation for Pretrained Transformers (PT)

Soshi Hirayae (Kyushu Institute of Technology), Kanta Yoshioka (Kyushu Institute of Technology), Yuichiro Tanaka (Kyushu Institute of Technology), Hakaru Tamukoh (Kyushu Institute of Technology)

31. Transformer-Based Vector Font Classification Using Different Font Formats: TrueType versus PostScript (PT)

Takumu Fujioka (Nagoya Institute of Technology), Gouhei Tanaka (Nagoya Institute of Technology)

32. Moving from Distrust to Trust in Artificial Intelligence: Copernican Turn of Regulations (PT)

Subhalagna Choudhury (Uppsala University)

33. Towards Robust and Inversion-Free Randomized Neural Networks: The XG-RVFL Framework (PT)

Mushir Akhtar (IIT Indore)

34. Self-Organized Distributed Inference in Volatile Edge Networks (PT)

Manuel Schrauth (Fraunhofer IIS)

35. Performance Analysis of Quantum Support Vector Classifiers and Quantum Neural Networks (poster) (PT)

Tomas Villalba-Ferreiro (Universidade da Coruña (CITIC)), Eduardo Mosqueira-Rey (UDC), Diego Alvarez-Estevéz (Universidade da Coruña (CITIC))

36. Personalized Federated Learning Architectures for Violence Detection in Surveillance Videos (PT)

Mohammad Kassir (CY Tech), Siba Haidar (ESIEA), Antoun Yaacoub (ESIEA)

37. TinyML-Driven Anomaly Detection in IoT Networks: Balancing Accuracy and Energy Efficiency (PT)

Amani Ibraheem (KKU)

38. A Hybrid LSTM-Attention Approach for Missing Data Imputation in IoT Time Series (PT)

Ammara Laeeq (Teesside University), Adeel Usman (Teesside University), Jie Li (Teesside University), Eleanor Starkey (Northumbria University)

39. Split Fine-Tuning of BERT-based Music Models in the Edge-Cloud Continuum: An Empirical Analysis (PT)

Bradley Aldous (Queen Mary University of London), Wai Fong Tam (Queen Mary University of London), Ahmed M. Abdelmoniem (Queen Mary University of London)

40. GAN-based Event-level Inverse Mapper (GEIM) - An Application on Quantum Chromodynamics Global Analysis (PT)

Tareq Alghamdi (Old Dominion University)

41. TreeCoders: Tree of Transformers (PT)

Pierre Colonna D'Istria (University of Leeds)

42. Neural_Network-Enhanced Topic Modeling with_LoRA Fine-Tuning Approach (PT)

Wadie Kadri (ISIMS)

43. Enhanced Submanifold Convolutional Block and Dynamic Feature Diffusion for Fully Sparse 3D Object Detection (PT)

jun zhou (Chongqing University of Posts and Telecommunications), Fuping Yang (Chongqing University of Posts and Telecommunications), Jing Wang (Changjiang Chongqing Communication Administration), xu zhang (Chongqing University of Posts and Telecommunications)

44. Exploring Representation Learning on VitalDB's Electrocardiogram Signals (PT)

João Victor Avanzini (IC - Unicamp), Marcos Raimundo (IC - Unicamp)

45. A Multi-value Updatable Compute-in-Memory Circuit Architecture with Binary Nonvolatile Memory for Brainmorphic Applications (PT)

Tomoro Jones (Kyushu institute of technology), Yuka Shishido (Kyushu Institute of Technology), Osamu Nomura (Kyushu Institute of Technology, The University of Fukuchiyama), Hakaru Tamukoh (Kyushu institute of technology), Takashi Morie (Kyushu Institute of Technology)

46. Enhancing Differentially Private Deep Learning via Self-Knowledge Distillation (PT)

Dengfeng Zhao (Renmin University of China), Daxuan Xue (Renmin University of China), Hong Chen (Renmin University of China)

47. Word and Phrase Features in Graph Convolutional Network for Question Classification (PT)

Junyoung Lee (Home Team Science and Technology Agency), Ninad Dixit (Nanyang Technological University), Kaustav Chakrabarti (Nanyang Technological University), S. Supraja (Nanyang Technological University)

48. A Data-driven Imputation Scheme for Cohort Studies: A Collegiate Basketball Case Study (PT)

Srishti Sharma (Ahmedabad University), Vishal Barot (LDRP Institute of Technology and Research), Srikrishnan Divakaran (Krea University), Tolga Kaya (Sacred Heart University), Mehul Raval (Ahmedabad University)

49. SD-LSTM: A Novel Semi-Decentralized LSTM Architecture for Scalable and Accurate Stock Price Prediction (PT)

Roman Senkerik (Tomas Bata University in Zlin, Faculty of Applied Informatics), Peng Li (Tomas Bata University in Zlin, Faculty of Applied Informatics), Zuzana Kominkova Oplatkova (Tomas Bata University in Zlin, Faculty of Applied Informatics)

50. Quantitative Threat Assessment via Multi-source Security Logs (PT)

Wenying Feng (PCL)

51. Detection of Unknown Intrusion Attacks in Connected Autonomous Vehicles (PT)

Talea Huraysi (Newcastle University), Rui Sun (Newcastle University), Haoran Duan (Newcastle University), Kwabena Adu-Duodu (Newcastle University), Bo Wei (Newcastle University), Rajiv Ranjan (Newcastle University), Tejal Shah (Newcastle University)

52. Critical and Ethical Reflection Regarding Artificial Intelligence in Higher Education (PT)

Emmanuelle Marceau (Université de Montréal/Cégep du Vieux Montréal)

53. Multi-Query Person Retrieval for the Edge Devices. (PT)

Jay Chaudhari (Ahmedabad University), Mehul Raval (Ahmedabad University)

54. Offline Signature Verification in the Banking Domain (PT)

Valentina Arrigoni (Unicredit)

55. UniAsk: AI-powered search for banking knowledge bases (PT)

Ilaria Bordino (UniCredit), Francesco Di Iorio (UniCredit), Andrea Galliani (UniCredit), Alessio Rosatelli (UniCredit), Lorenzo Severini (UniCredit)

56. Efficient Deep Equilibrium Models: Denoising Regularization and Average Fixed-Point Initialization to Reduce Function Evaluations (PT)

Jan-Ole Perschewski (Otto von Guericke University), Sebastian Stober (Otto von Guericke University)

10:30 – 12:30

Poster #5B: Journal to Conference (J2C) Track

Room: Manzoni

Session Chair(s): Andrea Ceni

57. Decoding Neuronal Networks: A Reservoir Computing Approach for Predicting Connectivity and Functionality (J2C)

Ilya Auslender (University of Trento), Giorgio Letti (University of Trento), Yasaman Heydari (University of Trento), Clara Zaccaria (University of Trento), Lorenzo Pavesi (University of Trento)

58. Federated Reinforcement Learning with Knowledge Transfer for Network Selection in Hybrid WiFi-VLC Networks (J2C)

Abdulmajeed Alenezi (Islamic University of Madinah)

59. A review of green artificial intelligence: Towards a more sustainable future (J2C)

Verónica Bolón-Canedo (Universidade da Coruña), Laura Morán-Fernández (Universidade da Coruña), Amparo Alonso-Betanzos (Universidade da Coruña), Brais Cancela (Universidade da Coruña)

60. Breaking boundaries: Low-precision conditional mutual information for efficient feature selection (J2C)

Laura Morán-Fernández (Universidade da Coruña), Eva Blanco-Mallo (Universidade da Coruña), Kostas Sechidis (Novartis Pharma AG), Verónica Bolón-Canedo (Universidade da Coruña)

61. A Contrastive Variational Graph Auto-Encoder for Node Clustering (J2C)

Nairouz Mrabah (Université du Québec à Montréal), Mohamed Bouguessa (Université du Québec à Montréal), Riadh Ksantini (University of Bahrain)

62. Do Highly Over-Parameterized Neural Networks Generalize Since Bad Solutions Are Rare? (J2C)

Julius Martinetz (Technical University Berlin), Thomas Martinetz (University of Lübeck)

63. A support vector machine formulation for linear and kernel discriminant analysis (J2C)

franck dufrenois (ULCO)

64. Offline prompt polishing for low quality instructions (J2C)

Jia Yu (Zhejiang University)

65. Euler State Networks: Non-dissipative Reservoir Computing (J2C)

Claudio Gallicchio (University of Pisa)

66. Edge of Stability Echo State Network (J2C)

Andrea Ceni (University of Pisa), Claudio Gallicchio (University of Pisa)

67. Residual Echo State Networks: Residual recurrent neural networks with stable dynamics and fast learning (J2C)

Andrea Ceni (University of Pisa), Claudio Gallicchio (University of Pisa)

68. Situation-Based Neuromorphic Memory in Spiking Neuron-Astrocyte Network (J2C)

Susanna Gordleeva (Lobachevsky University, Nizhny Novgorod), Yuliya Tsybina (Lobachevsky University, Nizhny Novgorod), Mikhail Krivonosov (Lobachevsky University, Nizhny Novgorod), Ivan Tyukin (King's College London), Victor Kazantsev (Lobachevsky University, Nizhny Novgorod), Alexey Zaikin (University College London), Alexander Gorban (University of Leicester and AIRI)

69. A survey of artificial intelligence approaches in blind source separation (J2C)

Sam Ansari (University of Sharjah), Abbas Saad Alatrany (Liverpool John Moores University), Khawla A. Alnajjar (University of Sharjah), Tarek Khater (Khalifa University), Soliman Mahmoud (University of Sharjah), Dhiya Al-Jumeily (Liverpool John Moores University), Abir Jaafar Hussain (University of Sharjah)

70. MRHGNN: Enhanced Multimodal Relational Hypergraph Neural Network for Synergistic Drug Combination Forecasting (J2C)

Mengjie Chen (Shandong University), Cunquan Qu (Shandong University)

71. A Multiply-And-Max/Min Neuron Paradigm for Aggressively Prunable Deep Neural Networks (J2C)

Luciano Prono (Politecnico di Torino), Philippe Bich (Politecnico di Torino), Chiara Boretti (Politecnico di Torino), Mauro Mangia (Università di Bologna), Fabio Pareschi (Politecnico di Torino), Riccardo Rovatti (Università di Bologna), Gianluca Setti (King Abdullah University of Science and Technology)

72. Two Phase Cooperative Learning for Supervised Dimensionality Reduction (J2C)

Ioannis Nellas (University of Thessaly), Sotiris Tasoulis (University of Thessaly), Spiros Georgakopoulos (University of Thessaly), Vassilis Plagianakos (University of Thessaly)

73. Meta-Scaler: A Meta-Learning Framework for the Selection of Scaling Techniques (J2C)

Lucas de Amorim (Instituto de Computação - Universidade Federal de Alagoas), George D. C. Cavalcanti (Centro de Informática - Universidade Federal de Pernambuco), Rafael Menelau Oliveira e Cruz (École de Technologie Supérieure)

74. Deep Kernel Principal Component Analysis for multi-level feature learning (J2C)

Francesco Tonin (KU Leuven), Qinghua Tao (KU Leuven), Panagiotis Patrinos (KU Leuven), Johan A.K. Suykens (KU Leuven)

75. Denoising diffusion post-processing for low-light image enhancement (J2C)

Savvas Panagiotou (University of Pretoria), Anna Bosman (University of Pretoria)

76. Learning EEG Motor Characteristics via Temporal-Spatial Representations (J2C)

Tianyu Xiang (Institute of Automation, Chinese Academy of Sciences), Xiao-Hu Zhou (Institute of Automation, Chinese Academy of Sciences), Xiao-Liang Xie (Institute of Automation, Chinese Academy of Sciences), Shi-Qi Liu (Institute of Automation, Chinese Academy of Sciences), Hong-Jun Yang (Institute of Automation, Chinese Academy of Sciences), Zhen-Qiu Feng (Institute of Automation, Chinese Academy of Sciences), Mei-Jiang Gui (Institute of Automation, Chinese Academy of Sciences), Hao Li (Institute of Automation, Chinese Academy of Sciences), De-Xing Huang (Institute of Automation, Chinese Academy of Sciences), Xiu-Ling Liu (Hebei University), Zeng-Guang Hou (Institute of Automation, Chinese Academy of Sciences)

77. Universal approximation theorem for vector- and hypercomplex-valued neural networks (J2C)

Marcos Eduardo Valle (Universidade Estadual de Campinas), Wington Vital (Universidade Estadual de Campinas), Guilherme Vieira (Universidade Estadual de Campinas)

78. A multilayered bidirectional associative memory model for learning nonlinear tasks (J2C)

Damien Rolon-Merette (ULaval), Thadde Rolon-Merette (HEC), Sylvain Chartier (uOttawa)

79. Event-based optical flow: method categorisation and review of techniques that leverage deep learning (J2C)

Robert Guaman (Universidad O'Higgins), Jose Delpiano (Universidad de los Andes), Rodrigo Verschae (Universidad O'Higgins)

80. MARSHAL: Multiple-Attribute Regret Theory and Semantically Aware Probabilistic Weights based Hesitant Linguistic Decision-Making (J2C)

Taniya Seth (South Asian University), Pranab K. Muhuri (South Asian University)

81. Deep belief network with fuzzy parameters and its membership function sensitivity analysis (J2C)

Amit Shukla (University of Vaasa), Pranab K. Muhuri (South Asian University)

82. Evolutionary Neural Architecture Search for Transferable Networks (J2C)

Xun Zhou (The Hong Kong Polytechnic University), Songbai Liu (Shenzhen University), A. K. Qin (Swinburne University of Technology), Kay Chen Tan (The Hong Kong Polytechnic University)

83. A Unified Optimization-Based Framework for Certifiably Robust and Fair Graph Neural Networks (J2C)

Vipul Singh (Indian Institute of Technology Delhi), Sandeep Kumar (Indian Institute of Technology Delhi), Avadhesh Prasad (Indian Institute of Technology Delhi), Jayadeva Jayadeva (Indian Institute of Technology Delhi)

11:00 – 12:30

Neural Networks for Image and video processing VI

Room: Leonardo da Vinci

Session Chair(s): Qikang Zhang

11:00 Test Time Training for 4D Medical Image Interpolation

Qikang Zhang (South China Normal University), Yingjie Lei (South China Normal University), Zihao Zheng (South China Normal University), Ziyang Chen (South China Normal University), Zhonghao Xie (South China Normal University)

11:18 DIANA: Drone Imagery for Archipelago Navigation and Analysis for Maritime Object Detection

Mehdi Asadi (Turku university of applied sciences), Amin Majd (Turku University of Applied Sciences), Mohammad Loni (Malardalen University), Juha Kalliovaara (Turku University of Applied Sciences)

11:36 DenseCapVCR: Utilizing Dense Captions for Visual Commonsense Reasoning

Subham Das (IIT Madras), C Chandra Sekhar (IIT Madras)

11:54 HFBRI-MAE: Handcrafted Feature Based Rotation-Invariant Masked Autoencoder for 3D Point Cloud Analysis

Xuanhua Yin (University of Sydney), Dingxin Zhang (University of Sydney), Jianhui Yu (University of Sydney), Weidong Cai (University of Sydney)

12:12 Hybrid Visual Adapter and Drop-View Training for Change Captioning

Ziyang Yu (Fudan University), Xiaodong Gu (Fudan University)

11:00 – 12:30

Interpretable and Explainable AI II

Room: Michelangelo

Session Chair(s):

11:00 Pay Attention to What and Where? Interpretable Feature Extractor in Vision-based Deep Reinforcement Learning

Canh An Tien Pham (The University of Manchester), Angelo Cangelosi (The University of Manchester)

11:18 Causal-discovery-based root-cause analysis and its application in time-series prediction error diagnosis

Hiroshi Yokoyama (Shiga University), Ryusei Shingaki (TOSHIBA Corporation), Kaneharu Nishino (TOSHIBA Corporation), Shohei Shimizu (Shiga University), Thong Pham (Shiga University)

11:36 Multi-criteria Rank-based Aggregation for Explainable AI

Sujoy Chatterjee (University of Campinas), Everton Romanzini Colombo (University of Campinas), Marcos Medeiros Raimundo (University of Campinas)

11:54 Inverted Transformers Interpretability Beyond Attention Visualization

Hugo Cazaux (Reykjavik University), Ralph Rudd (Reykjavik University), Hlynur Stefánsson (Reykjavik University), Sverrir Ólafsson (Reykjavik University), Eyjólfur Ingi Ásgeirsson (Reykjavik University)

12:12 Refusal Behavior in Large Language Models: A Nonlinear Perspective

Fabian Hildebrandt (University of Erlangen), Andreas Maier (University of Erlangen), Patrick Krauss (University of Erlangen), Achim Schilling (University of Erlangen)

11:00 – 12:30

Application of Neural Network to Robotics and Reinforcement Learning

Room: Raffaello

Session Chair(s):

11:00 Self-Learning Method of Traversability Perception using ATC-DT for an Autonomous Mobile Robot

Yukinaga Kato (Okayama University), Yuichiro Toda (Okayama University), Takayuki Matsuno (Okayama University), Yoshimasa Nakamura (Tokyo Metropolitan Industrial Technology Research Institute), Toshiki Masuda (Tokyo Metropolitan Industrial Technology Research Institute)

11:18 Nano VS: a Neural Perception Layer for Fully Onboard Visual Semantic Mapping on Tiny Robots

Thomas Rüegg (D-ITET, ETH Zürich), Marco Giordano (D-ITET, ETH Zürich), Tommaso Polonelli (D-ITET, ETH Zürich), Luca Benini (D-ITET, ETH Zürich), Michele Magno (D-ITET, ETH Zürich)

11:36 Human-Centered AI and Autonomy in Robotics: Insights from a Bibliometric Study

Simona Casini (University of Pisa), Pietro Ducange (University of Pisa), Francesco Marcelloni (University of Pisa), Lorenzo Pollini (University of Pisa)

11:54 RL-Pruner: Retraining-Free Global Exploration Pruning Method Based on Reinforcement Learning

Guangzhen Yao (Northeast Normal University), Yi Wang (Xi'an Jiaotong University), Chengze Du (School of Cyberspace Security, Beijing University of Posts and Telecommunications), Xiaoyu Deng (School of Engineering and Applied Science, University of Pennsylvania Philadelphia), Wenxin Zhang (University of Chinese Academy of Science), Renda Han (Hainan University), Zhanghao Qin (Nanyang Technology University), Yu Li (Hubei University), Bobin Xie (Shanghai University of Electric Power), Bowen Dong (Tianjin University), Haiming Peng (Fudan University), Sandong Zhu (Northeast Normal University), Long Zhang (Northeast Normal University), Zezhou Wang (The Australian National University), Zeyu Zhang (The Australian National University)

11:00 – 12:30

Autonomous Vehicles and Intelligent Transportation Systems II

Room: Tiziano

Session Chair(s): Lucio Marcenaro

11:00 Autonomous Vehicle Localization via LiDAR-Based Classification of Dynamic and Static Tracks in Dynamic Environments

Muhammad Adnan (University of Genova), Pamela Zontone (University of Genova), Lucio Marcenaro (University of Genova), David Martin Gomez (University Carlos III), Carlo Regazzoni (University of Genova)

11:18 TOMD: A Trail-based Off-road Multimodal Dataset for Traversable Pathway Segmentation under Challenging Illumination Conditions

Yixin Sun (Department of Computer Science, Durham University), Li Li (King's College London), Wenke E (Department of Computer Science, Durham University), Amir Atapour-Abarghouei (Department of Computer Science, Durham University), Toby Breckon (Department of Computer Science, Durham University)

11:36 Omni-V2X: A Vision-Language Model for Actionable Insights in Vehicle-to-Everything Systems

Nicanor Mayumu (Central South University), Deng Xiaoheng (Central South University), Patrick Mukala (University of Wollongong in Dubai), Saif Ur Rehman Khan (Central South University), Muhammad Usman Saeed (Central South University)

11:54 Towards Model-Agnostic Cooperative Perception

Junjie Wang (Umeå University), Tomas Nordström (Umeå University)

11:00 – 12:30

Efficient and Tiny Neural Networks

Room: Loyola

Session Chair(s): Lionel Prevost

11:00 A Lightweight Vision-Based Deep Learning Model for Fall Detection

Xuebin Zhang (College of Information Science and Technology, Donghua University), Fuyuan Feng (College of Information Science and Technology, Donghua University), Yan Feng (College of Information Science and Technology, Donghua University), Zhangcheng Yang (College of Information Science and Technology, Donghua University), Fan Zhang (College of Information Science and Technology, Donghua University), Longting Xu (College of Information Science and Technology, Donghua University)

11:18 SpaRTAN: Spatial Reinforcement Token-based Aggregation Network for Visual Recognition

Quan Bi Pay (Monash University Malaysia), Vishnu Monn Baskaran (Monash University Malaysia), Junn Yong Loo (Monash University Malaysia), KokSheik Wong (Monash University Malaysia), Simon See (NVIDIA AI Technology Center, NVIDIA)

11:36 Input Resolution Downsizing as a Compression Technique for Vision Deep Learning Systems

Jérémy Morlier (IMT Atlantique), Mathieu Léonardon (IMT Atlantique), Vincent Gripon (IMT Atlantique)

11:54 Optimized Domain-Specific Text Processing with Keyword Knowledge Distillation (KKD)

Momojit Biswas (TCS-Research), Anmol Singhal (TCS-Research), Preethu Anish (TCS-Research)

12:12 Semantic Retention and Extreme Compression in LLMs: Can We Have Both?

Stanislas Laborde (ESIEA), Martin Cousseau (ESIEA), Antoun Yaacoub (ESIEA), Lionel Prevost (ESIEA)

11:00 – 12:30

Special Session on Advances in Deep Learning for Biomedical Data Analysis

Room: Alfieri

Session Chair(s): Larbi Boubchir

11:00 Decoupling Local and Cross-Regional Transmission Dynamics for Enhanced COVID-19 Forecasting

Jiaqiang Fei (Institute of Automation), Zhidong Cao (Institute of Automation, Chinese Academy of Sciences), Tianyi Luo (Institute of Automation, Chinese Academy of Sciences), Jiaojiao Wang (Institute of Automation, Chinese Academy of Sciences)

11:18 Texture-Aware StarGAN for CT data harmonization

Francesco Di Feola (Umeå University), Ludovica Pompilio (University Campus Bio-Medico of Rome), Cecilia Assolito (Università degli Studi di Roma "La Sapienza"), Valerio Guarrasi (University Campus Bio-Medico of Rome), Paolo Soda (Umeå University)

11:36 ECoGNet: an EEG-based Effective Connectivity Graph Neural Network for Brain Disorder Detection

Jacopo Burger (University of Milan), Vittorio Cuculo (University of Modena and Reggio Emilia), Alessandro D'Amelio (University of Milan), Giuliano Grossi (University of Milan), Raffaella Lanzarotti (University of Milan)

11:54 Geometric Deep Learning for Essential Tremor Screening Using OCT-Derived 3D Point Clouds

Lorena Álvarez-Rodríguez (University of A Coruña), Joaquim de Moura (University of A Coruña), Elisa Vilades (University of Zaragoza), Elena Garcia-Martin (University of Zaragoza), Jorge Novo (University of A Coruña), Marcos Ortega (University of A Coruña)

12:12 MedConv: Convolutions Beat Transformers on Long-Tailed Bone Density Prediction

Xuyin Qi (The University of Adelaide), Zeyu Zhang (The Australian National University), Huazhan Zheng (Zhejiang University of Technology), Mingxi Chen (Guangdong Technion – Israel Institute of Technology), Numan Kutaiba (Austin Health), Ruth Lim (Austin Health), Cherie Chiang (The University of Melbourne), Zi En Tham (La Trobe University), Xuan Ren (The University of Adelaide), Wenxin Zhang (University of Chinese Academy of Science), Lei Zhang (University of Chinese Academy of Sciences), Hao Zhang (University of Chinese Academy of Sciences), Wenbing Lv (Yunnan University), Guangzhen Yao (Northeast Normal University), Renda Han (Hainan University), Kangsheng Wang (University of Science and Technology Beijing), Mingyuan Li (Hebei University of Technology), Hongtao Mao (Central China Normal University), Yu Li (Hubei

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University), Zhibin Liao (The University of Adelaide), Yang Zhao (La Trobe University), Minh-Son To (Flinders University)

11:00 – 12:30

Machine Learning

Room: Belli

Session Chair(s): Nikolaos Passalis

11:00 Multiplicative Stochastic Gradient Descent for fast and robust deep learning training

Manos Kirtas (Aristotle University of Thessaloniki), Nikolaos Passalis (Aristotle University of Thessaloniki), Anastasios Tefas (Aristotle University of Thessaloniki)

11:18 Automated Class Imbalance Learning via Few-shot Bayesian Optimization with Meta-learned Deep Kernel Surrogates

Zhaoyang Wang (University of Birmingham), Shuo Wang (University of Birmingham), Damien Ernst (University of Liège)

11:36 High Performance Machine Learning for Nation Wide Crop Classification

Lucas Borges (UFMG), Gianluca Zuin (UFMG & Kunumi), Adriano Veloso (UFMG & Kunumi), Nivio Ziviani (UFMG & Kunumi)

11:54 CI-RKM: A Class-Informed Approach to Robust Restricted Kernel Machines

Ritik Mishra (IIT Indore), Mushir Akhtar (IIT Indore), M Tanveer (IIT Indore)

12:12 Exploring the Relation between Dataset Complexity and AutoML Fitness Landscape Metrics

Thiago França (Universidade Federal de Pernambuco), Ricardo Prudêncio (Universidade Federal de Pernambuco), Péricles Miranda (Universidade Federal Rural de Pernambuco)

11:00 – 12:30

Special Session on AICS: Artificial Intelligence for Complex Systems

Room: Marinetti

Session Chair(s): Alessio Martino, Enrico De Santis

11:00 Chain of Thoughts-Based Prompting for Incident Detection Using Large Language Model

Lorraine Chambers (Conway Packaging Services (CPS) Ltd., Birmingham City University), Affiong Udokisai (Birmingham City University), Haitham Hassan Mahmoud (Birmingham City University), Khalid Ismail (Birmingham City University), Nazim Mohammed (Conway Packaging Services (CPS) Ltd.), Waldo Cervantes (Birmingham City University), Mohamed Gaber (Birmingham City University), Rehan Bhana (Birmingham City University)

11:18 High-level classification based on meta-graph of visibility graphs for Autism detection

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Ricardo Lima Filho (Universidade Federal de Uberlândia), Robinson Sabino-Silva (Universidade Federal de Uberlândia), Murillo Carneiro (Universidade Federal de Uberlândia)

11:36 LSTM in Recursive Feedback Loops: A Study on Textual Evolution and Complexity

Enrico De Santis (University of Rome "La Sapienza"), Alessio Martino (LUISS University), Francesca Ronci (University of Rome "La Sapienza"), Antonello Rizzi (University of Rome "La Sapienza")

11:54 2025: A GPT Odyssey. Deconstructing Intelligence by Gradual Dissolution of a Transformer

Enrico De Santis (University of Rome "La Sapienza"), Alessio Martino (LUISS University), Edoardo Bruno (Sis.Ter. Pomos S.r.l.), Antonello Rizzi (University of Rome "La Sapienza")

12:12 LogReader: General-Purpose Log Analysis via Open-Source Large Language Models

Jiaxing Qi (Beihang University), Zhongzhi Luan (Beihang University), Shaohan Huang (Beihang University), Yao Lu (Beihang University), Hailing Yang (Beihang University), Depei Qian (Beihang University)

13:00 – 14:00

Lunch

Room: Pontifical Gregorian University Hall

14:00 – 14:30

Closing Ceremony

Room: Leonardo da Vinci

14:00 – 17:00

Workshop: Trustworthiness and Reliability in Neurosymbolic AI

Room: Trilussa

Session Chair(s): Emanuel Di Nardo, Angelo Casolaro, Massimiliano Giordano Orsini

14:00 Graph Neural Networks and Explainability (KEYNOTE)

Riccardo Rizzo (ICAR CNR)

14:40 Challenge results: Explainable AI for Educational Question-Answering (CHALLENGE)

15:00 Speaking in Words, Thinking in Logic: A Dual-Process Framework in QA Systems

Tuan Bui (Ho Chi Minh City University of Technology (HCMUT)), Trong Le (Ho Chi Minh City University of Technology (HCMUT)), Thai Phat (Ho Chi Minh City University of Technology (HCMUT)), Sang Nguyen (Ho Chi Minh City University of Technology (HCMUT)), Minh Hua (Ho Chi Minh City University of Technology (HCMUT)), Ngan Pham (Ho Chi Minh City University of Technology (HCMUT)), Thang Bui (Ho Chi Minh City University of Technology (HCMUT)), Tho Quan (Ho Chi Minh City University of Technology (HCMUT))

July 5, 2025

15:20 Topology-Driven Explainable GNNs for Trojan Detection in Deep Learning

Riccardo Ceccaroni (Sapienza University of Rome), Pierpaolo Brutti (Sapienza University of Rome)

15:40 Break

16:00 Parallel Optimization of Quantized CNNs for Efficient GPU Inference

Marco Lettierio (Parthenope University of Naples), Pasquale De Luca (Parthenope University of Naples)

16:20 Stability-aware Neuromorphic Computation

Egor Nuzhin (Centre for Applied AI), Ivan Tyukin (King's College London), Georgii Ovchinnikov (Centre for Applied AI), Nikolay Brilliantov (Centre for Applied AI)

16:40 Competition awards and closing remarks

14:00 – 17:00

Workshop: artiFicial And bio-inspIred netwoRked intelliGence foR cOnstrained aUtoNomous Devices (FAIRGROUND)

Room: Montale

Session Chair(s): Fabrizio De Vita, Luca Patanè, Dario Bruneo

14:00 Welcome and opening remarks

14:10 An insect brain inspired neural network for visual navigation in unstructured environments

Paolo Arena (DIEEI University of Catania), Emanuele Cannizzo (DIEEI University of Catania), Alessia Li Noce (DIEEI University of Catania), Luca Patanè (University of Messina)

14:50 Spiking Networked System for Anomaly Detection in Vision-Guided Robots

Antonino Maio (University of Messina), Enrico Catalfamo (University of Messina), Fabrizio De Vita (University of Messina), Luca Patanè (University of Messina), Dario Bruneo (University of Messina)

15:10 Transfer learning optimization based on evolutionary selective fine tuning (SHORT PAPER)

Jacinto Colan (Nagoya University), Ana Davila (Nagoya University), Yasuhisa Hasegawa (Nagoya University)

15:30 Open discussion

14:00 – 17:00

Workshop: Intelligent Applications for Industrial Systems

Room: Leopardi

Session Chair(s): Morteza Moradi, Isaak Kavasidis, Ali Borji, Olivier Le Meur, Dan Guo

14:00 Welcome and opening remarks

14:10 Neural Networks in Image Processing: A Historical Perspective (KEYNOTE)

Guoping Qiu (University of Nottingham)

14:50 Understanding Human Attention: Computational Models of Visual Attention from University Research to Industrial Applications (KEYNOTE)

Hamed Rezazadegan Tavakoli (Nokia)

15:30 Micromagnetic and quantitative prediction of hardness of Cr12MoV steels using transfer learning

Cunfu HE (Beijing University of Technology), WANG Xianxian (Beijing Polytechnic), Zhixiang XING (Beijing Cizhen Liangyi Technology Co., Ltd.), Xiucheng Liu (Beijing University of Technology), Ping Fu (Beijing University of Technology), Mengshuai Ning (Beijing University of Technology)

15:50 Towards Autonomous Cyber Defence: Applying Systems Theoretic Process Analysis to Human-Machine Teaming

Shu-Jui Chang (Loughborough University), Chris Hicks (The Alan Turing Institute), Vasilios Mavroudis (The Alan Turing Institute), Iain Phillips (Loughborough University), Tim Watson (Loughborough University)

16:10 Closing remarks

14:30 – 16:00

Topological Deep Learning

Room: Loyola

Session Chair(s): Francesco Caso

14:30 Renormalized Graph Representations for Node Classification

Francesco Caso (Sapienza Università di Roma), Giovanni Trappolini (Sapienza Università di Roma), Andrea Bacciu (Amazon), Pietro Liò (University of Cambridge - Sapienza Università di Roma), Fabrizio Silvestri (Sapienza Università di Roma)

14:48 Geometry-Aware Convolutional Neural Networks on SPD Manifolds

Imad Eddine TBERMACINE (Sapienza University of Rome), Samuele Russo (Sapienza University of Rome), Christian Napoli (Sapienza University of Rome)

15:06 Topological Deep Learning with State-Space Models: A Mamba Approach for Simplicial Complexes

Marco Montagna (Università di Roma La Sapienza), Lev Telyatnikov (Università di Roma La Sapienza), Simone Scardapane (Università di Roma La Sapienza)

15:24 TopoLink: Topology-enhanced Graph Transformer with Extended Persistent Homology for Link Prediction

Lizhi Liu (China UnionPay)

15:42 Minimally Supervised Regression using Topological Projections in Self-Organizing Maps

Zimeng Lyu (Rochester Institute of Technology), Alexander Ororbia (Rochester Institute of Technology), Rui Li (Rochester Institute of Technology), Travis Desell (Rochester Institute of Technology)

14:30 – 16:00

Financial Engineering Applications

Room: Alfieri

Session Chair(s): Himanshu Choudhary

14:30 FinXplore: An Adaptive Deep Reinforcement Learning Framework for Balancing and Discovering Investment Opportunities

Himanshu Choudhary (Indian Institute of Technology Mandi, Mandi, HP), Arishi Orra (Indian Institute of Technology Mandi, Mandi, HP), Manoj Thakur (Indian Institute of Technology Mandi, Mandi, HP)

14:48 EP-GAT: Energy-based Parallel Graph Attention Neural Network for Stock Trend Classification

Zhuodong Jiang (University of Bristol), Pengju Zhang (University of Bristol), Peter Martin (University of Bristol)

15:06 FinSIR: Financial SIR-GCN for Market-Aware Stock Recommendation

Brian Godwin Lim (Nara Institute of Science and Technology), Jiahong Liu (The Chinese University of Hong Kong), Hans Jarett Ong (Nara Institute of Science and Technology), Jan Adrian Chan (Ateneo de Manila University), Renzo Roel Tan (Nara Institute of Science and Technology), Irwin King (The Chinese University of Hong Kong), Kazushi Ikeda (Nara Institute of Science and Technology)

15:24 A Multi-Scale and Dual-Attention Enhanced TimesNet Model for Electricity Price Forecasting

Yiming Jiang (Xinjiang University), Ying Jiang (Xinjiang University)

15:42 PerTime: A Multi-scale Periodic Mixing Model for Long-term Time Series Forecasting

Zilong Yan (Beijing University of Posts and Telecommunications), Chenyang He (Beijing University of Posts and Telecommunications), Tianmu Sha (Beijing University of Posts and Telecommunications), Lei Yao (Beijing University of Posts and Telecommunications), Qi Li (Beijing University of Posts and Telecommunications), Zhenyu Zhang (Beijing University of Posts and Telecommunications), Yong Zhang (Beijing University of Posts and Telecommunications)

14:30 – 16:00

Interpretable and Explainable AI III

Room: Belli

Session Chair(s): M Tanveer

14:30 Robust Universum Twin Support Vector Machine for Imbalanced Data

M Tanveer (IIT Indore), Abdul Quadir (IIT Indore)

14:48 Twin Restricted Kernel Machines for Multiview Classification

Abdul Quadir (IIT Indore), M. Sajid (IIT Indore), Mushir Akhtar (IIT Indore), M Tanveer (IIT Indore)

15:06 Enhancing Flash Flood Forecasting and Understanding Hydrosystem Dynamics for Small Urban Basins in the framework of Explainable Artificial Intelligence– Case Study of the Cadereau d'Alès, Nîmes

Youness Hrouar (HSM, Univ Montpellier, IMT Mines Ales, CNRS, IRD, Alès, France), Guillaume ARTIGUE (HSM, Univ Montpellier, IMT Mines Ales, CNRS, IRD, Alès, France), Anne JOHANNET (HSM, Univ Montpellier, IMT Mines Ales, CNRS, IRD, Alès, France)

15:24 Enhancing the Explainability of Neuro-Fuzzy Systems with Large Language Models: A Case Study on EEG-Based Epileptic Seizure Classification

Gabriella Casalino (University of Bari "Aldo Moro"), Giovanna Castellano (University of Bari "Aldo Moro"), Alberto Gaetano Valerio (University of Bari "Aldo Moro"), Gennaro Vessio (University of Bari "Aldo Moro"), Gianluca Zaza (University of Bari "Aldo Moro")

Video Presentations

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Multiple Population Alternate Evolution Neural Architecture Search

Juan Zou (Xiangtan University), Han Chu (Xiangtan University), Yizhang Xia (Xiangtan University), Juwen Xu (Xiangtan University), Yuan Liu (Xiangtan University), Zhanglu Hou (Xiangtan University)

AdaPT: Adaptive Policy Transfer for Multi-agent Reinforcement Learning with Domain Classifiers

Yuxiang Mai (Institute of Automation, Chinese Academy of Sciences), Qiyue Yin (Institute of Automation, Chinese Academy of Sciences), Wancheng Ni (Institute of Automation, Chinese Academy of Sciences), Kaiqi Huang (Institute of Automation, Chinese Academy of Sciences)

MolFusion: Multimodal Fusion Learning for Molecular Representations via Multi-granularity Views

MuZhen Cai (Harbin Institute of Technology), Sendong Zhao (Harbin Institute of Technology), Haochun Wang (Harbin Institute of Technology), Haoqiang Guo (Harbin Institute of Technology), Yanrui Du (Harbin Institute of Technology), Zewen Qiang (HIT), Bing Qin (Harbin Institute of Technology), Ting Liu (Harbin Institute of Technology)

Leveraging World Model Disentanglement in Value-Based Multi-Agent Reinforcement Learning

Zhizun Wang (McGill University), David Meger (McGill University)

Personalized Federated Learning Based on Fine-grained Subgraphs

Jiawei Liu (Ocean University of China)

Dual Adjacency Graph Convolutional Network Combined with Reinforcement Learning for Human Skeleton Action Recognition

Jiang Feng Xie (Northwest University), Juan Song (Northwest University), Yu Hang Gu (Northwest University), Jun Guo (Northwest University), Zhi Cheng Sun (Northwest University)

T-NER: Triple embedding for Chinese Named Entity Recognition

Pu Li (Zhengzhou University of Light Industry), Guopeng Cheng (Zhengzhou University of Light Industry), Yushan Guo (University of Camerino), Yuncheng Jiang (South China Normal University), Guoxiang Li (Guangxi University of Finance and Economics), Shuanghong Qu (University of Camerino), Bin Ai (Zhengzhou Think Freely Hi-Tech Co., Ltd.)

DB-STAGCN: A Dual-Branch Spatial-Temporal Attention Graph Convolutional Network for Traffic Flow Prediction

Zhenyu Yang (Shandong University of Technology), Zhiyong Wu (Shandong University of Technology), Fengna Ji (Shandong University of Technology), Lei Du (Shandong University of Technology), Xiuwei Hu (Shandong University of Technology), Yunhui Zheng (SDUT)

ContxE: Attention-based Context Aggregation for Temporal Knowledge Graph Completion

Borui Cai (Beihang University), yong xiang (deakin university), Longxiang Gao (Qilu University of Technology), Jiong Jin (Swinburne University of Technology), Junfeng Wu (Deakin University), Tom Luan (Xi'an Jiaotong University)

MKPR-GAT: Personalized Recommendation Algorithm for Traditional Chinese Medicine Prescription Based on Knowledge Graph

Chaobo Zhang (Heilongjiang University), Long Tan (Heilongjiang University)

The Improved Algorithm of RT-DETR Based on Multi-Head Attention Mechanism

Dong Wang (Chongqing University of Technology), Yuntian Jiang (Chongqing University of Technology), Shixinyu Wang (Chongqing University of Technology)

Attention-Driven LPLC2 Neural Ensemble Model for Multi-Target Looming Detection and Localization

Renyan Liu (Guangzhou University), Qibing Fu (School of Mathematics and Information Science, Guangzhou University)

A new lightweight YOLOv8 for vehicle detection

Wei Wei (Dalian Minzu University), Yuxiu Liu (Dalian Minzu University), Jian Yun (Dalian Minzu University), Xiaodong Duan (Dalian Minzu University)

Low-Rank Adaptive Structural Priors for Generalizable Diabetic Retinopathy Grading

Yunxuan Wang (Guangxi Normal University), Ray Yin (Nanjing First Hospital, Nanjing Medical University), Yumei Tan (Guangxi Normal University), Hao Chen (University of Cambridge), Haiying Xia (Guangxi Normal University)

Dynamic Attention and Bi-directional Fusion for Safety Helmet Wearing Detection

Junwei Feng (Northwestern Polytechnical University), Xueyan Fan (Northwestern Polytechnical University), Yuyang Chen (Northwestern Polytechnical University), Yi Li (Northwestern Polytechnical University)

Beyond Local Features: A Metadata-Driven Image Feature Modulation Network for Skin Disease Classification

Feng Li (Xinjiang University), Min Li (Xinjiang University), Chen Hu (Xinjiang University), Enguang Zuo (Xinjiang University), Chen Chen (Xinjiang University), Mingrui Ma (Xinjiang University), Xiaoyi Lv (Xinjiang University), Cheng Chen (Xinjiang University)

MATOT: A Model-Agnostic Constraint for Time Series Forecasting via Optimal Transport

Ruichu Cai (Guangdong University of Technology), Zhenhui Yang (Guangdong University of Technology), Yuguang Yan (Guangdong University of Technology), Haiqin Huang (Guangdong University of Technology), Kaitao Zheng (Guangdong University of Technology), Haozhi Chen (Guangdong University of Technology), Zhifan Jiang (Guangdong University of Technology), Zijian Li (Guangdong University of Technology)

Stochastic Trajectory Prediction via Brownian LSTM Network

Xinyu Han (Harbin Engineering University), Sizhao Li (Harbin Engineering University), Hao Yu (Harbin Engineering University), Tiantai Deng (The University of Sheffield), Huosheng Xu (Harbin Engineering University)

Auto Time-CoT Enhances Large Language Models for Temporal Reasoning Data Processing

Baosheng Yin (Shenyang Aerospace University), Naiyu Hu (Shenyang Aerospace University)

MS-DDNet: Efficient Multi-Scale Dual Decoder Network for Ultrasound Thyroid Nodule Segmentation

Juan Wu (Wuhan University of Science and Technology), Jun Liu (Wuhan University of Science and Technology), Liping Ye (Wuhan Qingchuan University)

Uncertainty-guided boundary enhancement network for breast ultrasound image segmentation

Rongsheng Fan (Wuhan University of Science and Technology), Jun Liu (Wuhan University of Science and Technology)

Adaptive Query Prompting for Multi-Domain Landmark Detection

Yuhui Li (Guangdong University of Technology), Qiusen Wei (Guangdong University of Technology), Guoheng Huang (Guangdong University of Technology), Xiaochen Yuan (Macao Polytechnic University), Guo Zhong (Guangdong University of Foreign Studies), Jianwen Huang (Guangdong University of Technology), Jiajie Huang (Guangdong University of Technology)

MoDE: Mixture of Diffusion Experts for Any Occluded Face Recognition

Qiannan Fan (Tianjin University), Zhuoyang Li (Tianjin University), Jitong Li (Tianjin University), Chenyang Cao (Tianjin University)

A Multi-level and Multi-scale Context Refinement Network for Video-based Depression Recognition

Jingyi Liu (Capital Normal University), Yuanyuan Shang (Capital Normal University), Mengyuan Yang (Capital Normal University), Jiayi Lu (Capital Normal University), Zhuhong Shao (Capital Normal University), Hui Ding (Capital Normal University), Tie Liu (Capital Normal University)

Deep Multi-View Clustering via Enhanced Consistency and Specificity

Qixiong Long (South China Agricultural University), Jinfeng Wang (South China Agricultural University)

JTFM: Joint Time-Frequency Method for Long-Term Forecasting

Yu Li (Hubei University), Wenxin Zhang (University of Chinese Academy of Science), Renda Han (Hainan University), Guangzhen Yao (Northeast Normal University), Zeyu Zhang (The Australian National University), Cuicui Luo (University of Chinese Academy of Science), Tao Liu (Hubei University)

Guidance Net: Remote Sensing Image Dehazing with Guidance of Prompt Texture Information Embedding

Zhengguang Tan (Guangdong University of Technology), Guoheng Huang (Guangdong University of Technology), Lianglun Cheng (Guangdong University of Technology), Alex Hay-Man Ng (Guangdong University of Technology)

PrivRec: Privacy-Preserving Cross-Domain Recommendation with Enhanced Learning Strategies

Feng Yu (Jiangnan University), Yuan Liu (Jiangnan University), Yicheng Di (Jiangnan University), Xue Wang (Jiangnan University), Yue Fang (Jiangnan University)

ToP: A Structured Pathway for Document-level Information Extraction with Large Language Models

Pengfei Yin (Institute of Information Engineering, Chinese Academy of Sciences), Yubing Ren (Institute of Information Engineering, Chinese Academy of Sciences), Fang Fang (Institute of Information Engineering, Chinese Academy of Sciences), Boxiang Hu (Institute of Information Engineering, Chinese Academy of Sciences), Xu Bai (Institute of Information Engineering, Chinese Academy of Sciences)

Adversarial Contrastive Training in Parameter Space for Improved Text Classification

Hao Wu (Shanghai University), Xiangfeng Luo (Shanghai University), Jianqi Gao (Shanghai Jiao Tong University), Dian Huang (Shanghai University)

SEMGD: Summary-enhanced Multimodal Fake News Detection

Xiaoyu Wang (Communication University of China), Wenqian Shang (Communication University of China), Jianxiang Cao (Communication University of China), Xiangxi Bo (Xidian University), Chunhua Wang (Communication University of China), Kang Song (Communication University of China)

Enhancing Traffic Prediction Using Spatio-Temporal Convolutional Network with Multi-Periodic Input and Attention-based Scoring

Kunxiang Deng (Sun Yat-sen University), Xinyu Zhang (Sun Yat-sen University), Jiangnan Yan (Sun Yat-sen University), Jun Li (Sun Yat-sen University)

Certifying Adapters: Enabling and Enhancing the Certification of Classifier Adversarial Robustness

Jieren Deng (University of Connecticut), Hanbin Hong (University of Connecticut), Aaron Palmer (University of Connecticut), Xin Zhou (Baidu Research), Jinbo Bi (University of Connecticut), Kaleel Mahmood (University of Rhode Island), Yuan Hong (University of Connecticut), Derek Aguiar (University of Connecticut)

A Physical Attack for Segmentation-Based Visual Foundation Models

Mengqi He (Australian National University), Jinhong Ni (The University of Hong Kong), Zhaoyuan Yang (GE Research), Yiwei Fu (GE Research), John Karigiannis (GE Vernova Advanced Research), Jing Zhang (Australian National University)

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Retrieval-Augmented Multi-Modal Chain-of-Thoughts Reasoning for Large Language Models

Bingshuai Liu (Xiamen University), Chenyang Lyu (Alibaba Group), Zijun Min (Xiamen University), Zhanyu Wang (University of Sydney), Jinsong Su (Xiamen University), Longyue Wang (Alibaba Group)

HSViT: Horizontally Scalable Vision Transformer

Chenhao Xu (Victoria University), Chang-Tsun Li (Deakin University), Chee Peng Lim (Deakin University), Douglas Creighton (Deakin University)

HIM-RAG: A Heuristic Framework for Iterative Multi-Source Retrieval-Augmented Generation

SIJUN LI (Shanghai Normal University), Yanglong Yu (Shanghai Normal University), Huiyu Yang (DataGrand Ltd), Yihao Zhou (DataGrand Ltd), Chuanjun Ji (DataGrand Ltd)

Efficient-YOLO: Optimization of Safety Equipment Identification Algorithm for Substation staff

Daming Liu (Shanghai University of Electric Power), Bohui Zhang (Shanghai University of Electric Power)

OA-SORT: Improving Multi-Object Tracking Performance with Occlusion Aware ViT and Adaptive Appearance Update

Qian Li (Jiangnan University), Jinlong Yang (Jiangnan University)

Safe Screening Rules for Group OWL Models

Runxue Bao (University of Pittsburgh), Quanchao Lu (Georgia Institute of Technology), Yanfu Zhang (William and Mary)

Regulated Message Passing for Graphs with Mixed Local Attribute Patterns

Yujie Li (Central South University), Ning Gui (Central South University)

FANet: Polyp Segmentation Based on Feature Aggregation Network

Yulong Bai (Xinjiang University), Xiuhong Li (Xinjiang University), Kuan Wang (Xinjiang University), Songlin Li (Xinjiang University), Haodong Zeng (Xinjiang University)

A Novel Computing Paradigm for MobileNetV3 using Memristor

Jiale Li (The University of Auckland), Zhihang Liu (The University of Auckland), Sean Longyu Ma (The University of Auckland), Chiu-Wing Sham (The University of Auckland), Chong Fu (Northeastern University)

YOLO-GSW: A Lightweight Multi-Granularity Fruit Detection Algorithm for Complex Life Scenarios

Yilong He (Northwest A&F University), Huijun Yang (Northwest A&F University)

CoT-Planner: Chain-of-Thoughts as the Content Planner for Few-shot Table-to-Text Generation Reduces the Hallucinations from LLMs

Yupian Lin (East China University of Science and Technology), Yang Bian (East China University of Science and Technology), Guangya Yu (East China University of Science and Technology), Dongge Xue (East China University of Science and Technology), Wanpeng Lu (East China University of

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Science and Technology), Jingping Liu (East China University of Science and Technology), Tong Ruan (East China University of Science and Technology)

UMGen: Multi-scale and Multi-region Joint Prediction Pipeline for Uveal Melanoma Prognosis-related Gene Subtyping

Zhuo Deng (Tsinghua University Shenzhen International Graduate School), Zheng Gong (Tsinghua University Shenzhen International Graduate School), Ruiheng Zhang (Beijing Tongren Hospital), Li Dong (Beijing Tongren Hospital), Weihao Gao (Tsinghua University Shenzhen International Graduate School), Lei Shao (Beijing Tongren Hospital), Wenbin Wei (Beijing Tongren Hospital), Lan Ma (Tsinghua University Shenzhen International Graduate School)

ConceptVQ: Visual Model Interpreter

Jianyu Zhang (Zhejiang University), Li Zhang (Zhejiang University), Shijian Li (Zhejiang University)

Long-only cryptocurrency portfolio management by ranking the assets: a neural network approach

Zijiang YANG (New York University)

DAF-MFNet: A Multi-Scale Driving Assistance Detection Algorithm Based on Multi-Modal Fusion

Zhuqi Li (Northeast Forestry University), Songtao Deng (Hainan university), Zhiwei Wang (ZJU), Wangyu Wu (University of Liverpool), Bingcai Wei (Wuhan University), Jingbo Zhan (Northeast Forestry University), Hao Li (Northeast Forestry University), Wuji Wei (Northeast Forestry University), Jian Wang (Northeast Forestry University)

KAN-TSCN: A Kolmogorov-Arnold Networks Enhanced Framework for Temperature Forecasting

Shuang Li (Fujian Normal University), Yuanyuan Zhang (Fujian Normal University), Jiayin Lin (Fujian Normal University)

KSINet: Keypoint-Enhanced Single-Head Inference for Sitting Posture Recognition

Yongheng Tai (Ningbo University), Shoudong Shi (Ningbo University), Shanshan Zhong (Ningbo University), Tianxiang Zhao (Ningbo University), Kedi Qiu (Ningbo University), Ting Lan (Ningbo University)

E²CB2former: Effective and Explainable Transformer for CB2 Receptor Ligand Activity Prediction

Jiacheng Xie (University of Alabama at Birmingham), Yingrui Ji (School of Electronic, Electrical and Communication Engineering, University of Chinese Academy of Sciences), Linghuan Zeng (University of Alabama at Birmingham), Xi Xiao (University of Alabama at Birmingham), Gaofei Chen (University of Alabama at Birmingham), Lijing Zhu (Bowling Green State University), Joyanta Jyoti Mondal (University of Delaware), Jiansheng Chen (Aerospace Information Research Institute, Chinese Academy of Sciences)

HDBO-B: On Benchmarking High-Dimensional Bayesian Optimization

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Yiyu Chen (Nanjing University), Hongye Cao (Nanjing University), Quanlin Chen (Nanjing University), Jing Huo (Nanjing University), Dong Li (Huawei Noah's Ark Lab), Xu He (Huawei Noah's Ark Lab), Yang Gao (Nanjing University)

Aggregated Distinguishable Feature Learning for Generalized Deepfake Detection

Bosheng Yan (Deakin University), Chenhao Xu (Victoria University), Chang-Tsun Li (Deakin University)

Hy²CRE: Hypernetworks with Hybrid Data Augmentation for Continual Relation Extraction

yang zhang (Xiamen University), Yidong Chen (Xiamen University)

TSFI-Net: An Ensemble Network for Improving Skin Cancer Detection Using Transfer Learning and Fuzzy Integral

Weihang Liu (Southwest University), Jiahao Chen (Southwest University), Jiake Lv (Southwest University)

Diffusion-Guided Domain-Adaptive Segmentation with Structure-Aware Learning via Retinal Image Noise Conditioning

Yibo Chen (University of Jinan), Zihao Dong (University of Jinan), Jinping Li (University of Jinan), Runmin Cong (Shandong University), Xiuli Shao (Nankai University)

Towards Frame Rate Insensitive Video Object Segmentation

Weitu Chong (Fudan University), Kaer Huang (Lenovo), Mingjia Shi (Sichuan University), Jian Li (Lenovo), Hui Yang (Lenovo), Dan Zhang (The Hong Kong Polytechnic University)

RFID Sign Language Recognition Based on Multi-level Deep Feature Fusion

Jinzhe Liang (Hebei Agricultural University), Jiaxu Li (Hebei Agricultural University), Bai Shan (Hebei Agricultural University)

MTLP-MDG: Multi-Task Learning Framework using Probabilistic Distribution Perception for Missing Data Generation

Jiahao Qin (XJTLU), Kan Liu (XJTLU), Yuxiang Cai (XJTLU), Tianrui Ji (XJTLU), Feng Liu (Shanghai Jiaotong University)

SISAM: An Enhanced Promptable Segmentation Model with Expanded Dataset for Surgical Instruments

YUCHU LIU (South China Normal University), JING XIAO (South China Normal University)

GLFormer: A Lightweight Vision Transformer for Balancing Global and Local Information

Ze Zhou Wang (The Australian National University), Yi Wang (Xi'an Jiaotong University), Wei Zhang (Yarbo Inc.), Yuping Yuan (Information and Network Institute, Radio, Film and Television Design and Research Institute Co., Ltd.), Suyang Chen (The Grove School of Engineering - Computer Science, The City College of the City University of New York), Guangzhen Yao (Northeast Normal University), Renda Han (School of Computer Science and Technology, Hainan University), Chengze Du (School of Cyberspace Security, Beijing University of Posts and Telecommunications), Bobin

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Xie (Shanghai University of Electric Power), Sandong Zhu (Northeast Normal University), Long Zhang (Northeast Normal University)

Hear ALL Parties: Detecting Implicit Hate Speech using Contrastive In-context Learning

Yuanyong Li (Beijing University of Posts and Telecommunications), Sanchuan Guo (Beijing University of Posts and Telecommunications), Xi Zhang (Beijing University of Posts and Telecommunications)

Optimizing Time-Step Sampling Probabilities in Diffusion Models for Enhanced Training Efficiency

Beibei Zhang (Xiamen University), Wenjing Liu (Xiamen University), Fei Chao (Xiamen University), Xiang Chang (Aberystwyth University), Changjing Shang (Aberystwyth University), Qiang Shen (Aberystwyth University)

A Hybrid Traffic Flow Prediction Model Incorporating Spatio-Temporal Features

Xiangfu Meng (Liaoning Technical University), Zilun Zhang (Liaoning Technical University), Weipeng Xie (Liaoning Technical University), Jiangyan Cui (Liaoning Technical University)

Training Dynamics of a 1.7B LLaMa Model: A Data-Efficient Approach

Miles Q. Li (McGill University), Benjamin C. M. Fung (McGill University), Shih-Chia Huang (National Taipei University of Technology)

PromptLTS: Text-Guided Controllable Speech Generation from Lip Movements

Wenlong Xu (Zhejiang University), Xuelin Cheng (Zhejiang University), Yanliang Tan (Zhejiang University), Shuo Zhang (Zhejiang University), Junlin An (Zhejiang University)

Advancing Fine-Grained Few-Shot Learning via Human-Centric Visual Cognition

Chaofei Qi (Harbin Institute of Technology), Zhitai Liu (Harbin Institute of Technology), Chao Ye (Harbin Institute of Technology), Weiyang Lin (Harbin Institute of Technology), Jianbin Qiu (Harbin Institute of Technology)

Multi-scale Feature Synergistic and Semantic Complementary Network for Remote Sensing Image Object Detection

Zhiping Dan (China Three Gorges University), Caiming Xu (China Three Gorges University), Shuzhen Wan (China Three Gorges University), Qiao Li (China Three Gorges University), Guoqing Xiao (China Three Gorges University), Chenhao Lv (China Three Gorges University)

BiLSTM-Enhanced GNN for Document-Level Event Extraction with Multi-Strategy Optimization

Xi Liu (Xinjiang University), Jun Long (Central South University), WenTi Huang (Hunan University of Science and Technology), Xi Yu (Xinjiang University), Yang Yang (Xinjiang University)

HARFT: Role and Function-Based Cooperation Approach for Heterogeneous Multi-Agent

Long Yang (Shanghai University), ShaoRong Xie (Shanghai University), XiangFeng Luo (Shanghai University)

Data Collection Maximization with V-DQN in UAV-Assisted Wireless Sensor Networks: A deep reinforcement learning approach

Ru Jin (Beijing University of Posts and Telecommunications), Rongheng Lin (Beijing University of Posts and Telecommunications)

Deep Scale-Recurrent Mamba for Weather-degraded Remote Sensing Image Restoration

Jiatao Shi (China University of Geosciences, Wuhan), Xiaoyu Chen (China University of Geosciences, Wuhan)

Natural Language Explanation Generation for Question Answering

Jinghong Qu (Soochow University), Zhongqing Wang (Soochow University), Guodong Zhou (Soochow University)

Few-shot Anomaly Detection Based on Diffusion Generation Model and Multi-scale Feature Manipulation

Shu Zhao (Anhui University), Ao Liu (Anhui University), Dingjun Qu (Hefei Institutes of Physical Science, Chinese Academy of Sciences), Shenghui Zhao (Chuzhou University)

Progressive Dynamic Adaptive Learning: An Effective Semi-Supervised Method for Histopathological Image Segmentation

Pu Zhang (Wuhan University of Science and Technology), Jun Liu (Wuhan University of Science and Technology)

HDiffTG: A Lightweight Hybrid Diffusion-Transformer-GCN Architecture for 3D Human Pose Estimation

Yajie Fu (Zhejiang University), Chaorui Huang (Zhejiang University), Junwei Li (Zhejiang University), Hui Kong (University of Macau), Yibin Tian (Shenzhen University), Huakang Li (Xi'an Jiaotong-Liverpool University), Zhiyuan Zhang (Zhejiang University)

EAS-YOLOv5: Enhancing YOLOv5's Attention on Small Objects via Large Objects

Yifan Li (Sichuan University), Pei Zhou (Sichuan University), Junlin Du (Sichuan University), Jiangping Zhu (Sichuan University)

Fed-DSMOTE A Federated Learning Approach for Intrusion Detection in Resource-Constrained Internet of Things

Haoran Li (Wenzhou University), Lixing Chen (ChinaTower Corporation Limited Wenzhou Branch), Zhenzhou Tang (Wenzhou University)

Transfer Learning in Financial Time Series with Gramian Angular Field

Hou-Wan Long (The Chinese University of Hong Kong), On-In Ho (University of Macau), Qi-Qiao He (University of Macau), Yain-Whar Si (University of Macau)

Power Load Forecasting Method Based on Improved Attention Mechanism

Xiangsen Liu (Northwest A&F University), Erlei Zhang (Northwest A&F University), Yu Zhang (Northwest A&F University), Wenxuan Yuan (Northwest A&F University)

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IBCL: Integrating Information Bottleneck and Multi-Level Contrastive Learning for Accurate Multimodal Sentiment Analysis

Feifei Xu (Shanghai University of Electric Power), Haoran Bi (Shanghai University of Electric Power), Bo Li (Shanghai University of Electric Power), Zixi Wu (Shanghai University of Electric Power), Miaoyue Jiafu (Shanghai University of Electric Power)

An Internet of Things (IoT) Intrusion Detection System Combining Large Language Models (LLMs) and Self-supervised Learning

YuFei An (GuangDong Police College), Wang Weibing (GuangDong Police College)

Mitigating Channel Redundancy for Multivariate Time Series Forecasting

Guoqing Xiao (Hunan University), Boxiang Qin (Hunan University), Yuedan Chen (Hunan University), Wangdong Yang (Hunan University)

MSFNet: Multi-Scale Feature Interaction Fusion Network for Skin Lesion Image Segmentation

Xin Wang (Changsha University of Science & Technology), Yuewen Luo (Changsha University of Science and Technology), Wei Wang. (Changsha University of Science and Technology)

Enhancing Image-Text Matching with Phrase-aware and Modality Difference-aware Embedding

Meng Meng (Sangfor), Shifeng Zhang (Sangfor), Xiaofan Chen (Sangfor), Shifeng Chen (SIAT), Xu Zhou (Sangfor)

StyleCSR: Style-controllable Sequential Recommendation with Prompt Tuning

Leilei Wen (Tongji university), Qi Shen (Tongji university), Shixuan Zhu (Tongji university), Zhihua Wei (Tongji university), Lijun Sun (Tongji university), Wen Shen (Tongji university)

Aspect-Based Summarization with Self-Aspect Retrieval Enhanced Generation

Yichao Feng (Nanyang Technological University), Shuai Zhao (Nanyang Technological University), Yueqiu Li (Nanyang Technological University), Luwei Xiao (East China Normal University), Xiaobao Wu (Nanyang Technological University), Anh Tuan Luu (Nanyang Technological University)

Multi-view Clustering via Bi-level Decoupling and Consistency Learning

Shihao Dong (Nanjing University of Information Science and Technology), Yuhui Zheng (Qinghai Normal University), Huiying Xu (Zhejiang Normal University), Xinzhong Zhu (Zhejiang Normal University)

Heterogeneous Graph Representation Learning Based on Multi-Relational Graphs

Dongqi Wang (Software College of Northeastern University), Zhenglin Li (Software College of Northeastern University), Chunmei Liang (Software College of Northeastern University), Jiaming Liu (Software College of Northeastern University), Mingzhao Xie (Software College of Northeastern University), Dongming Chen (Software College of Northeastern University)

Multi-level Information Fusion for Group Activity Recognition Using the Banzhaf Power Index

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Liping Zhang (Inner Mongolia University), Baiyue Feng (Guangxi University of Science and Technology), Yuqing Ye (Inner Mongolia University), Qi Guo (Fudan University), Zhihui Wang (Inner Mongolia University), Huijuan Wu (Inner Mongolia University)

Uncertainty-aware and Pseudo-supervised Guided Semi-supervised Liver Tumor Segmentation

Kai Zhao (Xinjiang University), Zhen Chen (Xinjiang University), Juan Chen (Xinjiang University)

MYOLO-Drone: Lightweight Small Object Detection Network for Drone-Based Applications

Yue Yang (Harbin Engineering University), Xiaoqiang Song (Harbin Engineering University), Xu Wang (Harbin Engineering University), Jinhao Song (Harbin Engineering University), Zilong Li (Harbin Engineering University)

Memory-Enhanced Anomaly Detection Based on Inter-variable Feature Correlation for Multivariate Time Series

Xiaosong Huang (peking university), Hongyi Liu (peking university), Yifan Wu (peking university), Tong Jia (peking university), Ying Li (peking university), Zhonghai Wu (peking university)

FedHG: Generator-Driven Head Adaptive Aggregation for Personalized Federated Learning

Mingkai Hu (Henan University of Science and Technology), Ping Zhang (Intelligent System Science and Technology Innovation Center, Longmen Laboratory), Hesheng Zhang (Henan University of Science and Technology), Yijing Xie (Henan University of Science and Technology), Nan Zhang (Henan University of Science and Technology)

MASNet: A Simple Neural Network Approach to Solve Multidimensional Array Search

Aniket Saxena (University of Montreal)

NeRF-DetS: Enhanced Adaptive Spatial-wise Sampling and View-wise Fusion Strategies for NeRF-based Indoor Multi-view 3D Object Detection

Chi Huang (Xiamen University), Xinyang Li (Xiamen University), Yansong Qu (Xiamen University), Changli Wu (Xiamen University), Xiaofan Li (Baidu Inc.), Shengchuan Zhang (Xiamen University), Liujuan Cao (Xiamen University)

Deep Robust Data Reconstruction via Smoothed L1-Autoencoder and Layerwise Sparse Group Lasso

Junyang Zhang (Chongqing University of Technology), Wen Yang (Chongqing University of Technology), Di Ming (Chongqing University of Technology)

HCRNet: Hybrid Collaborative Relation Network for Egocentric Hand-Object Segmentation

Ming Jiang (Guilin University of Electronic Technology, Guangxi Metaverse Application Engineering Center, School of Information Engineering, Guangxi Polytechnic of Construction), Chenguang Zhao (Guilin University Of Electronic Technology, Guangxi Metaverse Application Engineering Center), Feng Zhang (Guilin University of Electronic Technology, Guangxi Metaverse Application Engineering Center), Yao Lu (Guilin University of Electronic Technology, Guangxi Metaverse Application Engineering Center), Xingyu Tao (Guilin University of Electronic Technology, Guangxi Metaverse Application Engineering Center)

BT-Net: A Multi-Scale Transformer U-Net with Morphological Refinement for Adaptive Bone Tissue Segmentation

Wenyi Xiong (Central South University), Shenghui Liao (Central South University), Jie Zheng (No.903 Hospital of PLA Joint Logistic Support Force), Peishan Dai (Central South University), Xiaoyan Kui (Central South University)

Cross-Domain Feature Interaction: A Robust Generalization Network for Cross-Category Medical Image Classification

Xin Wang (Changsha University of Science & Technology), Wei Wang (Changsha University of Science & Technology), JiXing He (Changsha University of Science & Technology)

MTSFormer: Multimodal Spectral-Sequential Fusion Network for Traffic Flow Prediction

Wenfang Li (Hong Kong Chu Hai College), Haoyu Yang (Northern Arizona University), Haiquan Wu (Hong Kong Chu Hai College)

LSTM-Based Market-Driven Multi-Scale Time Fusion for Stock Price Forecasting

Kaiyin Li (South China Normal University), Xintao Zhuo (South China Normal University), Qingzhen Xu (South China Normal University)

Hyper-Relation Fusion for Solving Multi-depot Vehicle Routing Problems

Xingyan Liu (South China University of Technology), Yang Wang (South China University of Technology), Fansen Meng (South China University of Technology), Yahui Jia (South China University of Technology)

Augmenting Knowledge Graph Attention with Semantic Representation by Large Language Model for Recommendation

Yickim Lo (Gdhurray), Caihong Li (Gdhurray), Zefeng Feng (Gdhurray)

EfficientHuman: Efficient Training and Reconstruction of Moving Human using Articulated 2D Gaussian

Hao Tian (Chengdu Institute of Computer Applications, Chinese Academy of Sciences), Rui Liu (Minzu University of China), Wen Shen (Chengdu Institute of Computer Applications, Chinese Academy of Sciences), Yilong Hu (Chengdu Institute of Computer Applications, Chinese Academy of Sciences), Zhihao Zheng (Chengdu Institute of Computer Applications, Chinese Academy of Sciences), Xiaolin Qin (Chengdu Institute of Computer Applications, Chinese Academy of Sciences)

Task Enhancement and Global-Local Information Fusion for Few-Shot Gas Recognition

Heng Tian (East China University of Science and Technology), Zhihao Wu (East China University of Science and Technology), Hai Yang (East China University of Science and Technology), Zhe Wang (East China University of Science and Technology)

RPC-DETR: A Lightweight and Accurate Model for Foreign Object Detection on Transmission Lines

Daming Liu (Shanghai University of Electric Power), Jiahao Huang (Shanghai University of Electric Power)

Breaking Static Barriers: Dynamic Post-Training Quantization for Diffusion Models

Xiao Yang (Xiamen University), Huixia Li (ByteDance), Lijiang Li (Xiamen University), Xiawu Zheng (Xiamen University), Yuexiao Ma (Xiamen University), Feng Ling (ByteDance), Jie Wu (ByteDance), Xuefeng Xiao (ByteDance), Rui Wang (ByteDance), Min Zheng (ByteDance), Fei Chao (Xiamen University)

Spatial-Temporal Multi-Scale Interactive Graph Convolutional Network for Traffic Flow Prediction

Yuehai Xu (College of Information Engineering, Shanghai Maritime University), Lai Wei (College of Information Engineering, Shanghai Maritime University), Junting Li (College of Information Engineering, Shanghai Maritime University), Xinyi Cheng (College of Information Engineering, Shanghai Maritime University), Shiyu Lu (College of Information Engineering, Shanghai Maritime University)

Towards Effective Edge Unlearning: Enhancing Graph Unlearning via Contrastive Learning with Adversarial Example

Miaolin Xing (Nanjing University of Science and Technology), Jielong Zhou (China Mobile (Hangzhou) Information Technology Company Ltd), Shunmei Meng (Nanjing University of Science and Technology), Nan Liu (Nanjing University of Science and Technology), Xuyun Zhang (Australia School of Computing, Macquarie University)

A Dynamic Co-Inference Framework for Edge-End Using Discrete Soft Actor-Critic and SLA-Aware Task Batching

Jiaao Sun (Qilu University of Technology), Hao Hao (Qilu University of Technology), Huiling Shi (Qilu University of Technology), Zheng Su (Qilu University of Technology), Hanglun Li (Qilu University of Technology), Wei Zhang (Qilu University of Technology)

Make “V” and “Q” Inseparable: Deliberately Dual-Channel Adversarial Learning for Robust Visual Question Answering

Hanxiao Wu (Wuhan University of Technology), Zhaowen Li (Huawei Cloud), Feilong Chen (Huawei Cloud), Zhiyu Wang (Huawei Cloud), Jiali Xu (ShanDong Energy Group CO.,LTD), Liquan Hu (ShanDong Energy Group CO.,LTD), Huaixuan Cao (Yunding Technology CO. LTD), Yin Li (Huawei), Jinqiao Wang (University of Chinese Academy of Sciences), Jianlong Chang (Huawei Cloud)

MPM-GS: Optimizing Sparse-View 3D Scene Reconstruction with Virtual View Rendering and Multimodal Regularization

Mingyuan Yao (China Agricultural University), Shulong Zhang (China Agricultural University), Yukang Huo (China Agricultural University), Jiayin Zhao (China Agricultural University), Xiao Liu (China Agricultural University), Lin Xue (Beijing Union University), Yingyi Chen (China Agricultural University), Haihua Wang (China Agricultural University)

Multi-Perspective Protein Representation Learning for Protein-Protein Interaction Prediction

Long Wang (Nanjing University of Science and Technology), Tong Zhang (Nanjing University of Science and Technology), Bo Huang (Nanjing University of Science and Technology)

Dynamic Multi-Scale Spatial-Temporal Feature Network for Traffic Flow Forecasting

Daming Liu (Shanghai University of Electric Power), Chunlin Wang (Shanghai University of Electric Power)

DPSNet: A Dual-Path Hazy Object Detection Network with Dehazing Supervision

Ying Pang (Tianjin University of Technology), Fayu Wang (Tianjin University of Technology), Renhan Zhou (Tianjin University of Technology), Xinge Li (Tianjin University of Technology)

Initial-Key Cache: An Efficient KV Cache Strategy Focusing on Initial and Key Tokens for LLMs

Zhongyi Tang (National University of Defense Technology), Zejiang He (National University of Defense Technology), Junzhong Shen (National University of Defense Technology), Yiyue Hu (National University of Defense Technology), Luchen Zhou (National University of Defense Technology), Yongzhang Nie (National University of Defense Technology), Yongwen Wang (National University of Defense Technology)

Enhanced Medical Visual Question Answering Using Multi-Feature Fusion and Similarity-Based Answer Selection

Fenghua Yu (Harbin Engineering University), Haiwei Pan (Harbin Engineering University), kejia zhang (Harbin Engineering University), Haoyu Sun (Harbin Engineering University)

NI-MTSC: Neighborhood Interpolation Data Augmentation-based Multivariate Time Series Classification

Cuicui Yang (Huaqiao University), Zongwen Fan (Huaqiao University), Jin Gou (Huaqiao University), Cheng Wang (Huaqiao University)

Pureformer-VC: Non-parallel Voice Conversion with Pure Stylized Transformer Blocks and Triplet Discriminative Training

Wenhan Yao (Xiangtan University), Fen Xiao (Xiangtan University), Xiarun Chen (Peking University), Jia Liu (Peking University), YongQiang Qiang (Peking University), Weiping Wen (Peking University)

Quantifying Information in Similarity Matrices for Improved Representation Learning

Zelong Zhang (Shanxi University), Zhuhui Han (Shanxi University), Jietao Wang (Shanxi University), Feijiang Li (Shanxi University)

Dream2Drive: A Large Language Model Powered Agent for Real World Multi-Task Vehicle Motion Planning

Hongru Wang (East China Normal University), Jun Wang (East China Normal University)

Pattern Extraction Learning for Cooperative Multi-Agent Reinforcement Learning

Yifan Zang (Institute of Automation, Chinese Academy of Sciences, School of Artificial Intelligence, University of Chinese Academy of Sciences), Jinmin He (Institute of Automation, Chinese Academy of Sciences, School of Artificial Intelligence, University of Chinese Academy of Sciences), Kai Li (Institute of Automation, Chinese Academy of Sciences, School of Artificial Intelligence, University of Chinese Academy of Sciences), Junliang Xing (Tsinghua University), Jian Cheng (Institute of

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Position Paper: Large Language Models need Episodic Memory

Guangfu Hao (Institute of Automation, Chinese Academy of Sciences), Yuhan Zhang (Institute of Automation, Chinese Academy of Sciences), Guoqing Ma (Institute of Automation, Chinese Academy of Sciences), Yang Chen (Institute of Automation, Chinese Academy of Sciences), Frederic Alexandre (Inria Bordeaux, CNRS), Shan Yu (Institute of Automation, Chinese Academy of Sciences)

Dual-Channel Semantic and Syntactic Dependency Graph Convolutional Network for Aspect-based Sentiment Analysis

Kaixuan Sheng (Heilongjiang University), Chengguo Lv (Heilongjiang University), Jinfeng Guo (Xi'an Jiaotong-Liverpool University)

Research on Dynamic Curriculum Learning in Mongolian-Chinese Neural Machine Translation

Chunyue Hu (Inner Mongolia Normal University)

MSFNet-CPD: Multi-Scale Cross-Modal Fusion Network for Crop Pest Detection

Wenwen Xu (Anhui Agricultural University), Kejian Yu (Donghua University), Yunzhi Wu (Anhui Agricultural University)

Electricity Theft Detection Scheme Based on CNN-AE-LSTM Hybrid Model Against Evasion Attacks

Zhuoqun Xia (Changsha University of Science & Technology), Xi Lin (Changsha University of Science & Technology), Kaixin Zhou (Changsha University of Science & Technology), Jingjing Tan (Changsha University of Science & Technology)

FedSH: Scheduling High-order Approximation in Asynchronous Federated Learning

Haixin Gao (Sichuan University), Mingjia Shi (Sichuan University), Yuhao Zhou (Sichuan University), Deng Xiong (Stevens Institute of Technology), Qing Ye (Sichuan University), Jiancheng Lv (Sichuan University)

Enhancing Template-Free Retrosynthesis Prediction with Cross-Modal Fine-Grained Contrastive Learning

Junqi Zeng (Wuhan University), Zelin Yao (Wuhan University), Pengyang Song (Chinese Academy of Sciences), Jia Wu (Macquarie University), Wenbin Hu (Wuhan University)

Multimodal Lumbar Spine Segmentation Pipeline with Optimized Deep Learning and Network Pruning

Muhammad Usman Saeed (Central South University), Wang Bin (Central South University), Jinfang Sheng (Central South University)

Few-Shot Medical Image Segmentation via Multi-Prototype Synergy

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Bingjian Wang (Huazhong Agricultural University), Ke Xie (Huazhong Agricultural University), Shanmei Liu (Huazhong Agricultural University), Hui Peng (Huazhong Agricultural University)

SpecSTG: A Fast Spectral Diffusion Framework for Probabilistic Spatio-Temporal Traffic Forecasting

Lequan Lin (The University of Sydney), Dai Shi (The University of Sydney), Andi Han (Riken AIP), Junbin Gao (The University of Sydney)

Polyp-GSAM: A Graph Attention-Guided Hybrid SAM Architecture Model for Precise Polyp Segmentation

Ke Xie (Huazhong Agricultural University), Bingjian Wang (Huazhong Agricultural University), Shanmei Liu (Huazhong Agricultural University), HUI Peng (Huazhong Agricultural University)

FedSIT: Efficient Federated Fine-Tuning with Model Splitting and Importance-Based Tuning

Xinyu Gu (Sun Yat-Sen University), Xinghua Sun (Sun Yat-Sen University), Chenyuan Feng (EURECOM), Xijun Wang (Sun Yat-Sen University), Xiang Chen (Sun Yat-Sen University)

AENet: An Asymmetric Encoder Network with Feature Selection for Change Detection

Zhentaο Xiong (Xiamen University), Ming Cheng (Xiamen University), Youliang Chu (Xiamen University), Wen Jiang (Xiamen University), Cheng Wang (Xiamen University)

SkinMamba: Segmentation and Classification of Skin Cancer with Multi-level Context Understanding

Yufan Zhang (Beijing University of Posts and Telecommunications), Guoshun Nan (Beijing University of Posts and Telecommunications), Yang Yue (Beijing University of Posts and Telecommunications), Chengyao Jia (Beijing University of Posts and Telecommunications), Yutong Gao (Minzu University of China), Zuye Xiao (Beijing University of Posts and Telecommunications), Xu Wu (Beijing University of Posts and Telecommunications)

FedLCA: Federated Personalization Using Legacy Classifier Layer Aggregation

Haiyang Ji (Shanghai University of Electric Power), Chaochao Sun (Shanghai University of Electric Power), Yuan Peng (Shanghai University of Electric Power), Shuaiqi Leng (Shanghai University of Electric Power), Zhouyao Gu (Shanghai University of Electric Power)

Detecting Community Structures in Directed Networks Based on Latent In-Out-Link Patterns

Cangfeng Ding (Yanan University), Ye Zhu (Yanan University), Bohao Cao (Yanan University), Kexin Chen (Yanan University)

DynaSketch: Abstracting Coherent Sketches for Dynamic Image Sequences

Jiakai Wu (University of Chinese Academy of Sciences), Jun Xiao (University of Chinese Academy of Sciences)

Dynamic Graph Neural Network with Motif Reconstruction

Zhiqiang Wang (Shanxi University), Baijing Hu (Shanxi University), Xingwang Zhao (Shanxi University), Yajun Lin (Shanxi University), Yuqi Wang (Shanxi University)

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Encrypted Traffic Classification with Graph Sketch-Based Traffic Representation

Sitong Yu (Hubei University), Ding Li (Hubei University), Yanxing Guo (Hubei University), Ruyu Xie (Hubei University), Yan Zhang (Hubei University)

Personalized Federated Learning with Adaptive Feature Aggregation and Knowledge Transfer

Keting Yin (Zhejiang University), Jiayi Mao (Zhejiang University)

DPFN: Dual-Path Fusion Network for Lightweight Single Image Super-Resolution

Jinliang Ou (Southwest Forestry University), Haoyu Zhang (Xiamen University), Junheng Ge (Kunming City College), Yuying He (Yunnan University of Finance and Economics), Hanyu Gao (Universiti Malaya), Zhengnan Yin (Shantou University)

Spatial Dual Feature Aggregation Network for Lightweight Image Super-Resolution

Chengxing Xie (Southwest Jiaotong University), Linze Li (Southwest Jiaotong University), Xiaole Zhao (Southwest Jiaotong University)

ODE: Decision-based Black-box Adversarial Attack through Orthogonal Distribution Evolution

Hongyi Liu (Peking University), Yutong Fang (Peking University), Tong Jia (Peking University), Ying Li (Peking University)

Arbitrary Shaped Text Detection with Hierarchical Feature Refinement and Nonlinear Enhanced Transformers

Zhicheng Bao (Xinjiang University), Mayire Ibrayim (Xinjiang University)

Lightweight Self-Supervised Monocular Depth Estimation Based on Multi-Scale Hybrid Attention

Xue Yi (Beijing Jiaotong University), Ruipeng Gao (Beijing JiaoTong University), Gang Han (Xi'an University of Posts & Telecommunications)

Query Rephrasing for Context Independence in Scene Knowledge-guided Visual Grounding

Xilong Qin (National University of Defense Technology), Jing Yeh (Hunan Institute of Advanced Technology), Haixiang Zhu (Hunan Institute of Advanced Technology), Wansen Wu (National University of Defense Technology), Yue Hu (National University of Defense Technology)

Two-Stage Signal Detection in High-Resolution Time-Frequency Images: Preprocessing with Computer Graphics and Refined DETR

Zhenghao Li (University of Chinese Academy of Sciences), Xin Zhou (University of Chinese Academy of Sciences)

Robust Anomaly Detection with Spatio-temporal Representation Learning for Multivariate Time Series

Suqun Huang (Guangxi University), Xu Wu (Hainan Normal University), Jining Chen (Guangxi Zhuang Autonomous Region Information Center), Ningjiang Chen (Guangxi University), Hongda Qin (Guangxi University), Tao Deng (Guangxi University), Fengrong Wu (Guangxi University)

Efficient Semi-Supervised 3D Medical Image Segmentation via Coarse Label Generation and Reorganization

Xinzhe Xu (University of Shanghai for Science and Technology), Sunbo Xu (University of Shanghai for Science and Technology), Quanquan Li (University of Shanghai for Science and Technology)

Mapping Override Behavior: Investigating Why and How Artists Reject AI Suggestions in Collaborative Creation

Guangrui Fan (Taiyuan University of Science and Technology), Dandan Liu (Universiti Malaya), Lihu Pan (Taiyuan University of Science and Technology), Yishan Huang (Beijing Sankuai Network Technology Co., Ltd)

Adaptive Federated Distillation for Multi-Domain Non-IID Textual Data

Jiahao Xiao (Yunnan University), Jiangming Liu (Yunnan University)

Low-visibility Crop Detection in Agricultural Scenes via Point Cloud Guidance

Chen Wan (China Three Gorges University), Teng Jin (ChiThree Gorges University), Jinyu Yang (Southern University of Science and Technology), Fangyi Wang (China Three Gorges University), Feng Zheng (Southern University of Science and Technology)

Enhancing Branching Policy Generalization through Self-Supervised Adversarial Instance Augmentation

Ce Zhang (Institute of Automation, Chinese Academy of Sciences, School of Artificial Intelligence, University of Chinese Academy of Sciences), Bin Zhang (Institute of Automation, Chinese Academy of Sciences, School of Artificial Intelligence, University of Chinese Academy of Sciences), Xinyue Lu (Institute of Automation, Chinese Academy of Sciences, School of Artificial Intelligence, University of Chinese Academy of Sciences), Guoliang Fan (Institute of Automation, Chinese Academy of Sciences)

CalliStyleGAN: A Chinese Calligraphy Style Transfer Method Based on StyleSwin and Dual-Style Injection

Xuekai Zhao (Hebei University)

xLSRec: xLSTM for Sequential Recommendation

Haibo Liu (Hebei University), Mingyu Zhao (Hebei University), Jinglian Liu (Changshu Institute of Technology)

Sparse Self Attention Network Model for Short Text Classification

Xinyuan Liang (Guangxi Key Laboratory of Trusted Software, Guilin University of Electronic Technology Guilin), Yongyu Liang (Guangxi Key Laboratory of Trusted Software, Guilin University of Electronic Technology Guilin), Chuangying Zhu (Guangxi Key Laboratory of Trusted Software, Guilin University of Electronic Technology Guilin), Fei Xie (Academic Affair Office, Guilin University of Electronic Technology)

Diffusion Variational Generative Adversarial Model for Collaborative Filtering

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Jinzhong Li (Jinggangshan University), Junqi Liu (Jiangxi University of Science and Technology), Xueyu Huang (Jiangxi University of Science and Technology), Zhiqiang Huang (Jiangxi University of Science and Technology)

Detecting Codec-Based Deepfake Audio: A Multimodal Approach with Gated Cross-Attention and Sharpness-Aware Optimization

Jianqiao Cui (Yangtze Delta Region Institute of Tsinghua University, Zhejiang), Jianqiao Cui (University of Southampton), Fei Meng (Yangtze Delta Region Institute of Tsinghua University, Zhejiang)

Clinical Experience-inspired Multimodal Fusion Networks for Dermatological Classification

Chen Hu (Xinjiang University), Feng Li (Xinjiang University), Cheng Chen (Xinjiang University), Chen Chen (Xinjiang University), Enguang Zuo (Xinjiang University), Guangjian Liu (Xinjiang University), Min Li (Xinjiang University), Xiaoyi Lv (Xinjiang University)

LLM-MedQA: Enhancing Medical Question Answering through Case Studies in Large Language Models

Hang Yang (Chengdu University of Information Technology), Hao Chen (Chengdu University of Information Technology), Hui Guo (University at Buffalo), Yineng Chen (University at Albany), Ching-Sheng Lin (Tunghai University), Shu Hu (Purdue University), Jinrong Hu (Chengdu University of Information Technology), Xi Wu (Chengdu University of Information Technology), Xin Wang (University at Albany)

PADriver: Towards Personalized Autonomous Driving

Genghua Kou (Beijing Institute of Technology), Fan Jia (Tianjin University), Weixin Mao (waseda university), Yingfei Liu (Megvii Technology), Yucheng Zhao (Megvii Technology), Ziheng Zhang (Megvii Technology), Osamu Yoshie (Waseda University), Tiancai Wang (Megvii Technology), Ying Li (Beijing Institute of Technology), Xiangyu Zhang (Megvii Technology)

Improving Mathematical Reasoning Capabilities of Small Language Models via Feedback-Driven Distillation

Xunyu Zhu (Institute of Information Engineering, CAS), Jian Li (School of Artificial Intelligence, Beijing Normal University), Rong Yin (Institute of Information Engineering, CAS), Can Ma (Institute of Information Engineering, CAS), Weiping Wang (Institute of Information Engineering, CAS)

Improving Mathematical Reasoning Abilities of Small Language Models via Key-Point-Driven Distillation

Xunyu Zhu (Institute of Information Engineering, CAS), Jian Li (School of Artificial Intelligence, Beijing Normal University), Rong Yin (Institute of Information Engineering, CAS), Can Ma (Institute of Information Engineering, CAS), Weiping Wang (Institute of Information Engineering, CAS)

Joint Content Semantic Relation Learning with Mamba for Multimodal Recommendation

Xinyue Zhang (Wuhan University), Yue He (Wuhan University), Jing Li (Wuhan University), Jun Chang (Wuhan University), Kai Zhu (Wuhan University), Guohao Li (Wuhan University)

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3D Morphable Face Model with Continuous Semantics

Han Zhang (Nanjing University), Yu Zhou (Nanjing University), Yao Yu (Nanjing University)

Building a Chinese Medical Dialogue System: Integrating Large-scale Corpora and Novel Models

Xinyuan Wang (Xi'an Jiaotong University), Haozhou Li (Xi'an Jiaotong University), Dingfang Zheng (Xi'an Jiaotong University), Qinke Peng (Xi'an Jiaotong University)

Benchmarking Retrieval-Augmented Generation: Challenging Domain-specific Datasets Generation Method

Yanqing Liu (Xi'an Jiaotong University), Lei Hu (University of California, San Diego), Xiaolong Dong (Hangzhou Yanqu Information Technology Co., Ltd), Zhi Wang (Xi'an Jiaotong University)

AdvLensPolluter: Object-oriented Adversarial Camera Contamination Attack

Feiyang Xu (Beijing Institute of Technology), Shihao Wang (Beijing Institute of Technology), Genghua Kou (Beijing Institute of Technology), Ying Li (Beijing Institute of Technology)

MGTN: Motif-Aware Graph Transformer with Adaptive Redundancy Minimization for Node Importance Ranking

Ding Cangfeng (Yan'an University), Cao lu (Yan'an University), Ma Lerong (Yan'an University), Yan Zhaoyao (Yan'an University), You Hao (Yan'an University)

Causal Analysis of Intellectual Complexity in Software Engineering

chunhao Li (Kuaishou), mengdi zhang (Kuaishou), sijia meng (Kuaishou), xuning gao (Kuaishou), Jialin Yu (University College London, UK), jianyuan hu (Kuaishou), shuo wang (Kuaishou), Ricardo Silva (University College London, UK), bin chen (Kuaishou)

TSDA: A Temporal-Spatial Data Augmentation for Human Pose Recognition in Point Cloud

Wang Ning (NanJing University)

InfoSyncNet: Information Synchronization Temporal Convolutional Network for Visual Speech Recognition

Junxiao Xue (Zhengzhou University), Xiaozhen Liu (Zhengzhou University), Xuecheng Wu (Xi'an Jiaotong University), Fei Yu (Zhijiang Lab), Jun Wang (Zhijiang Lab)

WHC-Eval: Evaluating Hallucinations in LLMs with Real-World Chat Data

Yuying Zhang (Inner Mongolia University of Technology), Jing Yun (Inner Mongolia University of Technology), Xiaoguo Shi (Inner Mongolia University of Technology), Xueying Liu (Inner Mongolia University of Technology)

SSR-RAG: A smart Retrieval-Augmented Generation Framework with Rollback Mechanisms for Safer and More Accurate Answers

Haotian Wang (School of Artificial intelligence of Anhui University), Zhenyu Qi (University of Science and Technology of China), Ningzhi Wang (School of Artificial intelligence of Anhui University), Zhenda Yu (School of Artificial intelligence of Anhui University), Zerui Li (Institute of

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Artificial Intelligence, Hefei Comprehensive National Science Center), Wenjun Lv (University of Science and Technology of China)

WTHFL: Coarse- to Fine-Grained Hierarchical Feature Learning for Flood Forecasting

Xueyi Liu (Hohai University), Jun Feng (Hohai University), Haiyue Tong (Hohai University), Dongyu Wang (Hohai University), Pingping Shao (Hohai University)

FDAFusion: A Joint Frequency Decomposition and Adaptive Fusion Network for Nighttime Infrared and Visible Image Fusion

Kening Cui (Qilu university of technology), Jinyong Cheng (Qilu university of technology), Yan Pan (Qilu university of technology)

Controllable-Quality Neural Video Representation via Inter-frame Motion and Residual Mapping

Zihan Wan (university of science and technology beijing), Dongyan Zhang (University of Science and Technology Beijing)

Attention-Based Denoising Cross-Modal Multi-Level Fusion Network for Multimodal Sentiment Analysis

Kairui Wang (Ningbo University), Shanliang Pan (Ningbo University)

Semi-GD: Graph-Level Consistency Regularization and Dynamic Threshold Boosted Semi-Supervised Learning

Ruixue Wang (University of Jinan), Lizhi Peng (Quan Cheng Laboratory / University of Jinan), Shengbao Li (Shandong Branch of National Computer Network Emergency Response Technical), Kun Zhao (Inspur Comouter Technology Co., Ltd), Huawei Yang (Jinan Bosai Network Technology Co., Ltd)

Frequency SSL: An Explainable Method for Diffusion Facial Forgery Detection

Chunbo Zhu (MEGVII Cloud Service Group), Yuhao Wang (Beihang University), Yuanye Mo (MEGVII Cloud Service Group), Yulin Jin (Atomfusion)

Filtering Before Detection: Objects of Interest Enhanced Anomaly Detection for Surveillance

PENG HE (Independent Researcher), Zhenyuan Yang (Shanghai Jiao Tong University), Boqiang Xu (Independent Researcher)

Simple yet Effective Gradient-Free Graph Convolutional Networks

Yulin Zhu (Hong Kong Chu Hai College), Xing Ai (Hong Kong Polytechnic University), Qimai Li (Parametrix.AI), Xiaoming Wu (Hong Kong Polytechnic University), Wai-Lun Lo (Hong Kong Chu Hai College), Kai Zhou (Hong Kong Polytechnic University)

DOA: Advancing Cross-View Geo-Localization via Domain and Objective Alignment

Yu Meng (Sun Yat-sen University, School of Systems Science and Engineering), Lei Sun (Sun Yat-sen University, School of Systems Science and Engineering)

BCRNet: A Lightweight Branched Convolutional Neural Network Enhanced with Riemannian Geometry for End-to-End EEG-Based Emotion Recognition

Wenxia Qi (University of Chinese Academy of Sciences), Xingfu Wang (University of Chinese Academy of Sciences), Wenjie Yang (University of Chinese Academy of Sciences), Wei Wang (University of Chinese Academy of Sciences)

Enhancing the Undetectability of AI-Generated Text: A Semantics-Preserving Evasion Technique

luo bei (Beijing University of Posts and Telecommunications)

MGDTSI: A Multiple Guidance Distillation-Based Model for Time Series Imputation

Kangyan Li (Hangzhou Dianzi University), Junfeng Yuan (Hangzhou Dianzi University), Jilin Zhang (Hangzhou Dianzi University), Yuyu Yin (Hangzhou Dianzi University), Li Zhou (Hangzhou Dianzi University), Yan Zeng (Hangzhou Dianzi University)

CLMP: Cross Learning Multi-Head Prediction Guided Source-Free Domain Adaptation for Medical Image Segmentation

Jie Yang (MoE Engineering Research Center of SW/HW Co-design Technology and Application, East China Normal University, Shanghai Key Laboratory of Trustworthy Computing, East China Normal University), Yu Chen (MoE Engineering Research Center of SW/HW Co-design Technology and Application, East China Normal University, Shanghai Key Laboratory of Trustworthy Computing, East China Normal University), Wenqiang Lin (MoE Engineering Research Center of SW/HW Co-design Technology and Application, East China Normal University, Shanghai Key Laboratory of Trustworthy Computing, East China Normal University), Guitao Cao (MoE Engineering Research Center of SW/HW Co-design Technology and Application, East China Normal University, Shanghai Key Laboratory of Trustworthy Computing, East China Normal University)

Scaling Prompt Instructed Zero Shot Composed Image Retrieval with Image-Only Data

Yiqun Duan (University of Technology Sydney), sameera ramasinghe (University of Adelaide), Stephen Gould (Australian National University), Thalaiyasingam Ajanthan (Australian National University)

Application and Research of PINNs with Cross Network Enhanced Architecture in 3D Linear Elasticity Problems

Xu Liao (Chengdu Institute of Computer Applications, Chinese Academy of Sciences, Chengdu, China, University of Chinese Academy of Sciences, Beijing, China), Zhong Liu (Chengdu Institute of Computer Applications, Chinese Academy of Sciences, Chengdu, China, University of Chinese Academy of Sciences, Beijing, China)

Multiscale Attention Knowledge Distillation for Object Detection

Fengshuo Zhang (China University of Mining and Technology)

YOLO-WKPose: An Advanced Algorithm for Key Point Detection in Fixed-Wing UAVs

Jianghao Zhao (Nanjing University of Aeronautics and Astronautics), Feng Hu (Nanjing University of Aeronautics and Astronautics)

HEMS: Heterogeneous Model Splitting Strategies Under Cross-Domain Computing Power Distribution

Hanglun Li (Qilu University of Technology (Shandong Academy of Sciences)), Hao Hao (Qilu University of Technology (Shandong Academy of Sciences)), Huiling Shi (Qilu University of Technology (Shandong Academy of Sciences)), Jiaao Sun (Qilu University of Technology (Shandong Academy of Sciences)), Zheng Su (Qilu University of Technology (Shandong Academy of Sciences)), Wei Zhang (Qilu University of Technology (Shandong Academy of Sciences))

JMTF: A Joint Model for Chinese Measurable Quantitative Information Extraction based on Table Filling

Qixuan Zhang (South China Normal University), Haitao Wang (China National Institute of Standardization), Xinyu Cao (China National Institute of Standardization), Jie Wei (China National Institute of Standardization), Fu Lee Wang (Hong Kong Metropolitan University), Tianyong Hao (South China Normal University)

Refining and adaption: multi-modal learning in wear debris analysis

Yongcai Chen (Guangdong University of Petrochemical Technology), Fang Lei (Guangdong University of Petrochemical Technology), Xiantong Zhen (Guangdong University of Petrochemical Technology), Xin Li (Guangdong University of Petrochemical Technology), Lei Zhang (Guangdong University of Petrochemical Technology)

Reinforcement Learning-based and Energy Efficiency-aware Power Management for RISC-V Platforms

Kaizhong Tan (Nankai University), Qingbo Wu (KylinSoft Co., Ltd.), Wenzhu Wang (Haihe Lab of ITAI), Jie Yu (National University of Defense Technology)

CCS-SQL: Enhancing Text-to-SQL Framework for Computational Queries via Large Language Models

Qi Yun Ma (Qilu University of Technology), ShuMing Jiang (Qilu University of Technology (Shandong Academy of Sciences), Information Research Institute of Shandong Academy of Sciences), ZhiQiang Wei (Qilu University of Technology (Shandong Academy of Sciences), Information Research Institute of Shandong Academy of Sciences), Jing Zhao (Qilu University of Technology)

Remote Dependency Information Enhanced for Session Recommendation

Wenyuan Xu (Hebei University), Wenjie Luo (Hebei University), Xiudan Yang (Hebei University)

EndoDUM: Unsupervised Endoscopic Depth Estimation with Uncertainty Mask

Ji Qi (China Mobile (Suzhou) Software Technology Co., Ltd), Xuanxuan Liu (University of Electronic Science and Technology of China), Shuai Tang (South China University of Technology), Yue Zhang

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(University of Hong Kong), Minhao Liu (University of Electronic Science and Technology of China), Lixin Duan (University of Electronic Science and Technology of China)

Co-teaching with Local and Global Information for Weakly Supervised Video Anomaly Detection

Chen Xu (Hebei Key Laboratory of Machine Learning and Computational Intelligence), Chunguo Li (Hebei Key Laboratory of Machine Learning and Computational Intelligence), Hongjie Xing (Hebei Key Laboratory of Machine Learning and Computational Intelligence)

Self-supervised Graph Convolutional Networks for Multi-criteria Rating Recommendation

Chenjiao Feng (Shanxi University of Finance and Economics), Zhihao Guo (Shanxi University), Peng Song (Shanxi University)

YOLO-fungi: Detection Method for the Growth Stages of Edible Fungi under Complex Environments

Wenqian Zhang (Northwest A&F University), Xin Wang (Northwest A&F University), Jiule Huang (Northwest A&F University), Huijun Yang (Northwest A&F University)

STNet: Spatial-Temporal Transformers are Effective for Multivariate Time Series Forecasting

Kexin Yang (China Mobile Research Institute), Xing Wang (China Mobile Research Institute), Zhendong Wang (China Mobile Research Institute), Ce Chi (China Mobile Research Institute), Chao Deng (China Mobile Research Institute), Junlan Feng (China Mobile Research)

MPCGNet: A Multiscale Feature Extraction and Progressive Feature Aggregation Network Using Coupling Gates for Polyp Segmentation

Wei Wang (Changsha University of Science & Technology), Feng Jiang (Changsha University of Science & Technology), Xin Wang (Changsha University of Science & Technology)

Adaptive Sparse Graph Convolutional Mamba Network for EEG Emotion Recognition

Haiyue Duan (Wuhan University), Zizheng Nie (Nanchang University), Shuiyuan Huang (Nanchang University), Wenying Duan (Nanchang University)

MTANET-3D: 3D Multimodal Triplet Attention Fusion Network for Lung Cancer Histology Classification

Yi Lei (Nanjing University of Science and Technology), Hongtao Ji (Nanjing University of Science and Technology), Tong Zhang (Nanjing University of Science and Technology)

On The Impact of Different Batch Sizes to Byzantine Robustness in Federated Learning

Xinjian Huang (School of Cyber Science and Engineering, Nanjing University of Science & Technology), Yuxin Wei (School of Cyber Science and Engineering, Nanjing University of Science & Technology), Yunxuan Li (School of Cyber Science and Engineering, Nanjing University of Science & Technology), Yishuo Zhao (School of Cyber Science and Engineering, Nanjing University of Science & Technology), Bo Du (School of Computer Science, Wuhan University)

Book2QA: A Framework for Integrating LLMs to Generate High-quality QA Data from Textbooks

Zhanhao Cui (East China Normal University), Wenxin Hu (East China Normal University), Ye Wang (Renmin University of China), Xinya Huang (East China Normal University), Wen Wu (East China Normal University)

Clustering-Based Weight Orthogonalization for Stabilizing Deep Reinforcement Learning

Guoqing Ma (Institute of Automation, Chinese Academy of Sciences, School of Future Technology, University of Chinese Academy of Sciences), Yuhan Zhang (Institute of Automation, Chinese Academy of Sciences, School of Artificial Intelligence, University of Chinese Academy of Sciences), Yuming Dai (Institute of Automation, Chinese Academy of Sciences, School of Artificial Intelligence, University of Chinese Academy of Sciences), Guangfu Hao (Institute of Automation, Chinese Academy of Sciences, School of Artificial Intelligence, University of Chinese Academy of Sciences), Yang Chen (Institute of Automation, Chinese Academy of Sciences, School of Artificial Intelligence, University of Chinese Academy of Sciences), Shan Yu (Institute of Automation, Chinese Academy of Sciences, School of Artificial Intelligence, University of Chinese Academy of Sciences)

SDFDA: Modeling Spectral Distribution for Time-Series Forecasting Domain Adaptation

Daoxin Chen (Guangdong University of Technology), RuiChu Cai (Guangdong University of Technology), Haozhi Chen (Guangdong University of Technology), Zhenhui Yang (Guangdong University of Technology)

PUDet: Advancing 3D Object Detection with Generative Upsampling Networks

Limei Xu (Beijing Institute of Technology), Zhiguo Zhou (Beijing Institute of Technology), Xuehua Zhou (Beijing Institute of Technology)

MTD-Net: Moving Target Defense for Defending Neural Networks Adversarial Attacks

Zeshan Pang (National University of Defense Technology), Shasha Guo (National University of Defense Technology), Yuyuan Sun (National University of Defense Technology), Rongtao Liao (National University of Defense Technology), Xuehu Yan (National University of Defense Technology), Yuliang Lu (National University of Defense Technology)

Frequency-Spatial Domain Fusion for Graph Anomaly Detection

Senbao Hou (Xinjiang University), Enguang Zuo (Xinjiang University), Wenyan Wang (Xinjiang University), Ruiting Wang (Xinjiang University), Xiaoyi Lv (Xinjiang University)

HITSQL: Human-In-The-Loop Techniques for Enhancing Text-to-SQL Query Generation with Large Language Models

Dhoyazan Al-Turki (Birmingham City University), Shadi Basurra (Birmingham City University), Mohamed Gaber (Birmingham City University), Bushra Atassi (SkyTech LLC), Mohammed Abdelsamea (Exeter University)

DRIP: DRop unImportant data Points - Enhancing Machine Learning Efficiency with Grad-CAM-Based Streaming Data Prioritization for On-Device Training

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marcus rüb (Hahn-Schickard), Daniel Konegen (Hahn-Schickard-Gesellschaft für), Axel Sikora (HS-Offenburg), Daniel Müller-Gritschneider (TU Wien)

High-Quality Pseudo-Label Generation Based on Visual Prompt Assisted Cloud Model Update

Xinrun Xu (UCAS), QiuHong Zhang (UCAS), Jianwen Yang (UCAS), Zhanbiao Lian (UCAS), Jin Yan (UCAS), Zhiming Ding (UCAS), Shan Jiang (UCAS)

LSAQ: Layer-Specific Adaptive Quantization for Large Language Model Deployment

Binrui Zeng (National University of Defense Technology), Bin Ji (National University of Defense Technology), Xiaodong Liu (National University of Defense Technology), Jie Yu (National University of Defense Technology), Shasha Li (National University of Defense Technology), Jun Ma (National University of Defense Technology), Xiaopeng Li (National University of Defense Technology), Shangwen Wang (National University of Defense Technology), Xinran Hong (National University of Defense Technology), Yongtao Tang (National University of Defense Technology)

MiaHHGNN: A Drug-Target-Disease Prediction Model Based on Heterogeneous Hypergraphs and Natural Similarities

Jian Miao (Shandong University), Mengjie Chen (Shandong University), Junjie Chen (Shandong University), Cunquan Qu (Shandong University)

Fast Adversarial Training with Neighborhood Diversity Alignment

Hongxin Zhi (Information Engineering University), Hongtao Yu (Information Engineering University), Shaomei Li (Information Engineering University)

AMHP-SDC: An Adaptive Semantic Meta-Graph and Hypergraph Learning Framework for Predicting Synergistic Drug Combinations

Junjie Chen (Shandong University), Mengjie Chen (Shandong University), Jian Miao (Shandong University), Cunquan Qu (Shandong University)

Interpretable Res-ViTNet with Multiview Interaction and Multiobjective Optimization for sEMG-based LLMI Recognition

Xiangli Zhou (College of Optoelectronic Engineering, Chongqing University), Biao Wei (College of Optoelectronic Engineering, Chongqing University), Yu Liu (Bioengineering college, Chongqing University), Liufeng Xiao (Sports Medical Center, Department of Joint Surgery, First Affiliated Hospital, Army Medical University (Third Military Medical University)), Antonella Santone (Department of Medicine and Health Sciences "Vincenzo Tiberio," University of Molise), Francesco Mercaldo (Department of Medicine and Health Sciences "Vincenzo Tiberio," University of Molise)

ASTD-ABC: Arbitrary Shape Text Detection with Adaptive Points and B-Spline Curves

Xiubo Liang (Zhejiang University), Hongzhi Wang (Zhejiang University), Youwei Dan (Zhejiang University), Jinxing Han (Zhejiang University), Bin Zhao (Zhejiang University), Qifei Zhang (Zhejiang University)

SwinFusion-XL: Multi-Scale Fusion and Cross xLSTM for Enhanced Brain Tumor Segmentation

Zhaohan Zhang (Zhejiang University), Ruizuan Bao (Zhejiang University), Jingjun Gu (Zhejiang University), Yue Yu (Zhejiang University), Jiajun Bu (Zhejiang University)

BDA-YOLO: Enhancing Thyroid Nodule Detection and Segmentation via Dynamic and Bidirectional Attention

Yue Yu (Zhejiang University), Ruizuan Bao (Zhejiang University), Jinjun Gu (Zhejiang University), Zhaohan Zhang (Zhejiang University), Jiajun Bu (Zhejiang University)

EOOD: Entropy-based Out-of-distribution Detection

Guide Yang (Guangzhou University), Chao Hou (Guangzhou University), Weilong Peng (Guangzhou University), Xiang Fang (Nanyang Technological University), Yongwei Nie (South China University of Technology), Peican Zhu (Northwestern Polytechnical University), Keke Tang (Guangzhou University)

Robust Facial Expression Recognition via Symmetry Exploitation and Adaptive Neighborhood Label Correction

Kang Shen (HeFei University of Technology), Xiao Sun (HeFei University of Technology), Xuxiong Liu (HeFei University of Technology)

ADA-GNN: Atom-Distance-Angle Graph Neural Network for Crystal Material Property Prediction

Jiao Huang (Jilin University), Qianli Xing (Jilin University), Jinglong Ji (Jilin University), Bo Yang (Jilin University)

Be More Focused: A Key Information-Aware Framework with Text Reconstruction for Multi-Span Question Answering

Lingai Jiang (Zhejiang Sci-Tech University), Zuohua Ding (Zhejiang Sci-Tech University)

UVL: UAV Visual Localization Method with Enhanced Feature Associations via Visual Attention Mechanism

Xin Li (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Shang Wang (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Zhimin Mao (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Yuetian Shi (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Geng Zhang (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences), Bingliang Hu (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences)

Incorporating Long and Short-Term Memory Networks and Quaternion Transformation for Human Motion Prediction

Jin Miaomiao (Dongguan University of Technology), Ren Ziliang (Dongguan University of Technology), Zhang Qieshi (Shenzhen Institute of Advanced Technology, Chinese Academy of

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Sciences), Zhao Tiezhu (Dongguan University of Technology), Zhao Hui (Dongguan University of Technology)

CNF-VAE: Nonlinear Causal Representation Learning based on VAE and Flow

Jin Dai (Chongqing University of Posts and Telecommunications), Zhaoran Hu (Chongqing University of Posts and Telecommunications), Daijun Zhu (Chongqing University of Posts and Telecommunications)

Rethinking Multi-scale Feature Enhancement and Learning Mechanism for Real-time Object Detection

Chenxu Li (Jiangnan University), Tao Zhang (Central South University)

Representative-exploring Replay for Online Class-Incremental Continual Learning

libang zhao (Soochow University), Alysa Ziyang Tan (Nanyang Technological University), Siwei Feng (Soochow University), Han Yu (Nanyang Technological University), Tao Deng (Soochow University), Yuanlu Chen (Soochow University), Feng Wu (Soochow University), Mengyuan Song (Soochow University)

Lightweight Object Detection via Joint Region-Context Feature Representation

Chenxu Li (Jiangnan University), Tao Zhang (Central South University)

Dual-Domain Model for Enhanced Visual Grounding with Cross-Modal Interaction

hai nan (Chongqing University of Technology), chaoyue li (Chongqing University of Technology)

A Q-Learning-Based Opportunistic Routing Protocol for Energy-Efficient and Secure UASNs

Dixin Wang (University of Electronic Science and Technology of China), Jiahao Wang (University of Electronic Science and Technology of China), Min Li (University of Electronic Science and Technology of China), Jiewei Li (University of Electronic Science and Technology of China), Tianyuan Zhao (University of Electronic Science and Technology of China), Weidong Zhao (University of Electronic Science and Technology of China)

LOPD: A Low-illumination Scene Occluded Pedestrian Detection Model Based on Domain Adaptation

Liuyu Zhu (China University of Petroleum - Beijing), Zhiguang Wang (China University of Petroleum - Beijing), Yongsheng Hou (China University of Petroleum - Beijing), Zhiqiang Liu (China University of Petroleum - Beijing), Shen Li (China University of Petroleum - Beijing), Xiaoxue Li (China University of Petroleum - Beijing)

DLEN: Dual Branch of Transformer for Low-Light Image Enhancement in Dual Domains

Junyu Xia (Shanghai University), Jiesong Bai (Shanghai University), Yihang Dong (University of Chinese Academy of Sciences)

SeaFBen: A Multilingual Benchmark for Large Language Models in Southeast Asian Finance

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Gang Hu (Yunnan University), QingQing Wang (Yunnan University), WanLong Yu (Yunnan University), SiQi Lv (Yunnan University), AiJia Zhao (Yunnan University), Wang Gao (Jiangnan University)

Audio Adversarial Example Generation via Information Reduction

Kai Yang (School of Computer, Electronics and Information, GuangXi University), Jianbin Huang (School of Computer, Electronics and Information, GuangXi University), Ying Yang (School of Computer, Electronics and Information, GuangXi University)

A Local Structure-based Convolutional Neural Network and Its Application to Fault Diagnosis

Ruisheng Ran (Chongqing Normal University), Weizhe Ding (Chongqing Normal University), Jinping Wang (Chongqing University), Bin Fang (Chongqing University)

Aspect-Oriented Semantic Enhancement Network for Aspect-Level Multimodal Sentiment Analysis

Xiangbo Ji (Inner Mongolia University), Na Li (Inner Mongolia University), Renda Han (Hainan University)

FLEX-YOLO: A Feedback-Driven Lightweight and Enhanced Exchange Network for UAV Aerial Images

Ning Ding (Zhejiang University of Technology), Xinwei Li (Zhejiang University of Technology), Jiamin Ma (Zhejiang University of Technology), Ruohong Huan (Zhejiang University of Technology), Xiaomin Zhao (Zhejiang University of Technology)

Revisiting Graph Projections for Effective Complementary Product Recommendation

Leandro Anghinoni (Mercado Livre), Pablo Zivic (Mercado Libre), Jorge Sanchez (Mercado Libre)

DACKT: Enhanced Code Knowledge Tracing with Dual Attention Mechanisms

Boyi Ni (East China Normal University), Liangyu Chen (East China Normal University), Ningkan Jiang (East China Normal University)

Multi-Relation Graph-Kernel Strengthen Network for Graph-Level Clustering

Renda Han (Hainan University), Guangzhen Yao (Northeast Normal University), Mingyuan Li (Hebei University of Technology), Wenxin Zhang (University of Chinese Academy of Science), Yu Li (Hubei University), Wen Xin (Hainan University), Huajie Lei (Hainan University), Mengfei Li (Hainan University), Zeyu Zhang (The Australian National University), Chengze Du (Beijing University of Posts and Telecommunications), Yahe Tian (Southeast University)

LDLBP: LLM-Driven Latent Behavior Patterns Augmentation for ID-based Recommendation

Yu Bai (School of Computer Science, Shenyang Aerospace University, National & Local Joint Engineering Laboratory of Multi-Language Collaborative Translation Technology), Yuanlai Wang (School of Computer Science, Shenyang Aerospace University), Jian Huang (Suzhou Mandarin Huantu Intelligent Technology Co., Ltd), Shuang Xue (School of Foreign Languages, Shenyang Aerospace University), Jinfu Yuan (Shenyang Northern Software College of Information Technology)

FBI-Net: Foreground and Background Isolate Knowledge Distillation Network for Surface Defect Detection

Xuan Yang (Fudan University), Xinzhi Lin (Fudan University), Yuzheng Wang (Fudan University), Yunquan Sun (Fudan University), Lizhe Qi (Fudan University)

IF-DETR: Incremental Few-Shot Detection Transformer for Surface Defect Detection

Xuan Yang (Fudan University), Zhangxun Li (Fudan University), Xinzhi Lin (Fudan University), Jiamu Sheng (Fudan University), Nailei Hei (Fudan University), Lijun Dai (Fudan University), Lizhe Qi (Fudan University)

Spatio-Temporal Prior Graph Convolution-Mixer for Human Motion Prediction

Zhengyi Qian (Shanghai University), Hao Zhang (Shanghai University), Huahu Xu (Shanghai University)

Improving Graph Contrastive Learning with LLMs: A New Hardness-Aware Negative Sampling Strategy

Shuai Zhong (Beijing University of Posts and Telecommunications), Xiaotong Wang (Beijing University of Posts and Telecommunications), Haorui Wang (Beijing University of Posts and Telecommunications), Yuanxing Xu (Beijing University of Posts and Telecommunications), Xinming Chen (Beijing University of Posts and Telecommunications), Xu Liu (Beijing University of Posts and Telecommunications), Bin Wu (Beijing University of Posts and Telecommunications)

FTC-Net: Fourier Transform Convolution for Multivariate Time Series Classification in Human Activity Recognition

Jingchao Xie (South-Central Minzu University), Yang Wu (Wuhan University), Wei Li (South-Central Minzu University), Mingxin Yang (South-Central Minzu University), Rui Hou (South-Central Minzu University), Yahong Li (South-Central Minzu University)

Counterfactual Multi-Agent Decision Transformer

Fanfan Zhao (Tsinghua University), Yuanquan Hu (Tsinghua University), Wai Kin Chan (Tsinghua University)

Preserve Individuality: A Video Anomaly Detection Method Based on Pseudo Anomalies and Difference Learning

Jiangyun Chen (Zhejiang University of Technology)

Vulnerability Detection in EOSIO Smart Contracts Based on Teacher-Student Networks

ShenAo Lin (Hebei university), Meng Wang (Hebei university), Miao Wang (Hebei university)

DANet: Direction-Aware Network via Vertical-Horizontal Attention Fusion for Medical Image Segmentation

Mingke Li (University of Jinan), Xiaohui Yang (University of Jinan), Qiuyu Yu (University of Jinan), Jia Zhao (University of Jinan), Jing Wang (University of Jinan)

Multi-level Hypergraph Contrastive Learning with Centrality-based Adaptive Augmentation

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Mingjing Jiang (Wuhan University of Science and Technology), Yu Liu (Wuhan University of Science and Technology)

Data-efficient LLM Fine-tuning for Code Generation

Weijie Lv (Nanjing University of Aeronautics and Astronautics), Xuan Xia (Shenzhen Institute of Artificial Intelligence and Robotics for Society), Sheng-Jun Huang (Nanjing University of Aeronautics and Astronautics)

Towards Emotional Insights in Art: A Knowledge-Driven Framework Integrating Artistic Emotion Knowledge into Vision Language Models

Haoyang Chen (Nanjing University), Hengyang Lu (Jiangnan University), Lei Zhang (Nanjing University), Yi Xin (Nanjing University), Dian Kong (Nanjing University), Chongjun Wang (Nanjing University)

PJ-net: A Pipeline Emphasizing Centerline Priors and Junctions for Lane Graph Construction

Huiyuan Xiong (School of Intelligent Systems Engineering, Sun Yat-sen University), Jun Shen (School of Intelligent Systems Engineering, Sun Yat-sen University), Taohong Zhu (School of Intelligent Systems Engineering, Sun Yat-sen University), Ke Song (School of Intelligent Systems Engineering, Sun Yat-sen University)

SCANet: Multi-Channel Representation with Synthesis Convolution and Composite Attention for Malicious Network Traffic Detection

QingSheng Yang (University of Jinan), Lizhi Peng (University of Jinan), Kun Zhao (Inspur Computer Technology Co.,Ltd, Jinan, China), Jianjun Dong (Inspur Electronic Information Industry Co.,Ltd, Beijing, China)

Enhancing Secure Tree Training with Stacking Ensemble Method in Vertical Federated Learning on Non-IID Tabular Data

Jiahui Dai (Tongji University), Congcong Chen (Tongji University), Minyu Teng (Tongji University)

MTPKDistillNet: Multi-Teacher Prior Knowledge Distillation Network for Lung Tumor Surgical Section Image Classification

Yonglin Peng (South China Normal University), Qizhi Huang (Guangdong Provincial People's Hospital), Chengchuang Lin (South China Normal University), Gansen Zhao (South China Normal University), Haiyu Zhou (Southern Medical University)

LMACA: Specific Emitter Identification via a Lightweight Noise-Robust Complex-valued Network with Multi-scale Median Augmented Channel Attention

Kaicong Yu (National Key Laboratory of Electromagnetic Space Cognition Technology), Yi Fang (National Key Laboratory of Electromagnetic Space Cognition Technology), Jian Yang (National Key Laboratory of Electromagnetic Space Cognition Technology, Beijing Institute of Technology)

An Efficient Power Allocation Algorithm Based on Robust Bayesian Learning

Chunwei Miao (Central South University), Jinhong Yang (central south university), Jian Zhang (Central South University)

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Spatial Identity Embedding or Adjacency Matrix: Rethinking Spatial Dependency Modeling in Traffic Prediction

Weilai Zhang (Central South University), Dongbin Hu (Central South University)

Reconstructing Human Vision from fMRI with Multiscale Encoding and Perceptual Specificity

Wanqiu Huang (Zhejiang University), Ke Ma (Zhejiang University), Tingyu Xie (Zhejiang University), Hongwei Wang (Zhejiang University)

An Uninterpretable Right: Legal and Practical Limits of the Right to an Explanation

Arnoud Engelfriet (ICTRecht bv)

AMDWA: An Adaptive Multi-Dimensional Weight Adjustment Method for Fake News Detection

Yue Zhu (Central South University), Lin Shen (Central South University), Yubin Sheng (Central South University), Yao Xiao (school of software Xinjiang University), Zuping Zhang (Central South University)

Stealthy Backdoor Attack against Object Detection

Xiaoyang Ning (Wuhan University of Technology), Qing Xie (Wuhan University of Technology), Jinyu Xu (Wuhan University of Technology), Wenbo Jiang (University of Electronic Science and Technology of China), Xiaoyuan Liu (DBAPPSecurity Co., Ltd), Jiachen Li (Wuhan University of Technology), Yanchun Ma (Wuhan Vocational College of Software and Engineering)

Improving Sentence Embeddings of Extractive Question Answering Based on Adversarial and Contrastive Learning

Xin Wei (Southwest University), Chuan Liu (Southwest University), Yang Yang (Southwest University), Jun Zhou (Southwest University)

Implicit Topology Mining via Dual Filters for Attributed Graph Contrastive Clustering

Zhongyang Zhou (Chongqing Normal University), Bin Tang (Chongqing Normal University), Feiyu Chen (Chongqing Normal University), Nanjun Yu (Chongqing Normal University), Haomin Wu (Chongqing Normal University)

Exploring Self-supervised Skeleton-based Action Recognition in Occluded Environments

Yifei Chen (KIT), Kunyu Peng (KIT), Alina Roitberg (Stuttgart University), David Schneider (KIT), Jiaming Zhang (KIT), Junwei Zheng (KIT), Yufan Chen (KIT), Ruiping Liu (KIT), Kailun Yang (Hunan University), Rainer Stiefelhagen (KIT)

GCL-CCSE: Empowering Graph Contrastive Learning with Consolidated Community and Subgraph Essentials

Dongqi Wang (Software College of Northeastern University), Meiwen Tan (Software College of Northeastern University), Zhicheng Gao (Software College of Northeastern University), Tianqi Du (Software College of Northeastern University), Dongming Chen (Software College of Northeastern University)

ELFSurf: Explicit Latent Fusion for Implicit Surface Reconstruction

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Jijun Zhou (South China University of Technology), Zhuhua Yang (China Railway Liuyuan Group Co., Ltd.), Lingyu Liang (South China University of Technology), Chi Zhang (South China University of Technology), Yutian Yang (South China University of Technology), Yong Xu (South China University of Technology)

CFPFormer: Cross Feature-Pyramid Transformer Decoder for Medical Image Segmentation

Hongyi Cai (University of Malaya), Mohammad Mahdinur Rahman (Universiti Malaya), Wenzhen Dong (The Chinese University of Hong Kong), Jingyu Wu (Fuzhou University of International Studies and Trade)

SimMatch: Similarity threshold matching based framework for Semi-supervised medical image classification

Yufei Gao (School of Cyber Science and Engineering, Zhengzhou University, Zhengzhou 450001, China, SongShan Laboratory, Zhengzhou 450001, China), Shanyu Zhao (School of Cyber Science and Engineering, Zhengzhou University, Zhengzhou 450001, China), Yucheng Shi (School of Computer and Artificial Intelligence, Zhengzhou University, Zhengzhou 450001, China), Yan Cao (School of Cyber Science and Engineering, Zhengzhou University, Zhengzhou 450001, China, Laboratory of Cyberspace Security, Ministry of Education of China)

QuanSIRA: The Quantitative Investment Risk Modeling in Stock Markets with Pre-trained Language Models

Zheyang Luo (Yunnan University), Jiangming Liu (Yunnan University)

Leveraging Label Potential for Enhanced Multimodal Emotion Recognition

Xuechun Shao (Xinjiang University), Yinfeng Yu (Xinjiang University), Liejun Wang (Xinjiang University)

TF-DPNet: A Time-Frequency with Dual Perspectives Network for Multivariate Time Series Prediction

Wang Zhijiang (Yunnan University), Yang Yaoyuan (Yunnan University)

Temporal-Directed Multi-Graph Attention Network for Robust Phishing Detection in Blockchain

Luyao Peng (School of Computer Science, China University of Geosciences (Wuhan)), Yinhao Li (School of Computing, Newcastle University), Shuqi He (School of Computer Science, China University of Geosciences (Wuhan)), Jun Song (School of Computer Science, China University of Geosciences (Wuhan))

Discourse Features Enhance Detection of Document-Level Machine-Generated Content

Yupei Li (Imperial College London), Manuel Milling (Technical University of Munich), Lucia Specia (Imperial College London), Björn Schuller (Imperial College London, Technical University of Munich)

Optimized Local Updates in Federated Learning via Reinforcement Learning

Ali Murad (Auburn University), Bo Hui (Auburn University), Wei-Shinn Ku (Auburn University)

TV-MDiff: A Zero-Shot Text-To-Speech and Zero-Shot Voice Conversion System with Mamba-Based Diffusion Model

Zhihua Huang (Xinjiang Technical Institute of Physics & Chemistry, Chinese Academy of Sciences), Ke Chen (Xinjiang University), Yonghong Yan (University of Chinese Academy of Sciences)

N+Half BNN: An Ultra-lightweight Binary Neural Network for Traffic Signal Recognition

mingke Xiao (School of Intelligent Science and Technology, Hangzhou Institute for Advanced Study, University of Chinese Academy of Sciences), Yue Su (School of Intelligent Science and Technology, Hangzhou Institute for Advanced Study, University of Chinese Academy of Sciences), liang Yu (School of Intelligent Science and Technology, Hangzhou Institute for Advanced Study, University of Chinese Academy of Sciences), Guanglong Qu (School of Integrated Circuits, Southeast University), Yutong Jia (College of Electronic Science & Engineering Jilin University), Yukuan Chang (School of Intelligent Science and Technology, Hangzhou Institute for Advanced Study, University of Chinese Academy of Sciences), Xu Zhang (Institute of Semiconductors, Chinese Academy of Sciences)

KneeMamba: A Multi-level Feature Extraction Model for Knee MRI Assisted Diagnosis with Mamba

Zonghai Huang (UESTC), Jitong Si (BUPT), Jingting Zhang (UESTC), Fengjun Mu (UESTC), Rui Huang (UESTC), Hong Cheng (UESTC)

U-Net-Like Spiking Neural Networks for Single Image Dehazing

Huibin Li (Chengdu University of Technology), Haoran Liu (Chengdu University of Technology), Mingzhe Liu (Wenzhou University of Technology), Yulong Xiao (Politecnico di Milano), Peng Li (Chengdu University of Technology), Guibin Zan (Sigray, Inc.)

Role of Chaotic Neural Networks in EVSF-Network

Yoshitsugu Kakemoto (Jsol Corp.)

GuidedLatent: Defending VAEs against Membership Inference Attacks via Distribution-Guided Privacy

Chengze Du (Beijing University of Posts and Telecommunications), Guangzhen Yao (Northeast Normal University), Jibin Shi (Xidian University), Ying Zhang (Zhipu Huazhang Technology), Renda Han (Hainan University)

Joint Post-Training Pruning and Power-of-Two Quantization for Efficient Edge Computing

Zongcheng Yue (The University of Auckland), Longyu Ma (The University of Auckland), Chiu-Wing Sham (The University of Auckland), Chong Fu (Northeastern University)

CopyQNN: Quantum Neural Network Extraction Attack under Varying Quantum Noise

Zhenxiao Fu (Indiana University Bloomington), Leyi Zhao (Indiana University Bloomington), Xuhong Zhang (Indiana University Bloomington), Yilun Xu (Lawrence Berkeley National Laboratory), Gang Huang (Lawrence Berkeley National Laboratory), Fan Chen (Indiana University Bloomington)

LHA: Layer-wise Hardware Acceleration of Progressive Quantizing Inference through Partial Reconfiguration for Edge Computing

Zongcheng Yue (The University of Auckland), Longyu Ma (The University of Auckland), Chiu-Wing Sham (The University of Auckland), Chong Fu (Northeastern University)

CGDMamba: Boosting Remote Sensing Change Detection with Dual-Mamba

Li Xue (Inner Mongolia University of Technology), Li Dong (Inner Mongolia University of Technology), Fang Jiandong (Inner Mongolia University of Technology), Feng Xueying (Inner Mongolia University of Technology)

Prior-Guided Feature Fusion Network for Driving Obstacle Detection in Foggy Weather

Deshen Zhang (School of Cyber Security and Computer, Hebei University, Hebei, China), Miaomiao He (School of Cyber Security and Computer, Hebei University, Hebei, China), Xiangqian Geng (School of Cyber Security and Computer, Hebei University, Hebei, China)

Single-Image to High-Quality 3D Mesh: A Deep Learning-based Automatic Modeling Approach

Wenli Zhong (Qilu University of Technology), Ke Su (Qilu University of Technology), Ying Wang (Qilu University of Technology)

Fuzzy Knowledge-Driven Human-in-the-Loop Learning for Autonomous Driving

Yiming Zeng (University of Science and Technology of China), Yin Xu (University of Science and Technology of China), Xichong Zhang (University of Science and Technology of China), Xiao Huang (China Ship Development and Design Center), Mingjun Xiao (University of Science and Technology of China)

FedSDA: Enhancing Federated Learning with Client-Specific Data Augmentation

Zhiyu Zuo (Qilu University of Technology), Hongliang Zhang (Qilu University of Technology), Anming Dong (Qilu University of Technology), Yubing Han (Qilu University of Technology), Jiguo Yu (University of Electronic Science and Technology of China)

AG-Mask: Augmented 3D Generative Masked Motion Model for Text-to-Motion

Zixin Su (Guangxi University), Mengxiao Yin (Guangxi University), Fancui Xie (Guangxi University), Peihong Wu (Guangxi University), Bei Hua (Guangxi University), Feng Zhan (Guangxi University)

PoseTalker: Talking Head Synthesis via Pose-Driven 3D Gaussian Splatting

zhen xiong (Jinan University), Haozhi Huang (Jinan University), zhensheng yuan (Jinan University), Guanghua Yang (Jinan University), Jundong Tan (Jinan University)

Language Models Understand Themselves Better: A Zero-Shot AI-Generated Text Detection Method via Reading and Writing

Jinao Huang (Institute of Information Engineering, Chinese Academy of Sciences Beijing, China School of Cyber Security, University of Chinese Academy of Sciences Beijing, China), Chuang Zhang (Institute of Information Engineering, Chinese Academy of Sciences Beijing, China), Tingwen Liu (Institute of Information Engineering, Chinese Academy of Sciences Beijing, China), Taoyu Su (Institute of Information Engineering, Chinese Academy of Sciences Beijing, China),

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Quangang Li (Institute of Information Engineering, Chinese Academy of Sciences Beijing, China), Chi Chen (Institute of Information Engineering, Chinese Academy of Sciences Beijing, China School of Cyber Security, University of Chinese Academy of Sciences Beijing, China), Yulin Li (Institute of Information Engineering, Chinese Academy of Sciences Beijing, China School of Cyber Security, University of Chinese Academy of Sciences Beijing, China)

A Dual-path Spatial-Temporal Separation Framework for 3D Human Pose Estimation

Yiran Liu (Beijing University of Chemical Technology), Ruirui Li (Beijing University of Chemical Technology), Yuandong Hu (Guizhou Provincial Center for Disease Control and Prevention)

BGEM: Bipartite Graph-based Extension Modeling in Graph Neural Network for QoS Prediction

Yingwei Luo (East China Normal University), Yugen Du (East China Normal University), Shuo Shi (East China Normal University), Xia Chen (East China Normal University), Guoxing Tang (East China Normal University)

Multi-modal Hierarchical Clustering Network for Cancer Subtype Identification of Multi-omics Data

Fangfei Lin (University of Electronic Science and Technology of China), Jie Xu (University of Electronic Science and Technology of China), Yazhou Ren (University of Electronic Science and Technology of China), Junjie Chen (Harbin Institute of Technology Shenzhen), Irwin King (The Chinese University of Hong Kong), Zenglin Xu (Fudan University)

Concept Factorization via Self-Representation and Adaptive Graph Structure Learning

zhengqin yang (Chongqing University of Posts and Telecommunications), Di Wu (Southwest University), Jia Chen (Beihang University), Xin Luo (Southwest University)

Breaking Walls, Building Bridges: A Language-Adaptive Framework for Multilingual Sequential Recommendation

Hongjun Heng (Civil Aviation University of China), Liutong Chen (Civil Aviation University of China)

Adaptive-Weighted Convolutional Filters: A Depth Discrepancy-Focused Approach to Defocus Estimation

Yan Siwei (Sichuan University), Zhu Jiangping (Sichuan University), Zhou Pei (Sichuan University), Du Junlin (Sichuan University)

BP-WaveNet: A Multi-Scale Attention Mechanism for Continuous Blood Pressure Prediction

Zhou Yunliang (Zhejiang Gongshang University), Zhou Yong (Zhejiang Gongshang University), Xu Xiaogang (Zhejiang Gongshang University)

3D Cartoon Face Generation with Controllable Expressions from a Single GAN Image

Hao Wang (NTU), Wenhao Shen (NTU), Guosheng Lin (NTU), Steven Hoi (SMU), Chunyan Miao (NTU)

LiteHA-Net: A Lightweight and High-Accuracy Network for Infrared Small Target Detection

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Intention Aggregation and Category Enhancement Graph Neural Network for Session-based Recommendation

Xiangqian Geng (School of Cyber Security and Computer, Hebei University, Hebei, China), Deshen Zhang (School of Cyber Security and Computer, Hebei University, Hebei, China), Miaomiao He (School of Cyber Security and Computer, Hebei University, Hebei, China)

TechSupportEval: An Automated Evaluation Framework for Technical Support Question Answering

Bohan Chen (Tsinghua University), Yongqian Sun (Nankai University), Yuhe Liu (Tsinghua University), Longlong Xu (Tsinghua University), Zhe Xie (Tsinghua University), Changhua Pei (Computer Network Information Center, Chinese Academy of Sciences), Jing Han (ZTE Corporation), Fan Ni (ZTE Corporation), Xuhui Cai (China Mobile Communications Group Co., Ltd.), Ce Yang (China Mobile Communications Group Co., Ltd.), Dan Pei (Tsinghua University)

Geometry-Guided Behavior Pattern Adaptation for Trajectory Prediction in Unseen Scenes

Yaqun Cui (Sun Yat-sen University), Siyuan Chen (Guangzhou University), Jiahai Wang (Sun Yat-sen University), Meixiu Long (Sun Yat-sen University), Jinbiao Chen (Sun Yat-sen University), Jianpeng Zhou (Sun Yat-sen University)

Explainable Access Control Policies Classification through Large Language Models

Luca Petrillo (IMT School for Advanced Studies Lucca, IIT-CNR), Fabio Martinelli (ICAR-CNR), Antonella Santone (University of Molise), Francesco Mercaldo (University of Molise, IIT-CNR)

DAEM: A Decomposed Attention-Enhanced Mamba Model for Multivariate Time Series Forecasting

Wen Li (Shanghai University of International Business and Economics), Jiaxin Yuan (Shanghai University of International Business and Economics), Heming Du (The University of Queensland), Jiyanglin Li (Guizhou University of Finance and Economics), Shouguo Du (Shanghai Municipal Big Data Center), Yiming Tang (Shanghai Lixin University of Accounting and Finance)

MCCVM: Multi-Scale Cross-axes Conv-VMamba for Medical Image Classification

Xuan Chen (Donghua University), Zijian Wang (Donghua University), Qianzi Shen (China Mobile Shanghai Industry Research Institute China), Yanting Zhang (Donghua University), Cairong Yan (Donghua University)

SEP: Self-Rewarded Entity-Level Preference for Open Named Entity Recognition

Qi Li (Zhejiang University), Jiayi Xie (Zhejiang University), Jiabei He (Zhejiang University), Jian Zhang (Zhejiang University), Tingyu Xie (Zhejiang University), Ke Ma (Zhejiang University), Hongwei Wang (Zhejiang University)

Improving Medical Question Summarization through Re-ranking

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Enhancing Mandarin Lip Reading with a Multimodal Conformer and Structured State-Space Decoder

Meng Miao (Inner Mongolia University), Feilong Bao (Inner Mongolia University), Guanglai Gao (Inner Mongolia University)

MSIA-SDiT3D: 3D Multi-Scale Interpolation Attention in Lightweight Diffusion Transformers for 3D Point Cloud Generation

Xiaobao He (Chongqing University of Technology), Dan Huang (China Research & Development Academy of Machinery Equipment, Chongqing University of Technology)

Improve Multi-task Medical Image Segmentation by Localized Worst-case Balancing

Qianyi Pan (Sichuan University), Pei Yang (West China Hospital of Sichuan University), Zeao Zhang (Sichuan University), Huawei Cai (West China Hospital of Sichuan University), Quan Guo (Guangxi Minzu University)

Towards Automatic Rule Extraction for Intrusion Detection with Explainable AI

Wang Xingyu (University of Chinese Academy of Sciences), Miao Han (University of Chinese Academy of Sciences), Li Zhaoxuan (University of Chinese Academy of Sciences), Wang Wen (Institute of Information Engineering, Chinese Academy of Science), Liu Feng (Institute of Information Engineering, Chinese Academy of Science)

Exploring Disentangled Appearance-Motion Contexts for Temporal Activity Localization

Huashuo Lei (Harbin Institute of Technology), Xiaowen Cai (Huazhong University of Science and Technology), Daizong Liu (Peking University), Xiang Fang (Nanyang Technological University), Xiaoye Qu (Huazhong University of Science and Technology), Jianfeng Dong (Zhejiang Gongshang University), Jixiang Yu (City University of Hong Kong), Keyan Jin (University of Granada)

Lightweight Underwater Sonar Target Detection Algorithm Based on Context Feature Fusion

Weijie Zhou (Southeast University), Nan Wei (Southeast University), Longyu Jiang (Southeast University)

UR4NNV: Neural Network Verification, Under-approximation Reachability Works!

Zhen Liang (College of Computer Science and Technology, National University of Defense Technology), Taoran Wu (Institute of Software Chinese Academy of Sciences), Ran Zhao (Intelligent Game and Decision Lab, Academy of Military Science), Bai Xue (Institute of Software, Chinese Academy of Sciences), Ji Wang (College of Computer Science and Technology, National University of Defense Technology), Wenjing Yang (College of Computer Science and Technology,

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National University of Defense Technology), Shaojun Deng (College of Computer Science and Technology, National University of Defense Technology), Wanwei Liu (College of Computer Science and Technology, National University of Defense Technology)

MDAFusion: Multi-scale Dual Attention Feature Fusion for Multispectral Object Detection

Aoao Zhao (Wuhan University of Technology), Shishu Hong (Wuhan University of Technology), Simin Zhao (Xi'an Shiyong University), YaLing Zhai (Wuhan University of Technology), YuChen Tao (Wuhan University of Technology), Hao Pan (Wuhan University of Technology)

DS-YOLO: A Vehicle Detection Model for UAV Aerial Photography Based on Improved YOLO11n

Xinxin Zhou (Northeast Electric Power University), Hongrui Zhang (Northeast Electric Power University), Hui Yi (Northeast Electric Power University), Jinye Zhang (Northeast Electric Power University)

T2CV-Zero: Zero-shot Character Video Generation Via Text-to-Motion Model

Yong Ma (Wuhan University), Huasong Han (Wuhan University), Shiyuan Shen (Wuhan University), Wenxiao Zhang (Singapore University of Technology and Design), Chao Liang (Wuhan University), Chunxia Xiao (Wuhan University)

SPBA: Utilizing Speech Large Language Model for Backdoor Attacks on Speech Classification Models

Wenhan Yao (Xiangtan University), Fen Xiao (Xiangtan University), Xiarun Chen (Peking University), Jia Liu (Peking University), Yongqiang He (Peking University), Weiping Wen (Peking University)

Boosting Zero-Shot Generalization Performance of Constructive NCO Approaches for Large-Scale TSP

Xinwei Chen (Zhejiang University), Li Zhang (Zhejiang University), Shijian Li (Zhejiang University), Gang Pan (Zhejiang University)

PBFE-DAN: Personal Biological Feature Enhanced Domain Adaptation Network for Cross-Session Brainprint Recognition

Xinyu Yang (Hangzhou Dianzi University), Wanzeng Kong (Hangzhou Dianzi University), Xuanyu Jin (Hangzhou Dianzi University)

SECMG: Style Enhancement Commit Message Generation

Liao Zhifang (Central South University), liu wenlong (csu), Lan Peng (Central South University)

Guidelines-Enhanced ICL with Examples Selection for Document-Level Event Argument Extraction

Yuning Guo (Beijing University of Posts and Telecommunications), Xuanning Liu (Beijing University of Posts and Telecommunications), Bin Wu (Beijing University of Posts and Telecommunications)

Wave Height Prediction: 3D Spatiotemporal FourCastNet Method with Multi-factor

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SKAAL: Intelligent Voice Assistants Security Skill Scheme Based on Voiceprint Authentication and Authorization

Zhang Yan (Institute of Information Engineering, Chinese Academy of Sciences , School of Cyber Security, University of Chinese Academy of Sciences), wang zixin (Institute of Information Engineering, Chinese Academy of Sciences , School of Cyber Security, University of Chinese Academy of Sciences), Guan Pengxin (University of Science and Technology Beijing), Xu Peiran (Sun Yat-Sen University), Zhang Ruoding (Institute of Information Engineering, Chinese Academy of Sciences)

STMOM: A Spatiotemporal Traffic Flow Forecasting Model Based on Multi-Order Markov Chains

Shulan Guo (qingdao university), Jianbo Li (qingdao university), Zesheng Cheng (qingdao university), Haoran Li (qingdao university)

Learnable Multi-Transform Based Tensor Network for Low-Rank Tensor Decomposition

Haofei Liu (Shenzhen University), Honghang Chen (Shenzhen University), Haoye Zeng (Shenzhen University), Xiaoli Sun (Shenzhen University), Zimeng Li (Shenzhen Polytechnic University), Xiujuan Zhang (Shenzhen Polytechnic University)

PFGM-IQA: CT Image Quality Assessment using Poisson Flow Generative Models

Haifeng Zhao (Anhui University), Minghui Xu (Anhui University), Tianxia Yang (Anhui University), Shaojie Zhang (Anhui University), Yanping Fu (Anhui University)

GPFFenet: a lightweight grid parallel feature extraction net for 3D segmentation in agriculture

Wen jing Zhang (Northwest A&F University), Qinghe Liu (Northwest A&F University), HuiJun Yang (Northwest A&F University), Yufeng Fan (Northwest A&F University)

Towards More Effective Statute Retrieval for Non-Professionals: A Comparative Study of Generation-Augmented Retrieval Strategies with LLMs

Haochen Jia (Sichuan University), Duanyu Feng (Sichuan University), Hongan Chen (Sichuan University), Shijia Jiang (Sichuan University), Hao Wang (Sichuan University)

Simplifying CLIP: Unleashing the Power of Large-Scale Models on Consumer-level Computers

Hongbo Liu (Tongji University), Shengjie Zhao (Tongji University), Weichao Chen (Tongji University), Deniz Gunduz (Imperial College London)

A structural model to explain unfairness

Simone Pavarana (University of Freiburg)

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Moore: Optimal Expert Deployment Scheme in Low-Rank Adaptation architecture

Shuzhen Sun (Tianjin University), Jing Zhang (Tianjin University), Peng Zhang (Tianjin University)

Dual-Domain Discriminative Learning with Joint Consistency for Domain Adaptation

Zhenyang Ning (Guangdong University of Technology, GDUT), Shaohua Teng (Guangdong University of Technology, GDUT), Zefeng Zheng (Guangdong University of Technology, GDUT), Wei Zhang (Guangdong University of Technology, GDUT), Yihang Dong (University of Chinese Academy of Sciences, CAS)

Dual Stream Framework with Self-Correcting Memory for Semi-Supervised Video Object Segmentation

Chunlong Liu (South China University of Technology), Daoming Lu (South China University of Technology), Man Huang (Guangzhou University), Bo Li (South China University of Technology)

Disruptive Attacks on Face Swapping via Low-Frequency Perceptual Perturbations

Mengxiao Huang (Qilu University of Technology), Minglei Shu (Qilu University of Technology), Shuwang Zhou (Qilu University of Technology), Zhaoyang Liu (ShanDong Artificial Intelligence Institute)

Investment Advisory Robotics 2.0: Leveraging Deep Neural Networks for Personalized Financial Guidance

Gaozhe Jiang (National University of Singapore), Jie Yang (School of Management and Economics, The Chinese University of Hong Kong, Shenzhen), Shenghan Zhao (The Department of Economics, Cornell University), Hongyi Chen (Henry Samueli School of Engineering, University of California, Los Angeles), Yanyi Zhong (Graziadio Business School, Pepperdine University), Chenwei Gong (Henry Samueli School of Engineering, Department of Computer Science, University of California, Los Angeles)

Enhancing Interpretability of Convolutional Neural Networks with Dynamic Weighted Path Integral

Yongjie Liu (Shandong University), Wei Guo (Shandong University), Xinni Li (Shandong University), Xin Zhou (Nanyang Technological University), Xudong Lu (Shandong University)

Self-Supervised Learning for Time-Domain Radio Signal Detection

Chengzhi Ji (Institute of Software, Chinese Academy of Sciences, University of the Chinese Academy of Sciences), Xin Zhou (Institute of Software, Chinese Academy of Sciences, University of the Chinese Academy of Sciences)

NoiseGuard: A Three-Pronged Solution to Malicious Traffic Detection Under Label Noise and Class Imbalance

Ding Jiangtao (Zhejiang University of Technology), Xu Zhicheng (Zhejiang University of Technology), Zheng Junli (Zhejiang University of Technology), Cheng Hongbing (Zhejiang University of Technology)

LSPNet: A Local Semantic Perception Network for Topic Segmentation

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Shihao Yang (Northeast Normal University), Shaoru Zhang (Yantai Institute of Science and Technology), Yue Jiang (Northeast Normal University), Ziyi Zhang (Northeast Normal University), Ming Fang (Northeast Normal University), Shuhua Liu (Northeast Normal University)

G2S: A Greedy Node Swapping Algorithm to Compute Upper Bound Graph Edit Distance

Yilei He (University of Electronic Science and Technology of China), Jiansu Pu (University of Electronic Science and Technology of China), Derui Zhong (University of Electronic Science and Technology of China), Dejing Ke (University of Electronic Science and Technology of China), Jinyue Huang (University of Electronic Science and Technology of China), Yanlin Zhu (Chengdu Advanced Metal Materials Industry Technology Research Institute Co.)

ASACANet: Edge-Guided Agent Attention and Staged Convolution for Semantic Segmentation

Jiawei Sun (Guilin University of Electronic Technology)

Adaptive Hierarchical Graph Neural Network for Non-overlapping Cross-Domain Recommendation

Moyu Zhang (Soochow University), Zhe Yang (Soochow University)

CW-BASS: Confidence-Weighted Boundary-Aware Learning for Semi-Supervised Semantic Segmentation

Ebenezer Tarubinga (Korea University), Jenifer Kalafatovich (Korea University), Seong-Whan Lee (Korea University)

Integrating Locality-Aware Attention with Transformers for General Geometry PDEs

minsu koh (Korea University), Beom-Chul Park (Korea University), Hee-Jo Kong (Korea University), Seong-Whan Lee (Korea University)

ACoRN: Noise-Robust Abstractive Compression in Retrieval-Augmented Language Models

Singon Kim (Korea University), Gunho Jung (Korea University), Seong-Whan Lee (Korea University)

AnyStyler: Adding Style Control in Diffusion Models to Any Modality Stylization

Wuqin Liu (Kuaishou Technology)

ES-YOLO: Edge-Enhanced Infrared Small Target Detection for Low-Altitude UAV Remote Sensing

Licheng Yang (Hohai University), Yanfei Ye (Hohai University)

GRAIL: Gradient-Based Adaptive Unlearning for Privacy and Copyright in LLMs

Kun-Woo Kim (Korea University), Ji-Hoon Park (Korea University), Ju-Min Han (Korea University), Seong-Whan Lee (Korea University)

BF-UNet: A Brain Function-Inspired Model with Memory Mechanism for Medical Segmentation

Wei Wang (Changsha University of Science & Technology), Xing Zhang (Changsha University of Science & Technology), Xin Wang (Changsha University of Science & Technology), BeiBei Zhen (Changsha University of Science & Technology)

A Transformer-Based Hybrid Model for Multi-Indicator Numerical Prediction of Marine Environment

Binbin Duan (North China University of Technology), Li Ma (North China University of Technology), Yang Li (North China University of Technology), Dongchao Ma (North China University of Technology), Yingxun Fu (North China University of Technology)

Robust Meta Reinforcement Learning via Environment Context Enhancement

Wenning Hu (Harbin Engineering University), Hongbin Wang (Harbin Engineering University), Xirui Chen (Harbin Engineering University), Nianbin Wang (Harbin Engineering University)

BCLD-YOLOv11: An Adaptive Channel Attention and Cross-Scale Feature Fusion-based Method for Real-time Pedestrian Detection in Crowded Scenes

Xinxin Zhou (Northeast Electric Power University), Chunying Xie (Northeast Electric Power University), Yucai Li (Metering Center of National Power Supply Company in Tonghua), Chunzhen Li (Northeast Electric Power University)

Dynamic Graph Learning with Tensorized Lightweight Graph Convolutional Network

Minglian Han (Southwest University), Yuxin Fan (Southwest University), Ling Wang (Chongqing University of Posts and Telecommunications), Ye Yuan (Southwest University)

FPCRL: Feature Projection and Contrastive Representation Learning for End-to-End Speech Translation

Jiale Ou (Zhengzhou University), Hongying Zan (Zhengzhou University)

Brillouin temperature extraction technology based on RHN fusion Self-Attention mechanism

Jingyu Wu (Qilu University of Technology), Zhihui Sun (Qilu University of Technology), Wei Zhang (Qilu University of Technology), Shaodong Jiang (Qilu University of Technology), Faxiang Zhang (Qilu University of Technology), Xiaohui Liu (Shandong Feibosaisi Optoelectronics Technology Co., Ltd), Changfeng Li (Shandong Feibosaisi Optoelectronics Technology Co., Ltd), Chang Wang (Shandong Feibosaisi Optoelectronics Technology Co., Ltd)

Multi-Object Grounding via Hierarchical Contrastive Siamese Transformers

Chengyi Du (University of Electronic Science and Technology of China), Keyan Jin (University of Granada)

Multi-modal Knowledge Graph Generation with Semantics-enriched Prompts

Yajing Xu (Zhejiang University), Zhiqiang Liu (Zhejiang University), Jiaoyan Chen (Department of Computer Science, University of Manchester), Mingchen Tu (Zhejiang University), Zhuo Chen (Zhejiang University), Jeff Z. Pan (The University of Edinburgh), Yichi Zhang (Zhejiang University), Yushan Zhu (Zhejiang University), Wen Zhang (Zhejiang University), Huajun Chen (Zhejiang University)

DCPFedRec: A Dual Clustering-Based Personalized Federated Recommendation Method

Huan Liang (School of Cyber Security and Computer, Hebei University), Wenjie Luo (School of Cyber Security and Computer, Hebei University)

SmellDetector: Multi-Label Code Smell Detection and Refactoring with Large Language Models

Wenjie Liang (Tsinghua University), Jiale Wang (Tsinghua University), Hai-Tao Zheng (Tsinghua University), Yinghui Li (Tsinghua University), Haiye Lin (Tsinghua University), Hong-Gee Kim (Seoul National University), Bingxu An (Tencent), Zhao Wei (Tencent), Yong Xu (Tencent)

Adversarial-based Probabilistic Manifold Anomaly Detection Model for Mechanical Fault Diagnosis

Chen Shuang (Nanjing University of Posts and Telecommunications), Zhang Leyi (Nanjing University of Posts and Telecommunications), Tang Xi (Nanjing University of Posts and Telecommunications)

Uncertainty-Guided Curriculum Design: robust policy learning with adversarial environment

Wenning Hu (Harbin Engineering University), Lianke Zhou (Harbin Engineering University), Ming He (Harbin Engineering University), Nianbin Wang (Harbin Engineering University)

An LLM-powered Natural-to-Robotic Language Translation Framework with Correctness Guarantees

ZhenDong Chen (Sun Yat-Sen University), ZhanShang Nie (Sun Yat-Sen University), ShiXing Wan (Sun Yat-Sen University), JunYi Li (Sun Yat-Sen University), YongTian Cheng (Sun Yat-Sen University), Shuai Zhao (Sun Yat-Sen University)

Neural Architecture Generation via Contrastive Representation Learning

jingrong xie (Sichuan University), yuqi feng (Sichuan University), minxiao zhong (Sichuan University), yanan sun (Sichuan University)

Deep Reinforcement Learning for Autonomous Driving with Multiple Expert Demonstrations

Chenghao Wang (East China Normal University), Miaodi Li (East China Normal University), Muxiang Zhang (East China Normal University), Min Zhang (East China Normal University)

How Long Should LLMs Generate a Thought in Reasoning Framework

Kara Lee (Wuhan University), Xiaohu Yan (School of Undergraduate Education, Shenzhen Polytechnic University, Shenzhen 518055, China.), Fazhi He (Wuhan University), Xingyao Wu (JD EXPLORE ACADEMY)

Traffic Signals Enhanced Multi-modal Dual-Branch Cooperative Strategy for Autonomous Driving

Jianmei Su (Southwest University of Science and Technology), Xuean Huang (Southwest University of Science and Technology)

TravelNet: A Recursive Decomposition-Based Time Series Forecasting Framework for Bus Travel Time Estimation

Bolin Chen (University of Chinese Academy of Sciences), Yi Li (CIGIT), Rui Li (UCAS), Wenyan Wu (CIGIT), Mingquan Shi (CIGIT), Bin Tan (UCAS)

Orchestrating Spiking Dynamics with Dendritic Activation Functionality for Bolstering Expressivity and Learning Efficiency

Mingkun Xu (Guangdong Institute of Intelligence Science and Technology), Runxi Tang (Duke University), Yusong Wang (Institute of Science Tokyo), Shuai Zhong (Guangdong Institute of Intelligence Science and Technology)

Localization and Elimination: Object Detection Physical Patch Defense Based on Adversarial Patch Characterization

Zesheng Zhou (Hainan University), Sizheng Fu (Hainan University), Chunjie Cao (Hainan University), Fangjian Tao (Hainan University), Qi Zhang (Hainan University), Jingzhang Sun (Hainan University)

TextMamba: Scene Text Detector with Mamba

Qiyao Zhao (Fujian Key Laboratory of Pattern Recognition and Image Understanding), Yue Yan (The University of Sheffield), Da-han Wang (Fujian Key Laboratory of Pattern Recognition and Image Understanding)

MMCDSP: a Multimodal and Cross-domain Fusion Framework for Sequential Recommendation

Yitong Xu (Donghua University), Guohao Sun (Donghua University), Jinhua Lu (Fuyang Normal University), Li Yang (Donghua University), Xiu Fang (Donghua University), Yanting Zhang (Donghua University)

CICE: Neural Network Interpretability Based on Conceptual Interference Coefficients

Lijun Gao (Shenyang Aerospace University), Wenyu Li (Shenyang Aerospace University)

Learning to Stabilize Column Generation

Lichang Fang (Tsinghua University), Haofeng Yuan (Tsinghua University), Shiji Song (Tsinghua University), Bokui Chen (Tsinghua University)

A Novel Contrastive Signal Generative Framework for Accurate Graph Learning

Xiaofan Wei (SouthWest University), Binyan Zhang (SouthWest University), Ye Yuan (SouthWest University)

Evaluating Robustness of Voice Conversion Systems under Multi-source Channel Interference

Qianniu Chen (Zhejiang University), Xiaodi Zhao (Zhejiang University), Han Zhe (Zhejiang University), Xiao Li (Hanghai Information Technology (Shanghai) Co., Ltd.), Li Lu (Zhejiang University)

DTCP: Enhanced Graph Diffusion Models Alignment by Policy Gradient Regularization

Hang Zhu (Zhejiang University), Yijing Liu (Zhejiang University), Li Zheng (Zhejiang University), Shi Liu (Zhejiang University), Wei Chen (Zhejiang University)

FEMA: Emotion-Driven Personification in Generative Agents

Siyan Shao (Henan University of Science and Technology), Xinshan Qin (College of Information, North China University of Technology), Shuangjin Wu (Henan University of Science and

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Technology), Guanhua Lin (BeiHang University), Yu Zhang (College of Information, North China University of Technology), Lizhe Chen (China Shenzhen International Graduate School, Tsinghua University)

Multimodal enhanced Explainable Recommendation with Contrastive Learning

Kaihan Zhang (North University of China), Zixuan Wang (North University of China), Kangchi Liu (North University of China), Ping Chen (North University of China), Peng Song (Shanxi University), Jiye Liang (Shanxi University)

Partial Graph Matching Based on Node Filtering and Sampling

Tianshui Gu (Shenzhen University), Xuyao Li (Shenzhen University), Junjie Li (Shenzhen University), Kezhong Lu (Shenzhen University)

Learning From Each Other: Exploring A Novel Mutual Learning Paradigm for Enhancing Code Generation Performance

Xin Ju (Soochow University), Ye Zhang (Soochow University), Xiabing Zhou (Soochow University), Min Zhang (Soochow University)

Clustering-Aware Multiple Graph Matching with Cycle Consistency

Tianshui Gu (Shenzhen University), Junjie Li (Shenzhen University), Xuyao Li (Shenzhen University), Kezhong Lu (Shenzhen University)

Task-specific Prompt and Multi-level Linguistic Feature Enhancement for Aspect Sentiment Triple Extraction

Yu Zhang (Jiangsu Ocean University), Li Jia (Jiangsu Ocean University), Huihui Lv (Jiangsu Ocean University), Xinru Cui (Jiangsu Ocean University), Zeyu Huang (Jiangsu Ocean University), Zhaoman Zhong (Jiangsu Ocean University)

Personalized Federated Learning Based on Adaptive Layer-wise Parameter Recombination

Li Lin (Nanjing University of Aeronautics and Astronautics), Lu Zhou (Nanjing University of Aeronautics and Astronautics)

Dynamic Cognitive Bias: Hallucination and Forgetting in the Cognitive Dynamics of LLMs

Ni Ziyi (CASIA), Tang Sen (southeast university), Guo Xuhao (University of Melbourne), Sun Liguang (CASIA), Lv Pin (CAISA)

Unimodality-Supervised Contrastive Learning and Inference Enhancement Method for Medical Visual Question Answering

Yunlong Tian (Beijing University of Posts and Telecommunications), Zhaowei Qu (Beijing University of Posts and Telecommunications), Zehua Zhang (China Communication Service Application and Solution Technology Co., Ltd.), Dongxin Zhou (China Communication Service Application and Solution Technology Co., Ltd.), Mujin Liu (China Communication Service Application and Solution Technology Co., Ltd.)

Research on High-Quality Prompt Engineering for Large Language Models in Software Defect Prediction

Jin Zhang (Hunan Normal University), Shunyu Xu (Hunan Normal University), Yang Zhang (National University of Defense Technology)

Omni-Dimensional Dynamic Convolution with Global-Local Multi-Scale Aggregation for Robust Spoof Speech Detection

Hai Zhong (Changsha University of Science & Technology), Wenhao Wang (Changsha University of Science & Technology), Jin Zhang (Changsha University of Science & Technology, Hunan Normal University)

SPAN: A Salient Patch-Clue Aware Network for Cross-Domain Face Anti-Spoofing

Yan Liu (University of Science and Technology Beijing), Liangfeng Zhang (University of Science and Technology Beijing), Lei Chen (Department of Automation, Tsinghua University), Kai Li (University of Science and Technology Beijing), Jinhui Lin (University of Science and Technology Beijing), Song-Lu Chen (University of Science and Technology Beijing), Feng Chen (EEasy Technology Company Ltd), Xu-Cheng Yin (University of Science and Technology Beijing)

Hierarchical Distribution-Aware Network for Point Cloud Completion

Jiaqi Zou (Soochow University), Yanyun Tao (Soochow university), Yefei Yang (Soochow University)

Stochastic Pruning on Neural Networks

Luis Avendaño Muñoz (University of Leeds), Netta Cohen (University of Leeds), Nabi Omidvar (University of Leeds)

Detecting and Removing Adversarial Patches using Frequency Signatures

Dominic Simon (University of Florida), Chase Walker (University of Florida), Sumit Jha (Florida International University), Rickard Ewetz (University of Florida)

FlexFFN: Hierarchical Dynamic Selection of Feedforward Networks for Large Language Models

Miaobo Hu (Institute of Information Engineering, Chinese Academy of Sciences)

Dual Graph Neural Networks for Optimizing Circuit Partitioning: A Synergistic Approach

Anita Soroush (University of Guelph), Shawki Areibi (University of Guelph), Gary Grewal (University of Guelph), Brayden Yip (University of Guelph)

Saliency Time-Series Anomaly Detection Service for AIOps

Lisa Zhang (China Mobile (Suzhou) Software Technology Company Limited), Haibo Huang (China Mobile (Suzhou) Software Technology Company Limited), Xiaojun Sun (China Mobile (Suzhou) Software Technology Company Limited), Ruiyu Wang (China Mobile (Suzhou) Software Technology Company Limited), Lifeng Zhu (China Mobile (Suzhou) Software Technology Company Limited), Haoshuo Wang (China Mobile (Suzhou) Software Technology Company Limited), Wenpeng Zhu (China Mobile (Suzhou) Software Technology Company Limited), Xinyong Jiang (China Mobile (Suzhou) Software Technology Company Limited)

A Neural Network-Based Pipeline Parallel Strategy Solver for Heterogeneous Environments

Jie Ou (University of Electronic Science and Technology of China), Jinyu Guo (University of Electronic Science and Technology of China), Yueming Chen (University of Electronic Science and Technology of China), Shuaihong Jiang (University of Electronic Science and Technology of China), Ruini Xue (xueruini@uestc.edu.cn), Wenhong Tian (University of Electronic Science and Technology of China)

Low-Rank Decomposition Assisted Quantization and Inference Compensation for Quality Large Language Model Inference

Jie Ou (University of Electronic Science and Technology of China), Jinyu Guo (University of Electronic Science and Technology of China), Shuaihong Jiang (University of Electronic Science and Technology of China), Zhaokun Wang (University of Electronic Science and Technology of China), Yueming Chen (University of Electronic Science and Technology of China), Ruini Xue (University of Electronic Science and Technology of China), Wenhong Tian (University of Electronic Science and Technology of China)

Hierarchical Dual-Branch Attention Transformer for Micro-Expression Recognition

Xinliang Liu (Chongqing Normal University), Yanxia Wang (Chongqing Normal University), Guoyu Xia (Chongqing Normal University)

Hybrid Swin Transformer for Appearance Gaze Estimation

Zhang Cheng (Chongqing Normal University), Yanxia Wang (Chongqing Normal University), Xinliang Liu (Chongqing Normal University), Wei Liang (Chongqing Normal University), Fenglin Huang (Chongqing Normal University)

Interpretability-Aware Vision Transformer

Yao Qiang (Wayne State University), Chengyin Li (Wayne State University), Hui Zhu (Wayne State University), Prashant Khanduri (Wayne State University), Dongxiao Zhu (Wayne State University)

Towards An Unsupervised Federated Hypernetwork Method for Distributed Anomaly Identification in Industrial IoT Environment

Junfeng Hao (Xihua University), Peng Chen (Xihua University), Xi Li (Xihua University)

EFAMS-DETR: Multi-scale Infrared Target Detection with Feature Aggregation and Edge Enhancement for Low-altitude Remote Sensing

Licheng Yang (Hohai University), Yanfei Ye (Hohai University)

Efficient Stem-Leaf Segmentation with a CDW Transformer: Reduced Memory and Enhanced Accuracy

Ronggeng Guo (NWAUFU), Jing Wang (NWAUFU), Yue Yang (NWAUFU), Nan Geng (NWAUFU)

Mitigating Gender Bias in Multiclass CNN Classifications Using Causal Modeling

Min Sik Byun (Singapore Institute of Technology), Wendy Hui (Singapore Institute of Technology), Wai Kwong Lau (University of Western Australia)

Detection of small UAV Objects with Density Information

Fangnan He (Soochow University), Wangshu Yao (Soochow University), Xiaofeng Jiang (Soochow University), Baile Liu (Soochow University)

MPFDAN: Multi-Perspective Feature Dynamic Adaptation Network for Domain Adaptive Object Detection

Hang Yang (Hangzhou Dianzi University), Ke Liu (Hangzhou Dianzi University), Wenchao Weng (Zhejiang University of Technology), Weichen Dai (Hangzhou Dianzi University), Andrzej Cichocki (Polish Academy of Science), Wanzeng Kong (Hangzhou Dianzi University)

HRAN-MKR: Multi-task Recommendation based on Heterogeneous Relation Attention Network

Peiyang Chen (Shenzhen Technology University), Junchao Ma (Shenzhen Technology University), Mustafa A. Al Sibahie (Department of Management and Marketing, Basrah University for Oil and Gas), Zaid Ameen Abduljabbar (Information Technology Department, Management Technical College), Vincent Omollo Nyangaresi (Department of Computer Science and Software Engineering, Jaramogi Oginga Odinga University of Science & Technology)

MSCoT: Structured Chain-of-Thought Generation for Multiple Programming Languages

Naizhu Jin (Nanjing University), Zhong Li (Nanjing University), Tian Zhang (Nanjing University), Qingkai Zeng (Nanjing University)

MPFormer: Multi-Prior Transformer for Vision-based Scene Understanding in Autonomous Driving

Biao Xu (Northeastern University), Zuotao Ning (Neusoft Reach Automotive Technology (Shenyang) Co., Ltd.), Shuai Cheng (Neusoft Reach Automotive Technology (Shenyang) Co., Ltd.), Yin Zhang (Neusoft Reach Automotive Technology (Shenyang) Co., Ltd.), Jiwei Nie (Northeastern University), Guixing Xu (Northeastern University), Hualin Chen (Northeastern University), Wei Liu (Northeastern University)

VulnTeam: A Team Collaboration Framework for LLM-based Vulnerability Detection

Jiayuan Li (Institute of Information Engineering, Chinese Academy of Sciences), Lei Cui (Quancheng Lab), Wenyan Yu (Institute of Information Engineering, Chinese Academy of Sciences), Haiqiang Fei (Institute of Information Engineering, Chinese Academy of Sciences), Feng Cheng (Institute of Information Engineering, Chinese Academy of Sciences), Hongsong Zhu (Institute of Information Engineering, Chinese Academy of Sciences)

Enhance the prior knowledge in Bayesian learning with semantic similarity for few-shot image classification

Jingyu Chen (Jiangsu Ocean University), Jiaying Wu (Jiangsu Ocean University), Can Gao (Jiangsu Ocean University), Zheng Huang (Jiangsu Ocean University), Zhaoman Zhong (Jiangsu Ocean University), Gan Quan (Jiangsu Ocean University)

What Happens in the Surroundings: A Benchmark for 360° image Captioning

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Wenhui Jiang (Jiangxi University of Finance and Economics), Tiancong Xu (Jiangxi University of Finance and Economics), Haijun Li (Jiangxi University of Finance and Economics), Zichen Li (Jiangxi University of Finance and Economics), Yuming Fang (Jiangxi University of Finance and Economics), Zhen Tang (Sany Heavy Industry CO., LTD)

Low-Light Image Enhancement based on Hierarchical Discrete Cosine Transform

Zezhao Su (Fujian Normal University), Liang Chen (Fujian Normal University), Xionghai Lan (Fujian Normal University), Yongxi Hu (Fujian Normal University), Shaoqi Luo (Fujian Normal University)

MRAFF: Multi-resolution Attention Feature Fusion Method for Multi-label Fundus Image Ocular Disease Screening

Chucheng Chen (Tsinghua University Shenzhen International Graduate School), Zheng Gong (Tsinghua University Shenzhen International Graduate School), Weihao Gao (Tsinghua University Shenzhen International Graduate School), Zhuo Deng (Tsinghua University Shenzhen International Graduate School), Lei Shao (Beijing Tongren Hospital, Capital Medical University), Li Dong (Beijing Tongren Hospital, Capital Medical University), Wenbin Wei (Beijing Tongren Hospital, Capital Medical University), Lan Ma (Tsinghua University Shenzhen International Graduate School)

Shared Latent Space by Both Languages for Non-Autoregressive Neural Machine Translation

DongNyeon Heo (Handong Global University), Heeyoul Choi (Handong Global University)

FA-YOLO: Research on Efficient Feature Selection YOLO Improved Algorithm Based on FMDS and AGMF Modules

Yukang Huo (China Agricultural University), Mingyuan Yao (China Agricultural University), Qingbin Tian (China Agricultural University), Shulong Zhang (China Agricultural University), Jiayin Zhao (China Agricultural University), Xiao Liu (China Agricultural University), Haihua Wang (China Agricultural University)

HiGATA: Hierarchy-aware Graph Attention Networks Enhanced by Topological Analysis for Hierarchical Multi-Label Text Classification

Yali Gao (Beijing University of Posts and Telecommunications), Xinhao Zheng (Beijing University of Posts and Telecommunications), Haowen Sun (Beijing University of Posts and Telecommunications)

NouMenn: Accurate Reconstructive Privacy Protection for Facial Soft Attributes via Style Code

Zihan Fang (Fujian Normal University), Biao Jin (Fujian Normal University), Changyang Zhang (Fujian Normal University)

Discrete Feature Selection via Bi-Level Optimization for Hyperparameter Tuning

Chenchen Wang (Nankai university), Jun Wang (Ludong University), Yanfei Li (Nankai University), Jin-Mao Wei (Nankai University)

CDS-GAN: Unpaired Infrared to Visible Image Translation Using Cross-domain Regional Similarity Matching

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Guanghui Li (Northwest A&F University), Xiaofei Jin (Northwest A&F University), Yuxuan Zhang (Northwest A&F University), Jianfeng Zhang (Northwest A&F University), Guoliang Hu (Northwest A&F University)

SGTrans: Signed Graph Transformer for Link Sign Prediction

Xuequan Lin (South China Normal University), Hao Cheng (South China Normal University), Junwei Cheng (South China Normal University), Chaobo He (South China Normal University), Qimai Chen (South China Normal University)

Curriculum Design for Scalable Biologically Plausible Deep Reinforcement Learning

Alexandra van den Berg (Centrum Wiskunde & Informatica), Pieter Roelfsema (Netherlands Institute for Neuroscience), Sander Bohte (Centrum Wiskunde & Informatica)

Reducing Redundancy in Small Lesion Features for Multi-Shape Stenosis Detection in Coronary X-ray Angiography

Sigeng Chen (Beijing Institute of Technology), Jingfan Fan (Beijing Institute of Technology), Jiaxin Chen (Beijing Institute of Technology), Danni Ai (Beijing Institute of Technology), Yining Wang (Chinese Academy of Medical Sciences and Peking Union Medical College), Jian Yang (Beijing Institute of Technology)

Bert and Relation Graph Attention Network for Entity Alignment

Daojun Han (Henan University), Zaichao Wang (Henan University), Juntao Zhang (Henan University), Tao Xu (Henan University)

Mitigating Q-Value Overestimation through Latent Causal Modeling in Deep Reinforcement Learning

Ruichu Cai (Guangdong University of Technology), Fuyi Lin (Guangdong University of Technology), Wei Chen (Guangdong University of Technology), Jie Qiao (Guangdong University of Technology), Haipeng Zhu (Guangdong University of Technology), Zhifeng Hao (Shantou University)

Quantile Interval Prediction of Power Load Based on DCS-Optimized TCN-BiLSTM-Attention Model

Yiyao Yu (National University of Singapore), Yifan Wang (Nanyang Technological University)

Semi-supervised Graph Neural Networks with Incremental Learning for Fraud Detection

Chen Xue (Shanghai University), Liang Jing (Shanghai University), Yu Hang (Shanghai University)

FGNet: Feature Calibration and Guidance Refinement for Camouflaged Object Detection

Qiang Yu (Shanghai Institute of Technology), Qing Zhang (Shanghai Institute of Technology), Yanjiao Shi (Shanghai Institute of Technology), Qiangqiang Zhou (Jiangxi Normal University)

SRF - A Structured Method for Enhancing Large Model Reasoning

Qin Zhu (Alibaba)

HEFNet: Hierarchical Unimodal Enhancement and Multi-modal Fusion for RGB-T Salient Object Detection

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Jiayun Wu (Shanghai Institute of Technology), Qing Zhang (Shanghai Institute of Technology), Chenxi Zhang (Shanghai Institute of Technology), Yanjiao Shi (Shanghai Institute of Technology), Qiangqiang Zhou (Jiangxi Normal University)

Semantic-Level Temporal Question Answering over Knowledge Graphs

Chenanran Kong (The Chinese university of HongKong (Shenzhen))), Jiacheng Wang (Hebei University of Technology)

MVBMR: Multi-View Breast Mass Recognition Network

Hua Yuan (South China University of Technology), Ning Zhao (South China University of Technology), Shoubin Dong (South China University of Technology), Yimao Yan (South China University of Technology)

BMCNet-A: A Bone Marrow Cell Classification Model Based on Multi-scale Structure and Attention Mechanism

Hua Yuan (South China University of Technology), Leyi Zhang (South China University of Technology), Shoubin Dong (South China University of Technology), Jian Luo (South China University of Technology)

Fake News Detection Based on Cross-Semantic Multimodal Data Fusion

Ruxin Wang (University of Jinan), Ke Ji (University of Jinan), Yuan Gao (University of Jinan), Kun Ma (University of Jinan), Chong Ma (University of Jinan), Xiaofan Zhao (People's Public Security University of China)

SynNER: Synergizing Large and Small Language Models for Few-Shot Nested NER

Hong Ming (Hefei University of Technology), Jiaoyun Yang (Hefei University of Technology), Shuo Liu (Hefei University of Technology), lili jiang (Umea University), ning an (Hefei University of Technology)

AdaptiveSleepNet: State-Space Sequence Enhanced Multi-modal Network for Sleep Staging

Zhentao Huang (Chongqing University of Posts and Telecommunications, School of Computer Science and Technology), Congming Tan (Chongqing University of Posts and Telecommunications, School of Computer Science and Technology), Xiaozhuo Bai (Chongqing University of Posts and Telecommunications, School of Life and Health Information Science and Engineering), Jing Zhang (Chongqing University of Posts and Telecommunications, School of Life and Health Information Science and Engineering), Guowei Huang (Chongqing University of Posts and Telecommunications, School of Life and Health Information Science and Engineering), Yin Tian (Chongqing University of Posts and Telecommunications, School of Computer Science and Technology)

Interpretable GAN for Alzheimer's Disease Progression Identification Based on Gene Expression and sMRI

Jiahao Gu (Chongqing University of Posts and Telecommunications), Yin Tian (Chongqing University of Posts and Telecommunications)

Probing Implicit Bias in Semi-gradient Q-learning: Visualizing the Non-equilibrium Loss Landscapes via the Fokker – Planck Equation

Shuyu Yin (Shanghai Jiao Tong University), Fei Wen (Shanghai Jiao Tong University), Peilin Liu (Shanghai Jiao Tong University), Tao Luo (Shanghai Jiao Tong University)

LLM-Enabled Style and Content Regularization for Personalized Text-to-Image Generation

Anran Yu (Shandong University), Wei Feng (Shandong University), Xiang Li (Shandong University), Lei Meng (Shandong Research Institute of Industrial Technology Jinan), Lei Wu (Shandong University Jinan), Xiangxu Meng (Shandong University), Yaochen Zhang (Inspur Technology)

A Lightweight Model for Ancient Chinese Character Image Retrieval Based on Channel Optimization and Global Modeling

JiaWang Song (HeBei University)

A Hybrid Model of Bidirectional GRU and Graph Neural Network for Multivariate Temporal Data Interpolation

Hongtao Song (Harbin Engineering University), Siao Li (Harbin Engineering University), Qilong Han (Harbin Engineering University)

IR-DED: An Adaptive Retrieval-Augmented Generation Framework Supporting Iterative Reasoning and Instruction Denoising

Puzhou Wang (Beihang University), Haixia Pan (Beihang University), Jiale Bo (China Agricultural University)

WPMnet: Time Series Forecasting via Wavelet Patch Multi-scale

botao wu (Zhejiang University), Xuelin Cheng (Zhejiang University), Haozheng Yang (Zhejiang University), Runjie Zhao (Zhejiang University), Chang You (Zhejiang University of Technology)

Retinex2Diff: Two-branch Diffusion Model for Low-Light Image Enhancement

Minghai Yang (National Engineering Research Center of Highway Maintenance Technology, Changsha University of Science & Technology), Yuxu PENG (National Engineering Research Center of Highway Maintenance Technology, Changsha University of Science & Technology)

GLOSyformer: Global-Local Synergistic Enhanced Transformer for Multivariate Time Series Forecasting

Jiafu Zhao (University of Jinan), Jing Zhang (University of Jinan, Yantai Institute of Science and Technology, Shandong Key Laboratory of Ubiquitous Intelligent Computing), Dongmei Niu (University of Jinan, Shandong Key Laboratory of Ubiquitous Intelligent Computing), Tongzheng Zhu (University of Jinan), Chenghao Zhang (University of Jinan), Junzheng Yang (Yantai Institute of Science and Technology)

TAAE: Team-Aware Attention Extraction for Generalized Agent Coordination in Multi-Agent Reinforcement Learning

Zhenfeng Su (Casia), Zhiming Zhou (Casia), Jiaosai Li (Casia), Ren Wen (Casia), Zhen Liu (Casia)

BiFMNet: A Bi-Frequency Modeling Network for Time Series Forecasting

Tongzheng Zhu (University of Jinan), Jing Zhang (University of Jinan, Yantai Institute of Science and Technology, Shandong Key Laboratory of Ubiquitous Intelligent Computing), Dongmei Niu (University of Jinan, Shandong Key Laboratory of Ubiquitous Intelligent Computing), Jiafu Zhao (University of Jinan), Chenghao Zhang (University of Jinan), Junzheng Yang (Yantai Institute of Science and Technology)

An Effective Multimodal Rumor Detection Model via Image Semantic Enhancement and Hierarchical Fusion

Peiwen Yan (Wuhan University), Kang He (Wuhan University), Bobo Li (Wuhan University), Yujie Huang (Wuhan University), Fei Li (Wuhan University), Chong Teng (Wuhan University), Donghong Ji (Wuhan University)

Dynamic Neural Field Modeling of Visual Contrast for Perceiving Incoherent Looming

Ziyan Qin (School of Mathematics and Information Science, Guangzhou University), Qining Fu (School of Mathematics and Information Science, Guangzhou University), Jigen Peng (School of Mathematics and Information Science, Guangzhou University), Shigang Yue (University of Leicester)

Enhanced Biomedical Relation Extraction with Semantic and Descriptive Knowledge

Liu YuHan (XinJiang University), He Liang (Tsinghua University, XinJiang University)

Offline Model-based Optimization with Fisher Divergence Regularization

Mingcheng Chen (Shanghai Jiao Tong University), Minkai Xu (Stanford University), Yichen Zhu (Shanghai Jiao Tong University), Haoran Zhao (Shanghai Jiao Tong University), Weinan Zhang (Shanghai Jiao Tong University), Yong Yu (Shanghai Jiao Tong University)

Multi-scale spatio-temporal cross human motion prediction based on self-attention mechanism

Chuyi Gao (University of Macau), Haidong Hu (Beijing Institute of Control Engineering), Jiucheng Xie (Nanjing University of Posts and Telecommunications)

4S-Classifier: Empowering Conservation through Semi-Supervised Learning for Rare and Endangered Species

Hongyang He (University of Warwick), Hongyang Xie (University of Warwick), guodong shen (University of Warwick), Boyang Fu (University of Warwick), Haochen You (Columbia University), Victor Sanchez (University of Warwick)

A Hidden Backdoor Attack via Formal Text Style Transfer in Language Models

Zihan Wang (University of Electronic Science and Technology of China), Hongwei Li (University of Electronic Science and Technology of China), Wenbo Jiang (University of Electronic Science and Technology of China), Rui Zhang (University of Electronic Science and Technology of China), Jaming He (University of Electronic Science and Technology of China), Hanxiao Chen (University of Electronic Science and Technology of China), Guowen Xu (University of Electronic Science and Technology of China)

BiCon: Bi-Branch Network with Contour-Enhanced Features for Class Incremental Learning

Fengcheng Zeng (Institute of Software, Chinese Academy of Sciences), Qiming Yang (Institute of Software, Chinese Academy of Sciences), Heng Shu (Institute of Software, Chinese Academy of Sciences), Linjuan Cheng (Institute of Software, Chinese Academy of Sciences), Yuquan Wu (Institute of Software, Chinese Academy of Sciences), Chenghao Hu (Institute of Acoustics, Chinese Academy of Sciences)

MAMR: Modality-Aligned Multi-modal Retrieval

Xu YangZhen (South China Normal University), Mo JiaWei (South China Normal University), Lin FangZhen (Dongguan NVT Technology Co.,Ltd), Chen ZeBiao (South China Normal University), Chen ChengFeng (South China Normal University), Liu ShouQiang (South China Normal University)

RAR: A Refined-Attitude Reasoning Framework on LLMs for Zero Shot Stance Detection

Yiming Lee (Beijing University of Posts and Telecommunications), Yangfu Zhu (Capital Normal University), Xinming Chen (Beijing University of Posts and Telecommunications), Bin Wu (Beijing University of Posts and Telecommunications)

Few-Shot Knowledge Graph Entity Typing with Enhanced Neighbor

chong Xue (GDUT), Cheng Lianglun (School of Computer Science and Technology Guangdong University of Technology)

MST-GFN: Multimodal Spatiotemporal Graph Fusion Network for Abnormal Gait Recognition Using Wearable Sensors and Skeleton Data

Linna Chen (Fujian Normal University), Liang Wang (Fujian Normal University), Jianning Wu (Fujian Normal University)

RanAT4BIE: Random Adversarial Training for Biomedical Information Extraction

Jian Chen (Hainan University), Shengyi Lv (Hainan University), Leilei Su (Hainan University)

Face Forgery Detection Attack via Hybrid Perturbation with Dual Mask

Zixiang Wu (Beijing University of Technology), Dongming Zhang (State Key Laboratory of Communication Content Cognition, People's Daily Online), Jing Zhang (Beijing University of Technology), Zijie Yang (State Key Laboratory of Communication Content Cognition, People's Daily Online)

MD-Mono: Lightweight Self-Supervised Monocular Depth Estimation Based on Multi-Scale Adaptive Detail Enhancement

Peihong Wu (Guangxi University), Mengxiao Yin (Guangxi University), Pengfei Lai (Cuqiao Sub-district Office, Wuhou District, Chengdu), Zixin Su (Guangxi University), Feng Zhan (Guangxi University), Bei Hua (Guangxi University)

FSSUWNet: Mitigating the Fragility of Pre-trained Models with Feature Enhancement for Few-Shot Semantic Segmentation in Underwater Images

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Zhuohao Li (Sun Yat-sen University), Zhicheng Huang (Sun Yat-sen University), Wenchao Liu (Sun Yat-sen University), Zhuxing Zhang (Sun Yat-sen University), Jianming Miao (Sun Yat-sen University)

Hypergraph Prediction Diffusion Transformers for Person Image Synthesis

Zhiheng Wu (University of Science & Technology of China), Ningzhi Wang (Anhui University), Huilin Deng (University of Science & Technology of China), Hanhui Zeng (South China University of Technology), Zhenyu Qi (University of Science & Technology of China), Jichen Wang (University of Science & Technology of China)

MBTFuse: A transformer-based multi-branch attention network for multi-modal image fusion

Jing Wang (Xinjiang University), Long Yu (Xinjiang University), Shengwei Tian (Xinjiang University)

Working Towards Toxic datasets for LLM Safeguarding

Liuye Guo (Nanjing University of Posts and Telecommunications), Ziyuan Wang (Nanjing University of Posts and Telecommunications), Zhipeng Wang (Nanjing University), Tieke He (Nanjing University)

LJ-DETR: LightWeight RT-DETR Algorithm with Joint Encoder for Steel Surface Defect Detection

Chenyuan Wang (Taiyuan University of Technology), Tianqi Wang (Taiyuan University of Technology), Huacheng Li (Taiyuan University of Technology), Mengyao Wang (Taiyuan University of Technology), Jingqi Xia (Taiyuan University of Technology), Xilin Liu (Taiyuan University of Technology)

Enhancing Fault Localization via Causal Measurement Features

Yunlong Li (Wuhan University), Bo Cai (Wuhan University), Hongyi Yang (Wuhan University), Chengqing Cai (Wuhan University), Yangbo Qiu (Wuhan University), Tao Chen (Wuhan University), Chen Zhang (Wuhan University)

QueryNILM: Query based Non-Intrusive Load Monitoring with Appliance Embeddings

Shijie Yang (China University of Petroleum (Beijing)), Jie Jiang (China University of Petroleum (Beijing)), Yichen Zhang (China University of Petroleum (Beijing)), Qiuqiang Kong (The Chinese University of Hong Kong), Qianwen Cao (China University of Petroleum (Beijing))

KANOptiKT: Matrix Factorization and KAN Optimized Attention for Interpretable Knowledge Tracing

Wenjie Chen (Hubei University), Yan Zhang (Hubei University), Kui Xiao (Hubei University), Miao Zhang (Hubei University), Shihui Wang (Hubei University), Zhifei Li (Hubei University)

TriAnomalyNet: A Microservice Anomaly Detection Model Based on Multi-Stream Encoders

Zhuang Lu (Institute of Information Engineering, Chinese Academy of Sciences), Yulei Wu (Faculty of Engineering, University of Bristol), He Kong (Institute of Information Engineering, Chinese Academy of Sciences), Shuai Ding (Institute of Information Engineering, Chinese Academy of Sciences), Shijun Zhao (Institute of Information Engineering, Chinese Academy of Sciences), Chunjing Han (Institute of Information Engineering, Chinese Academy of Sciences)

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Neural Network Interpretability and Incremental Correction Based on Conceptual Spatial Relationships

Lijun Gao (Shenyang Aerospace University), Luli Zhu (Shenyang Aerospace University)

ARCM: A Representation Classification Method for Tabular Data Based on Graph Embedding Rules

Guohui Ding (Shenyang Aerospace University), Yongqiang Ren (Shenyang Aerospace University), Yueyi Zhu (Shenyang Aerospace University)

A Real-time Vein Puncture Segmentation Framework Based on YOLO and DEVA

Qiubo Huang (Donghua University), Wupeng Zhao (Donghua University), Shiwen Tang (Donghua University), Dehua Chen (Donghua University)

Multi-modal Multi-layer Graph Neural Network for early diagnosis of Alzheimer's Disease

Yang Chen (Huazhong Agricultural University), Ke Xie (Huazhong Agricultural University), Kun Cheng (Huazhong Agricultural University), Hui Peng (Huazhong Agricultural University), Shanmei Liu (Huazhong Agricultural University)

Adaptive Equilibrium Awareness Learning for Change Caption

Lilin Cai (Qilu University of Technology (Shandong Academy of Sciences), Shandong Artificial Intelligence Institute), Guokai Yang (Qilu University of Technology (Shandong Academy of Sciences), Shandong Artificial Intelligence Institute), Ningyu Wu (Qilu University of Technology (Shandong Academy of Sciences), Shandong Artificial Intelligence Institute)

DRL-BPSD: Deep Reinforcement Learning-Enhanced Blockchain Phishing Scam Detection Method

Dezhao Kong (Beijing University of Posts and Telecommunications), Fan Zhang (Beijing University of Posts and Telecommunications), Chang Liu (Beijing University of Posts and Telecommunications), Feng Qi (Beijing University of Posts and Telecommunications), Yan Zhang (State Grid Beijing Electric Power Company), Yu Jiang (State Grid Jiangsu Electric Power Co., Ltd), Xuwen Liu (State Grid Jiangsu Electric Power Co., Ltd), Yingchun Zheng (State Grid Jiangsu Electric Power Co., Ltd)

NCMI: A Framework for Missing Modality Generation in Multi-modal Recommendation

Ningyu Wu (Qilu University of Technology (Shandong Academy of Sciences), Shandong Artificial Intelligence Institute), Lilin Cai (Qilu University of Technology (Shandong Academy of Sciences), Shandong Artificial Intelligence Institute)

DMP-DETR: Dilation Multi-Scale and Partial Channel Gated Fusion Attention for Steel Defect Detection

Shuangquan Zhao (Hubei University of Technology), Cong Wu (Hubei University of Technology), Yu Feng (Hubei University of Technology)

High-Frequency Information Assisted Superpixel Attention for Lightweight Image Super-Resolution

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Sijia Fu (Hebei University), Qingxuan Shi (Hebei University), Fang Yang (Hebei University), Fangxin Hou (Hebei University), Junhui Li (Hebei University)

SAT: A Sparse Attention Transformer-based Approach for Predicting Market Risk Factors Using Stock Time Series Data

Yingzi Wang (Southern University of Science and Technology), Cong Liu (Tsinghua University), Kaiyuan Liu (Harbin Institute of Technology (Shenzhen)), Danny D. Sun (PengCheng Laboratory)

BATR-FST: Bi-Level Adaptive Token Refinement for Few-Shot Transformers

MOHAMMED AL-HABIB (Central South University), Zuping Zhang (Central South University), Abdulrahman Noman (Central South University)

Global and Local Attention for Single Image Defocus Deblurring

Shenggui Ling (Sichuan University of Science and Engineering), Hongmin Zhan (Sichuan University of Science and Engineering), He Zhao (Sichuan University of Science and Engineering), Rui Shi (Sichuan University of Science and Engineering)

Cellular Network Traffic Prediction in Data-Scarce Environments: A Cross-Domain Transfer Learning Mechanism

Ke Liu (Beijing University of Posts and Telecommunications), Yin Lin Ren (Beijing University of Posts and Telecommunications), Shao Yong Guo (Beijing University of Posts and Telecommunications), Shuang Wu (State Grid Ningxia Electric Power Co., Ltd. Information and Communication Company), Feng Qi (Beijing University of Posts and Telecommunications)

Message Queue Throughput Time-Series Prediction by Fusing GANformer and TCN-Attention

shen dong (China Mobile (Suzhou)Software Technology Co., Ltd), xu chu (China Mobile (Suzhou)Software Technology Co., Ltd), Lv Xiangzhao (China Mobile Internet Co., Ltd), hu zongtang (China Mobile (Suzhou)Software Technology Co., Ltd)

FLIP: Adaptive Comparison Method Selection for Efficient Preference-Based Reinforcement Learning

Ziang Liu (School of Computer Science and Technology, East China Normal University), Xingjiao Wu (East China Normal University), Hongxin Chen (School of Computer Science and Technology, East China Normal University), Luwei Xiao (School of Computer Science and Technology, East China Normal University), Jing Yang (School of Computer Science and Technology, East China Normal University)

Teach Structure Features to Cooperate with Node Embeddings in Link Prediction

Ziwei Li (UCAS), Feifei Dai (UCAS), Yucan Zhou (UCAS), Haihui Fan (UCAS), Xiaoyan Gu (UCAS), Dan Meng (UCAS)

Improving Communication-Efficient and Byzantine-Robust Distributed Learning with Local Adaptive Momentum

Yanghao Li (sichuan university), Changxin Liu (East China University of Science and Technology), Yuhao Yi (Sichuan university)

FAformer: Exploring Frequency and Attention in Transformers for Long-Term Time Series Forecasting

Jiawei Gu (Shandong Univeristy), Dingxin Cheng (Shandong Univeristy), Qiang Guo (Shandong University of Finance and Economics), Bin Jiang (Shandong Univeristy), Wenyu Wang (Shandong Univeristy), Meixia Qu (Shandong Univeristy)

Enhancing Multi-Object Tracking with Spatiotemporal Graph Convolution and Trajectory Recovery

Lijun Gao (Shenyang Aerospace University), Zhaoyang Qiu (Shenyang Aerospace University)

TabMeta: A Novel Framework for Chart Generation Using Metadata and Enhanced Column Attention

Yuxing Tan (Xinjiang University), Liang He (Tsinghua University), Xiaozhe Qi (Xinjiang University), Zhida Song (Xinjiang University), Tengfei Feng (Xinjiang University)

Norm-Based Generalization Bounds can be Arbitrarily Loose for Equivariant Tensor Networks

Wenliang Liu (Zhejiang University), Guanding Yu (Zhejiang University)

MRLF: Multimodal Representation Learning for Tabular Data Classification

Guohui Ding (Shenyang Areospace University), Yongqiang Ren (Shenyang Areospace University), Zhonghua Li (Shenyang Areospace University)

DyFusion-YOLO: An Enhanced Model for Small Object Detection in Aerial Imagery

Xinyu Wang (Qufu Normal University), Yude Wang (Qufu Normal University), Teng Liu (Qufu Normal University), Haoyu Guo (Qufu Normal University), Yuanpei Wang (Qufu Normal University), and Fei Song (Qufu Normal University)

LaneGS:Novel View Synthesis for Lane Change Scenarios in Autonomous Driving

Youtao Tang (National Elite Institute of Engineering, Chongqing University, China), Ji Liu (College of Computer Science, Chongqing University, Chongqing, China), Chengliang Wang (College of Computer Science, Chongqing University, Chongqing, China), Tian Jiang (AI Lab, Chongqing Changan Automobile Co., Ltd., Chongqing 401120, China), Yonggang Luo (AI Lab, Chongqing Changan Automobile Co., Ltd., Chongqing 401120, China)

SBR-GS:Enhancing Scene Editability based on Static Background Reconstruction using Gaussian Splatting

Jingyi Wu (National Elite Institute of Engineering, Chongqing University), Chengliang Wang (College of Computer Science, Chongqing University), Ji Liu (College of Computer Science, Chongqing University), Tian Jiang (AI Lab, Chongqing Changan Automobile Co., Ltd., Chongqing 401120), Yonggang Luo (AI Lab, Chongqing Changan Automobile Co., Ltd., Chongqing 401120)

Learning Implicit Relations for Collaborative Filtering via Optimal Transport

Jingwen Wang (China Telecom Cloud Computing Corporation), Chuanguang Huang (China Telecom Cloud Computing Corporation), Jiabi Zheng (Guangdong Polytechnic Normal University), Yuguang Yan (Guangdong University of Technology)

Multimodal Sentiment Analysis Based on Heterogeneous Contrastive Representation Learning with Prior Knowledge Enhancement

Lichao Cui (Shandong University of Technology), Shaojie Liu (Shandong University of Technology), Lei Wang (Shandong University of Technology), Shanliang Yang (Shandong University of Technology)

CRS3D: Consistency Regularization for Sparsely-Supervised 3D Object Detection

Binghui Zeng (Jimei University), Zongyue Wang (Jimei University), Zhaoliang Liu (Jimei University), Yidong Chen (Xiamen University), Weiquan Liu (Jimei University), Wentao Yang (Jimei University)

UML-MVSNet: Uncertainty-guided Multi-task Learning for Multi-view Stereo

Yuanliang Lu (Xi'an Jiaotong University), Qian Zhang (Xi'an Jiaotong University), Jianji Wang (Xi'an Jiaotong University)

FLinear: A Lightweight Model for Multivariate Time Series Forecasting with Multi-feature Decomposition

Liwei Dai (Xinjiang University), Jiong Yu (Xinjiang University)

Towards Efficient Pruning and Multi-Scale Feature Transformations to Uncover Medical Diseases

Omar bilal (Central South University), Saif Ur Rehman Khan (Central South University), Sajib Mistry (Curtin University), Novarun Deb (University of Calgary), Mufti Mahmud (King Fahd University of Petroleum and Minerals), Monowar Bhuyan (Umeå University)

KDLight: A Lightweight Knowledge Distillation Framework for Medical Image Classification

Saif Ur Rehman Khan (Central South University), Omar Bilal (Central South University), Sajib Mistry (Curtin University), Novarun Deb (University of Calgary), Mufti Mahmud (King Fahd University of Petroleum and Minerals), Monowar Bhuyan (Umeå University)

FedSA: A Novel Heterogeneous Federated Learning Method Combining Structural Optimization and Client Aggregation

Tao Yang (Zhejiang Gongshang University), Xuwei Fan (Zhejiang Gongshang University), Bailin Yang (Zhejiang Gongshang University)

Dual-domain Collaboration Learning Network for Camouflaged Object Detection

Jingming Wang (Shanghai Institute of Technology), Qing Zhang (Shanghai Institute of Technology), Xinyi Zhao (Shanghai Institute of Technology), Yanjiao Shi (Shanghai Institute of Technology), Qiangqiang Zhou (Jiangxi Normal University)

Cloud-Edge-End Collaborative Dependent Task Offloading Based on Meta Deep Reinforcement Learning

Yongtao Huang (East China Normal University), Jiarong Zhu (Northeastern University), BinBin Huang (East China Normal University)

DPCAI: Image Composition via Diffusion Prior and Compound Attention Injection

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wentao yang (East China Normal University), lei chen (East China Normal University)

Adaptive Fine-tuning with Language Models in Subject Education Tutoring

Miao Zhang (Hubei University), Hui Chen (Hubei University)

A Real-Time Multi-Task Learning Framework for Ear Recognition and Landmark Localization with Integrated Gradient Architecture

Taiyu Jin (Hangzhou Normal University), Jian Zhang (Hangzhou Normal University), Xiaoyan Sun (Hangzhou Normal University), Zhenming Yuan (Hangzhou Normal University)

AGDAformer: Agent-Guidance Dual Attention Transformer for Climate-Aware Crop Yield Prediction

Yi Zhongyan (Xinjiang University), Fang Zhihua (Xinjiang University), Xu Ruifeng (Xinjiang University), Wang Jintai (Xinjiang Hengfeng Modern Agriculture Polytron Technologies Co., Ltd.), He Liang (Tsinghua University)

Data Valuation Method Based on Federated Learning and Shapley Value

Yi Tan (Xinjiang University), Jintai Wang (Xinjiang Hengfeng Modern Agriculture Polytron Technologies Co., Ltd.), Liang He (Tsinghua University)

PL-SDA-Net: Unsupervised Road Detection Using Superpixels Enhanced RGB-Pseudo LiDAR Fusion

Baihan Yang (Shanghai Jiaotong University), Lingkun Luo (Shanghai Jiaotong University), Shiqiang Hu (Shanghai Jiaotong University)

Deep Quantization Retrieval of Audio Fingerprints Based on Double Contrast Learning

Weize Yue (Xinjiang University), Liang He (Department of Electronic Engineering Tsinghua University)

AttentionDefense: Leveraging System Prompt Attention for Explainable Defense Against Novel Jailbreaks

Charlotte Siska (Microsoft), Anush Sankaran (Microsoft)

In Sensor Real Time Learning for Continuous Glucose Monitoring

Anna Sabatini (Università Campus Bio-Medico di Roma), Francesco Sacconi (Università di Parma), Luca Vollero (Università Campus Bio-Medico di Roma), Danilo Pau (STMicroelectronics)

Spatial-Enhanced Temporal Graph Networks for Credit Risk Prediction to Cold-Start Users

Yujia Zhang (Zhejiang University), Yunjun Gao (Zhejiang University)

Multi-scale Weight-residual Transformer for Uni- and Multi-modal Representation Learning

Dingxin Cheng (Shandong University), Jiawei Gu (Shandong University), Kang Xie (Key Lab of information Network Security Ministry of Public Security), Mengyue Zhang (The 54th Research Institute of China Electronics Technology Group Corporation), Gang Wang (The 54th Research Institute of China Electronics Technology Group Corporation), Bin Jiang (Shandong University)

Causality-Guided Policy Optimization in Reinforcement Learning

Lishan Yang (University of Science and Technology of China), Qiuju Chen (University of Science and Technology of China), Lihua Liu (National University of Defence Technology), Yibin Zhan (JD Explore Academy)

Bridging the Language Gap: Enhancing Multilingual Prompt-Based Code Generation in LLMs via Zero-Shot Cross-Lingual Transfer

Mingda Li (University of Texas at Austin), Abhijit Mishra (University of Texas at Austin), Utkarsh Mujumdar (University of Texas at Austin)

Digital Twin-Based Methodology for Predictive Monitoring of Photovoltaic Systems: Integration of IoT, BIM, and GIS

Mario Casillo (University of Salerno), Liliana Cecere (University of Salerno), Francesco Colace (University of Salerno), Angelo Lorusso (University of Salerno), Domenico Santaniello (University of Salerno), Carmine Valentino (University of Salerno)

CCS-GAD: A Collaborative Contrastive Self-supervised Learning Model for Graph Anomaly Detection

Rui Cao (Jilin University), Shijie Xue (Jilin University), Qi Wang (Jilin University), He Kong (Jilin University), Runliang Niu (Jilin University), Qianli Xing (Jilin University), Deyang Zhang (Jilin University)

NR-DETR: A Lightweight Real-Time Fabric Defect Detection Model with Multi-Scale Enhancement

Huijuan Hao (Qilu University of Technology (Shandong Academy of Sciences)), Lei Xu (Qilu University of Technology (Shandong Academy of Sciences)), Conghui Gao (Qilu University of Technology (Shandong Academy of Sciences)), Wenpeng Wang (Qilu University of Technology (Shandong Academy of Sciences)), Lijun Wen (Qilu University of Technology (Shandong Academy of Sciences)), Can Li (Qilu University of Technology (Shandong Academy of Sciences)), Sijian Zhu (Qilu University of Technology (Shandong Academy of Sciences))

Dual-Spectral Neural Operator for Solving Partial Differential Equations

Jing Xiao (National university of defense technology), Xinhai Chen (National university of defense technology), Rui Xia (National university of defense technology), Jie Liu (National university of defense technology)

Pooling functions for extracting shift-invariant features in artificial feedforward neural networks

Hubert Cecotti (California State University, Fresno), Leon Kantikov (California State University, Fresno)

RSTA: A Recurrent Scene Topic-aware Model for Multi-scene Endoscopic Report Generation

Xinpan Yuan (Hunan University of Technology), JunHua Kuang (hunan university of technology), Liujie Hua (Hunan University of Technology), Guihu Zhao (Xiangya Hospital, Central South

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University), Changhong Zhang (Zhuzhou People's Hospital), Jiabao Li (Hunan University of Technology)

The lane detection algorithm for row classification based on dynamic shape perception and feature alignment

Wang Hong (South-Central Minzu University), Wang Wendi (South-Central Minzu University), Ren Kai (South-central Minzu University), Tian Shasha (South-Central Minzu University), Tie Jun (South-central Minzu University)

Multi-Scale Node Neighborhood Aggregation Via Graph Coarsening and Transformer

Mohammadreza Ghanbari (University of Melbourne), Saeed Asadi Bagloee (University of Melbourne), Jianzhong Qi (University of Melbourne), Majid Sarvi (University of Melbourne)

Spatio-Temporal Prediction of Two-Phase Flow in Heterogeneous Reservoirs Using Deep Neural Networks

Weifeng Chen (National university of defense technology), Xinhai Chen (National university of defense technology), Qisong Xiao (National university of defense technology), Haijian Yang (Hunan University), Jiali Tu (Hunan University), Jie Liu (National university of defense technology)

Cross-Asset Risk Management: Integrating LLMs for Real-Time Monitoring of Equity, Fixed Income, and Currency Markets

Jie Yang (The Chinese University of Hong Kong), Yiqiu Tang (Columbia University), Yongjie Li (University of Utah), Lihua Zhang (University of Utah), Haoran Zhang (Wiley University)

Multi-Object Pedestrian Tracking Based on YOLO-RED and Hybrid-SORT

Kai Wang (University of Science and Technology of China), Jian Wang (University of Science and Technology of China), Huawei Liang (Hefei Institutes of Physical Science)

Dynamic Hedging Strategies in Derivatives Markets with LLM-Driven Sentiment and News Analytics

Jie Yang (The Chinese University of Hong Kong), Yiqiu Tang (Columbia University), Yongjie Li (University of Utah), Lihua Zhang (University of Utah), Haoran Zhang (Wiley University)

Similarity-based Prompt Optimization for Distilling Factual Knowledge from Language Models

Na Li (University of Shanghai for Science and Technology), Haoran Liu (University of Shanghai for Science and Technology), Dunlu Peng (University of Shanghai for Science and Technology), Zied Bouraoui (CRIL Univ-Artois & CNRS)

DF-Net: A PM10 Concentration Prediction Network Based on Meteorological Factors

Yongsheng Wang (Inner Mongolia University of Technology), Guolin Zhang (Inner Mongolia University of Technology), Shiyi Tan (Inner Mongolia University of Technology), Delong Zhang (Meteorological Data Center of Inner Mongolia Autonomous Region), Haotian Chen (Dalian University of Technology)

An Improved CenterNet2 Model for Long-Arm Engineering Vehicle Object Detection

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Neural Architecture Search-Based Meta-Reinforcement Learning in Robotic Simulation Environments

Guo Jun (Dalian University of Technology)

Long-term Spatio-Temporal Forecasting using Spectral Graph Neural Networks

Xiang Li (Shan Dong University), Yanping Zheng (Renmin University of China), Zhewei Wei (Renmin University of China), Ye Yuan (Beijing Institute of Technology)

Style xLSTM for Facial Age Editing

Mingyuan Li (Hebei University of Technology), Songcheng Xu (Northeastern University), Renda Han (Hainan University), Ye Zhu (Hebei University of Technology), Yingchun Guo (Hebei University of Technology), Zeyu Zhang (The Australian National University, Canberra ACT 2601), Zeming Tian (Wuhan University)

Is Complete Labeling Necessary? An Active Learning Framework for Longitudinal Medical Imaging

Siteng Ma (University College Dublin), Honghui Du (University College Dublin), Prateek Mathur (University College Dublin), Brendan S. Kelly (University College Dublin), Ronan P. Killeen (University College Dublin), Aonghus Lawlor (University College Dublin), Ruihai Dong (University College Dublin)

Global Periodic Spatiotemporal Awareness for X-Shaped Anterior Visual Pathway Segmentation

JinHui Liu (Chongqing Normal University), HaoDong XU (Chongqing Normal University), ShaoGuo Cui (Chongqing Normal University)

MBANet: A Multi-Branch Deep Learning Model for Giant Panda Age Estimation

XiuWei Yang (Sichuan Normal University School of Computer Science), Han Su (Sichuan Normal University School of Computer Science), Rui Xiong (Sichuan Normal University School of Computer Science), Mengnan He (Chengdu Research Base of Giant Panda Breeding), Yimin Han (Chengdu Research Base of Giant Panda Breeding), Gai Luo (Chengdu Research Base of Giant Panda Breeding), Pengcheng Wu (Chengdu Research Base of Giant Panda Breeding), Qingyue Min (Chengdu Research Base of Giant Panda Breeding), Rong Hou (Chengdu Research Base of Giant Panda Breeding), Peng Chen (Chengdu Research Base of Giant Panda Breeding)

A Second-Order Tensor Network Model for Understanding Time-varying QoS Data

Zhentaο Peng (Dongguan University of Technology), Ke Yu (Chongqing University), Yan Fang (Kennesaw State University), Weiling Li (Dongguan University of Technology)

A Simplified Synthetic Attention Transformer for Single Image Deraining

Minghui Lu (Inner Mongolia University), Qiyu Jin (Inner Mongolia University), Jie Yang (Shanghai Jiao Tong University)

Corruption-Agnostic Sign Language Translation

Honghao Fu (Institute of Artificial Intelligence, Xiamen University, China), Yidong Chen (School of Informatics, Xiamen University, China)

MOKD-EEG: Multi-task Learning-based Online Knowledge Distillation for Cross-task EEG Classification

Qiaoli Zhou (School of Computer Science, Shenyang Aerospace University, School of Electrical Engineering, Shenyang University of Technology), Xiyuan Ye (School of Computer Science, Shenyang Aerospace University), Shurui Li (School of Computer Science, Shenyang Aerospace University), Yi Zhao (School of Computer Science, Shenyang Aerospace University), Qiang Du (School of Electrical Engineering, Shenyang University of Technology), Li Ke (School of Electrical Engineering, Shenyang University of Technology)

Manipulating the Bounding Box: Multimodal Controlled Backdoor Attacks on 3D Visual Grounding Models

Xiayue Zhang (Huazhong University of Science and Technology), Huashuo Lei (Harbin Institute of Technology), Daizong Liu (Peking University), Xiaoye Qu (Huazhong University of Science and Technology), Xiang Fang (Nanyang Technological University), Runwei Guan (University of Liverpool), Keyan Jin (University of Granada)

Semantic Data Augmentation Enhanced Invariant Risk Minimization for Medical Image Domain Generalization

Yaoyao Zhu (University of Chinese Academy of Sciences), Xiuding Cai (University of Chinese Academy of Sciences), Yingkai Wang (University of Chinese Academy of Sciences), Yu Yao (University of Chinese Academy of Sciences), Xu Luo (University of Chinese Academy of Sciences), Zhongliang Fu (University of Chinese Academy of Sciences)

MonoAttack: A Strong Attack Framework with Depth-Migration and Attribute-Tampering for Monocular 3D Object Detection

Xiayue Zhang (Huazhong University of Science and Technology), Huashuo Lei (Harbin Institute of Technology), Daizong Liu (Peking University), Xiaoye Qu (Huazhong University of Science and Technology), Xiang Fang (Nanyang Technological University), Runwei Guan (University of Liverpool), Keyan Jin (University of Granada)

S-DiffAdv: Enhancing Unrestricted Adversarial Attack via Sparse Diffusion

Shijie Zhao (Southwest University of Science and Technology), Anjie Peng (Southwest University of Science and Technology), Shujian Liao (Southwest University of Science and Technology), Wanli Dong (Southwest University of Science and Technology), Yong Peng (Southwest University of Science and Technology)

SRVul: A High-Quality Self-Restrained Vulnerable Code Dataset for Vulnerability Detection

Hongjun Huang (Shanghai Jiao Tong University), Futai Zou (Shanghai Jiao Tong University), Jiaping Gui (Shanghai Jiao Tong University), Tianming Zheng (Shanghai Jiao Tong University), Yue Wu (Shanghai Jiao Tong University)

TRRD: Enabling Accurate and Reliable Retrieval of Time-sensitive Information

junyao zhou (Hebei University of Engineering), yushan tan (Academy of Military Science of the People's Liberation Army), zibo yi (Academy of Military Science of the People's Liberation Army), xian zhou (Academy of Military Science of the People's Liberation Army), ruiqing du (School of Information and Electrical Engineering, Hebei University of Engineering,), wenpeng hu (Academy of Military Science of the People's Liberation Army)

H2C-Scheduler: An Efficient and Scalable Job Scheduling Method for Hybrid Heterogeneous AI Computing Clusters

Huagang Wen (Qilu University of Technology (Shandong Academy of Sciences)), Chunxiao Wang (Shandong Computer Science Center (National Supercomputer Center in Jinan)), Jian Zhang (Shandong Computer Science Center (National Supercomputer Center in Jinan)), Zhigang Zhao (Shandong Computer Science Center (National Supercomputer Center in Jinan)), Qiuyue Liu (Qilu University of Technology (Shandong Academy of Sciences))

LSTPointGMN: Lightweight Spatial-Temporal Graph Mamba Network for Gesture Recognition Using Millimeter-Wave Radar

Jun Zhang (Fudan University), Chunyu Wang (Fudan University), Zhenpeng Li (Fudan University), Lihua Zhang (Fudan University)

CFCPalsy: Facial Image Synthesis with Cross-Fusion Cycle Diffusion Model for Facial Paralysis Individuals

Weixiang Gao (Shandong University), Yating Zhang (Shandong University), Yifan Xia (Shandong University)

From Code Changes to Performance Variations: A Predictive Approach for Microbenchmark Prioritization

Long Zhang (Hangzhou Dianzi University), Jie Chen (Hangzhou Dianzi University), Dongjin Yu (Hangzhou Dianzi University), Yingling Li (Southwest Minzu University), Hengyu Chen (Hangzhou Dianzi University)

Explaining Deepfake Detectors to Enhance Generalization via Game-Theoretic Approaches

Weidong Zhao (Sichuan Normal University), Rongzuo Guo (Sichuan Normal University), Dixin Wang (Sichuan Normal University), Jiewei Li (Sichuan Normal University), Tianyuan Zhao (Sichuan Normal University)

Robust Signed Distance Fields for Articulated Human Body Reconstruction via Multiresolution Hash Encoding

Minzhe Tang (Academy for Engineering and Technology, Fudan University), Dongliang Kou (Fudan University), Mingcheng Li (Academy for Engineering and Technology, Fudan University), Lihua Zhang (Fudan University)

Multi-channel Cross-modal Fusion with Contrastive Learning for Multimodal Sentiment Analysis

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Ding Zhang (School of Cyber Security and Computer, Hebei University), Shaokang Zhang (School of Cyber Security and Computer, Hebei University), Ning Ran (College of Electronic & Information Engineering, Hebei University), Liang Wang (School of Cyber Security and Computer, Hebei University)

PTsFusion: Multimodal Medical Image Fusion Based on Parallel Transformers with Global-Local Feature Interaction

qiang han (North University of China), Xiwen Wang (Chengcheng Middle School), Lifang Wang (North University of China), Wei Guo (North University of China), Kaixin Jin (North University of China), Xiaoqing Yu (North University of China)

SCM-DTI: a substructure-oriented method based on a codebook mechanism to improve drug–target interaction prediction

Ping Huang (Wuhan University of Technology), Jing Peng (Wuhan University of Technology), YangYi Lu (Wuhan University of Technology), Yifeng Zhu (Wuhan University of Technology)

Pseudo Triplet Guided Few-shot Composed Image Retrieval

Bohan Hou (Shandong University), Haoqiang Lin (Shandong University), Haokun Wen (Harbin Institute of Technology (Shenzhen), City University of Hong Kong), Meng Liu (Shandong Jianzhu University), Mingzhu Xu (Shandong University), Xuemeng Song (City University of Hong Kong)

UTD-SCnet: Underwater Target Detection in Sonar Image based on Spatial and Channel Attention Net

Zhipeng Zhang (School of Computer Science and Technology, Hainan University), Zheng Ding (School of Computer Science and Technology, Hainan University), Zhichao Tang (School of Computer Science and Technology, Hainan University), Kaitao Wu (School of Computer Science and Technology, Hainan University), Lei Sheng (School of Computer Science and Technology, Hainan University), Xiangdang Huang (School of Computer Science and Technology, Hainan University)

BiTST: Transformer for Time Series Forecasting with Bi-level Routing Attention along a Single Dimension

Changlin Ou (South China University of Technology), Bo Li (South China University of Technology), Man Huang (Guangzhou University)

Dynamic Polyhedral Heterogeneous Graph Learning for Stock Correlation Analysis

Weihong Wang (Zhejiang University of Technology), Qiyun You (Zhejiang University of Technology), Cheng Zhao (Zhejiang University of Technology)

3D Joint-Aware Features in GRU-based Kinematic Chain for Human Mesh Recovery

Jingchen Zhang (Jiangnan University), Yang Hua (Jiangnan University), Wenjie Zhang (Jiangnan University), Xiaoning Song (Jiangnan University)

CourseLRec: Leveraging Large Language Models for Personalized Course Recommendations

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Leveraging Interaction Uncertainty for Enhanced Navigation Performance in Dynamic Crowds

Tao Zou (Central South University), Haonan Yang (Central South University), Ping Zhong (Central South University)

ESM2-Driven Protein-Protein Interaction Prediction with Global-Local Graph Topology Learning

Jingwen Liu (Nanjing University of Science and Technology), Tong Zhang (Nanjing University of Science and Technology)

NILMixer: A Novel Multi-Seq2Seq Model for Load Disaggregation in Long-Term Windows

Houyi Zhu (ChongQing Normal University), Chao Wang (ChongQing Normal University), Bin Wang (ChongQing Normal University), Zonghui Wang (ChongQing Normal University), Youlong Zhang (ChongQing Normal University), Jin Keyan (University of Granada)

A stereo-wise masking strategy for weakly supervised point cloud semantic segmentation

Ziyu Huang (Jimei University), Guoqing Jiang (Jimei University), Xiaorong Zhang (Jimei University), Yundong Wu (Jimei University), Jinhe Su (Jimei University)

UFormer: A U-Net Framework for Long-Term Time Series Forecasting

yu li (Hubei University), Tao Liu (Hubei University)

LightLLIE: Lightweight Low-Light Image Enhancement via Dual Attention and Re-parameterization

Xi Wang (University of Chinese Academy of Sciences), Quan Zheng (Institute of Software Chinese Academy of Sciences)

DPEE: A Dual-Prompt Framework for Overlapping and Nested Event Extraction

Xuqiang Yuan (Laboratory of Data Science and Information Studies, Beijing Information Science and Technology University), Xuhong Liu (Laboratory of Data Science and Information Studies, Beijing Information Science and Technology University), Ning Li (Laboratory of Data Science and Information Studies, Beijing Information Science and Technology University), Xiulei Liu (Laboratory of Data Science and Information Studies, Beijing Information Science and Technology University)

DRGait: Dynamism Reinforced Gait Encoder for Identifying Scoliosis in a Noninvasive Way

Soma Chakraborty (Indian Institute of Technology Mandi), Aditya Nigam (Indian Institute of Technology Mandi)

FedCSG - A Novel Federated Continual Graph Learning Framework for Resource-limited Devices

Hanyue Xu (School of AI and Advanced Computing, Xi'an Jiaotong-Liverpool University), Kah Phooi Seng (School of Science, Technology and Engineering, University of the Sunshine Coast), Jieli Chen

(School of AI and Advanced Computing, Xi'an Jiaotong-Liverpool University), Li Minn Ang (School of Science, Technology and Engineering, University of the Sunshine Coast), Smith Jeremy (Department of Electrical Engineering and Electronics, University of Liverpool)

Enhanced YOLOv7 for UAV Platforms: Achieving High Precision with Low Resource Utilization

Chenchen Sui (Qilu University of Technology (Shandong Academy of Sciences), Shandong Fundamental Research Center for Computer Science), Jiancheng Zhang (Qilu University of Technology (Shandong Academy of Sciences), Shandong Fundamental Research Center for Computer Science, Shandong Zhengzhong Information Technology Co., LTD), Liuhui Jin (Qilu University of Technology (Shandong Academy of Sciences), Shandong Fundamental Research Center for Computer Science), Quanli Lu (Qilu University of Technology (Shandong Academy of Sciences), Shandong Fundamental Research Center for Computer Science, Shandong Zhengzhong Information Technology Co., LTD), Jiyang Chen (Institute of Marine Science and Technology, Shandong University, Shandong Zhengzhong Information Technology Co., LTD)

CLIP-Enhanced Linear Alignment for AI-Generated Image Detection Using Latent Cross-Attention

Yanxi Wang (Dalian University of Technology), Tao Sun (Dalian University of Technology)

Behavior-prompted Learning with Tree Attention for Advanced Facial Action Unit Detection

Hao Zou (Zhejiang University), Zheng Gao (Zhejiang University), Yante Li (University of Oulu), Ce Li (Moore Threads Technology Co. Ltd.), Xiaobai Li (Zhejiang University)

ReNIE: Semantic Retrieval and Negative Instances Augmented Information Extraction

HaoRan Tu (Guangzhou University), Shuo Yang (Guangzhou University), JianMan Tan (Guangzhou University)

RSNet: Reflectance-Guided and Semantic-Aware Network for Low-light Image Enhancement

Lijun Dai (Academy for Engineering and Technology, Fudan University, Shanghai, China), Lizhe Qi (Academy for Engineering and Technology, Fudan University, Shanghai, China), Yunquan Sun (Academy for Engineering and Technology, Fudan University, Shanghai, China)

Ind-MSA: Bridging the Linguistic Gap for Inductive Multilingual Sentiment Analysis with Graph Neural Networks

El Mahdi Mercha (ENSIAS), Houda Benbrahim (ENSIAS), Mohammed Erradi (ENSIAS)

TS-Diff: Two-Stage Diffusion Model for Low-Light RAW Image Enhancement

Yi Li (Zhejiang University), Zhiyuan Zhang (Singapore Management University), Jiangnan Xia (Zhejiang University), Jianghan Cheng (Zhejiang University), Qilong Wu (Zhejiang University), Junwei Li (Zhejiang University), Yibin Tian (Shenzhen University), Hui Kong (University of Macau)

An Exposure-Aware Self-Attention Method for Enhanced Self-Supervised All-Day Depth Estimation

Jingrui Dou (Changsha University of Science & Technology), Peng Feng (Changsha University of Science & Technology), Jiannan Teng (Changsha University of Science & Technology), Zijin Luo

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(Changsha University of Science & Technology), Lu Hu (Changsha University of Science & Technology)

Fed-CLIDS: Network intrusion detection system based on federated meta-continuous learning

Yang Shumian (Qilu University of Technology (Shandong Academy of Sciences), Shandong Computer Science Center (National Supercomputer Center in Jinan),), Lou Guoqing (Qilu University of Technology (Shandong Academy of Sciences), Shandong Fundamental Research Center for Computer Science), Xu Lijuan (Qilu University of Technology (Shandong Academy of Sciences), Shandong Computer Science Center (National Supercomputer Center in Jinan),), Zhao Dawei (Qilu University of Technology (Shandong Academy of Sciences), Shandong Computer Science Center (National Supercomputer Center in Jinan),)

PEFT Innovations in Text-to-SQL: Adapter and Prefix Tuning Methods with Structural Awareness

Zhifeng Hao (Guangdong University of Technology), Yuyuan Cai (Guangdong University of Technology), Shaobin Shi (Guangdong University of Technology), Boyan Xu (Guangdong University of Technology), Ruichu Cai (Guangdong University of Technology)

Beyond Similarity: Aligning Retrieval with Generation for Enhanced Image Captioning

Gengqi Yang (Institute of Information Engineering, Chinese Academy of Sciences), Dayan Wu (Institute of Information Engineering, Chinese Academy of Sciences), Jinyang An (Institute of Information Engineering, Chinese Academy of Sciences), Shupeixiao (Institute of Information Engineering, Chinese Academy of Sciences), Zheng Lin (Institute of Information Engineering, Chinese Academy of Sciences)

DLST: A Novel Framework for Market Risk Stress Testing via EXformer

Fusheng Chen (East China Normal University), Jing Liu (East China Normal University), Zhongming Han (Beijing Technology and Business University), Li Han (East China Normal University)

SCSNet: Semantic segmentation of carbon source and sink in remote sensing images based on multi-scale transformer and local feature fusion

Yang Liu (Henan Key Laboratory of Big Data Analysis and Processing, School of Computer and Information Engineering, and Department of Clinical Laboratory, Huaihe Hospital, Henan University), Wenqian Cao (Henan Key Laboratory of Big Data Analysis and Processing, and School of Computer and Information Engineering, Henan University), Haige Xu (Henan Key Laboratory of Big Data Analysis and Processing, and School of Computer and Information Engineering, Henan University), Yi Xie (Henan Key Laboratory of Big Data Analysis and Processing, and School of Computer and Information Engineering, Henan University), Changwei Miao (China Nuclear Industry Survey Design & Research Co., Ltd.)

Dynamic RDP-based Sampling for Faster Diffusion Models

Yongcheng Yin (Renmin University of China)

Direction-Oriented Edge Reconstruction Network for Camouflaged Object Detection

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Xiaoxu Yang (Shanghai Institute of Technology), Qing Zhang (Shanghai Institute of Technology), Qiangqiang Zhou (Jiangxi Normal University)

Real-Time Assessment of Trust using EEG and Artificial Neural Network

Julakha Jahan Jui (Institute for Intelligent Systems Research and Innovation (IISRI), Deakin University, Australia), Imali Hettiarachchi (Institute for Intelligent Systems Research and Innovation (IISRI), Deakin University, Australia), Asim Bhatti (Institute for Intelligent Systems Research and Innovation (IISRI), Deakin University, Australia), Mohamed Ragab Mahmoud Farghaly (Institute for Intelligent Systems Research and Innovation (IISRI), Deakin University, Australia)

LegalRAG: A Hybrid RAG System for Multilingual Legal Information Retrieval

Muhammad Rafsan Kabir (North South University), Rafeed Mohammad Sultan (North South University), Fuad Rahman (Apurba Technologies), Mohammad Ruhul Amin (Fordham University), Sifat Momen (North South University), Nabeel Mohammed (North South University), Shafin Rahman (North South University)

Violating Content Detection Based on Knowledge Graph and Heterogeneous Graph Neural Network

Shuyue Zhang (Xidian University), Xinyi Zhou (Xidian University), Xiongtao Sun (Xidian University), Hui Li (Xidian University)

Multimodal Video Moment Retrieval: A Survey

Wenwen Su (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Min Li (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Junxing Ren (Institute of Information Engineering, Chinese Academy of Sciences), Lin Chen (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Chenghua Gao (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Jitao Fu (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Haobin Sun (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences)

ChatSeek: Open-Vocabulary Object Seeking with LLM-Informed Belief Field and Vehicle-Arm Cooperation

Bolei Chen (Central South University), Liangbai Liu (Central South University), Haonan Yang (Central South University), Yongzheng Cui (Central South University), Shengsheng Yan (Central South University), Ping Zhong (Central South University), Yu Sheng (Central South University)

Learning Robust Representations for Carotid Plaque Classification via Transition Matrix and Structural Similarity Regularization

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Yongrui Lv (Hubei University of Technology), Ran Zhou (Hubei University of Technology), Cong Wu (Hubei University of Technology), Ji Wang (Hubei University of Technology), Haitao Gan (Hubei University of Technology)

SpikEmo: Enhancing Emotion Recognition with Spiking Temporal Dynamics in Conversations

Xiaomin Yu (Great Bay University)

IEAgent: A Zero-Shot Information Extraction Agent with Knowledge RAG for Unstructured Data

Jiajia Sun (Peking University), Zhuqing Sun (Shanxi University of Finance and Economics), Min Ren (Hunan Normal University), Yingjie Zhang (Peking University)

A Spatial-Temporal Interactive Graph Networks Fusion for Traffic Prediction

yin xiang (henan university), xia chengliang (henan university)

Bidirectional Multitask Learning for Non-Autoregressive Machine Translation

Songsheng Wang (NLP2CT Lab, Department of Computer and Information Science, University of Macau), Shijie Zhang (NLP2CT Lab, Department of Computer and Information Science, University of Macau), Zhihang Yuan (Infinigence AI), Dongkun Wang (Department of Electronic Engineering, Tsinghua University, Beijing, China), Derek F. Wong (NLP2CT Lab, Department of Computer and Information Science, University of Macau)

Metaheuristically Enhanced ANN-Based Intrusion Detection System with Explainable AI Integration

Mujeeb Rehman (De Montfort University), Muhammad Abrar (De Montfort University), Sohail Khalid (Riphah International University), Muhammad Kazim (De Montfort University), Vishal Krishna Singh (University of Essex)

Multi-Scale Feature Recognition and Lightweight Cotton Pest Detection Network Based on YOLOv10

li xinkang (Xinjiang University), Jiang Shaochen (Xinjiang University), Wang Liejun (Xinjiang University)

Boosting Network for Image Denoising

Zhonghua Xie (Huizhou University), Haoyi Tang (Huizhou University), Siyi He (Huizhou University), Lingjun Liu (Huizhou University)

Multimodal Data Augmentation for Dynamic Fusion

Haining Li (Tianjin university), Shan Huang (Tianjin university), Changqing Zhang (Tianjin university)

DRM-Yolov8 Pedestrian Detection Method for Nighttime Complex Scenarios

Rongqi Yao (Sichuan Normal University), Guoxiang Wu (Sichuan Normal University), Dixing Wang (Sichuan Normal University), Yixin Wang (Sichuan Normal University), Yu Lu (Sichuan Normal University)

TIMM: A Type-Induced Missing-aware Mixture-of-Experts Model for Imputing Missing Modalities

Shuwei Qian (Nanjing University), Zhicheng Fan (Nanjing University), Qiangqiang He (Nanjing University), Chongjun Wang (Nanjing University)

DCT-GMM-FedSeg: Multimodal Medical Image Segmentation in a Federated Learning Framework

Feng Yunhe (Hainan university), Wang Jianan (Hainan university), Wang Xiong (Hainan university), Wang Lingren (Hainan university), Li Yutong (Hainan university), Renda Han (Hainan University)

Pixel-wise Rain Error Distillation Framework for Robust Sparse Matching in Rainy Scene

Wenwei Lin (Sun Yat-sen University), Pinhuan Wei (Sun Yat-sen University), Gang Chen (Sun Yat-sen University)

A Fine-tuned Approach to Code Summarization Generation Based on Keyword Augmentation and Contrastive Learning

Huan Wang (Sichuan university), Shenggen Ju (Sichuan University), Yujie Wan (Sichuan University), Rongmei Zhao (Sichuan university), Junlin Ren (Sichuan University)

PD-YOLOv11s: An End-to-End Paper Surface Detection for Specific Visible Angle Defect

Shupan Li (Zhengzhou University), Hanlin Zhu (Zhengzhou University), Xiangrong Zhong (Zhengzhou University), Mingliang Xu (Zhengzhou University), Mingyuan Jiu (Zhengzhou University), Wei Guo (Zhengzhou University), Yan Chen (Zhengzhou University)

MLPlayerNet: A Medical Image Segmentation Model Based on Multi-layer Perceptron Layers

Ruoyu Li (Sichuan University), Zijun Guan (Sichuan University), Jinlong Tang (Sichuan University), Jiaqi Qv (Sichuan University), Ying Qi (Sichuan University)

Cross-modal Context Fusion and Adaptive Graph Convolutional Network for Multimodal Conversational Emotion Recognition

Junwei Feng (Northwestern Polytechnical University), Xueyan Fan (Northwestern Polytechnical University)

DAGNet: A Dynamic Aggregation and Generation Network for Next POI Recommendation

Yanli Zhang (LUT), Guochen Li (LUT)

S3PI: A Semi-Supervised Smart Ponzi Identification Method Based on Contrastive Learning

Weijia Yang (School of Computer Science and Engineering(School of Cyber Security) in University of Electronic Science and Technology of China), Tian Lan (School of Computer Science and Engineering (School of Cyber Security) in University of Electronic Science and Technology of China), Wei Chen (School of Information and Software Engineering in University of Electronic Science and Technology of China), Leyuan Liu (School of Information and Software Engineering in University of Electronic Science and Technology of China), Xiaosong Zhang (School of Computer Science and Engineering(School of Cyber Security) in University of Electronic Science and Technology of China)

SupGATE: Supervised Contrastive Learning and Attention-Gated Multimodal Fusion for Emotion Recognition in Conversations

Jiajun Wang (School of Computer Science and Technology, Tongji University), Chunqi Tian (School of Computer Science and Technology, Tongji University), Haiping Sun (School of Computer Science and Technology, Tongji University)

Pattern Learning for Trajectory Anomaly Detection: Recent Developments and Emerging Challenges

Chaoneng Li (Lanzhou Jiaotong University), Xiaolong Wang (Lanzhou Jiaotong University), Xiaohu Wang (Lanzhou Jiaotong University), Siyuan Chen (Lanzhou Jiaotong University), Ji Ye (Lanzhou Jiaotong University), Shuxu Zhao (Lanzhou Jiaotong University)

PromptMetric: Prompt Recipe as an Automatic Metric for Evaluating Open-domain Question Answering Systems

Pengzhe Wang (University of Science and Technology of China), Xin Zeng (Chinese Academy of Sciences), Chiwei Zhu (University of Science and Technology of China), Benfeng Xu (University of Science and Technology of China), Zhendong Mao (University of Science and Technology of China), Yongdong Zhang (University of Science and Technology of China)

Generative Reconstruction Model for Trajectory Anomaly Detection and Virtual Traffic Flow Authenticity Evaluation

Chaoneng Li (Lanzhou Jiaotong University), Xiaolong Wang (Lanzhou Jiaotong University), Ze Ye (Lanzhou Jiaotong University), Ji Ye (Lanzhou Jiaotong University), Siyuan Chen (Lanzhou Jiaotong University), Shuxu Zhao (Lanzhou Jiaotong University)

Singular Value Maximization and Suppression: Addressing Imbalanced & Indistinct Classes for Domain Generalization

Bingli Wang (Sichuan Agricultural University), Jiao Li (University of Electronic Science and Technology of China), Daixian Liu (Sichuan Agricultural University), Houcheng Su (Hong Kong University of Science and Technology (Guangzhou)), Yuwei Kang (Sichuan Agricultural University)

DSF-Net: Dual-Path Spatial Attention Feature Fusion Network for Building Extraction from Remote Sensing Images

changjiang hu (Southwest University of Science and Technology), Minxian Liu (Southwest University of Science and Technology), Dong Li (Southwest University of Science and Technology)

PointDico: Contrastive 3D Representation Learning Guided by Diffusion Models

Pengbo Li (Beijing University of Posts and Telecommunications), Yiding Sun (Xi'an Jiaotong University), Haozhe Cheng (Xi'an Jiaotong University)

PIONM: A Generalized Approach to Solving Density-Constrained Mean-Field Games Equilibrium under Modified Boundary Conditions

Jinwei Liu (Beihang University), Wang Yao (Beihang University), Xiao Zhang (Beihang University)

MF2former: Multi-Feature Fusion Transformer for Traffic Flow Prediction

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Zihan Zhang (Tongji University), Shengjie Zhao (Tongji University), Shilong Dong (Tongji University), Jiafeng Huang (Tongji University), Yuhang Wan (Tongji University), Wenzhen Jia (Tongji University), Hao Deng (Tongji University)

STTP: Urban Spatio-Temporal Forecasting with Timestamp Information Mining and Pattern Differentiation

Chutong Ding (Tongji University), Aoyu Liu (Tongji University), Yaying Zhang (Tongji University)

SentinelGNN: A Neural Network Architecture for Detecting Anomalies in Attributed Multi-graphs

Victor Kombou (University of Electronic Science and Technology of China), Jianbin Gao (University of Electronic Science and Technology of China), Qi Xia (University of Electronic Science and Technology of China), Hu Xia (University of Electronic Science and Technology of China), Stephane Richard Befoum (University of Electronic Science and Technology of China), Brinda Leaticia Kuiche Sop (Chengdu University of Technology)

MMFF-DDI: An Efficient Multi-modal Multi-Granularity Feature Fusion Framework for Drug-drug Interaction Prediction

An Li (Wuhan University of Technology), Jing Peng (Wuhan University of Technology), PeiYuan Wu (Wuhan University of Technology)

FocusNet: A New Data-driven SAR Image Autofocus Method

Yifei Fan (Xidian University), Shuang Li (Xidian University), Ganggang Dong (Xidian University)

IKG-Agent: Intent-driven Knowledge Graph Agent for Adaptive Workflow Reasoning

Yunzhi Liang (Chinese Academy of Sciences), Siyang Tao (University of Chinese Academy of Sciences), Haoyuan Teng (Chinese Academy of Sciences), Hongyu Yao (Chinese Academy of Sciences), Xin Wang (Chinese Academy of Sciences), iaobo Guo (Chinese Academy of Sciences), Lei Wang (Chinese Academy of Sciences), Ji Xiang (Chinese Academy of Sciences)

Foreground-Aware Enhancement-Based Multimodal 3D Object Detection

Peng Ziyang (Hunan University), He Wei (Hunan University), Mao Jianxu (Hunan University), Tao Ziming (Hunan University), Yi Junfei (Hunan University), Wang Yaonan (Hunan University)

Byzantine-Resilient Decentralized Parallel Policy Gradient

Qifeng Lin (Sun Yat-Sen University), Yue Huang (Sun Yat-Sen University), Qing Ling (Sun Yat-Sen University)

Corrected with the Latest Version: Make Robust Asynchronous Federated Learning Possible

Chaoyi Lu (Xi'an Jiaotong University), Yiding Sun (Xi'an Jiaotong University), Pengbo Li (Beijing University of Posts and Telecommunications), Zhichuan Yang (Xi'an Jiaotong University)

Label Semantics for Robust Hyperspectral Image Classification

Rafin Hassan (North South University), Zarin Roshni (North South University), Rafiqul Bari (North South University), Alimul Islam (North South University), Nabeel Mohammed (North South University)

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University), Moshiur Farazi (University of Doha for Science and Technology), Shafin Rahman (North South University)

WDSF-Mamba: Clothing Parsing via Wavelet Domain Spatial-Frequency Mamba

Zhongyuan Teng (Donghua University), Shaoyu Wang (Donghua University), Xinyi Luo (Donghua University), Shiyang Yang (Donghua University), Nuo Chen (Donghua University)

Social Interaction-Aware Dynamic Expert Networks for Predicting User Opinion Dynamics

Yang Li (University of Science and Technology of China)

Robust Representation from EEG via Pre-trained SeqMAE for Brain Activity Decoding

Yisu Wang (Chinese Academy of Sciences), Yangyang Li (Beijing Institute of Mechanical Equipment), Honggang Wang (State Key Laboratory of Robotics and System, Harbin Institute of Technology), Xuzhi Li (Chinese Academy of Sciences), Guangbin Sun (Chinese Academy of Sciences)

Gaussian Function-Based Fuzzy Min-Max Neural Network

Yani Xue (Tianjin University of Technology), Hongyun Ning (Tianjin University of Technology), Honghao Zhang (Tianjin University of Technology)

DA-Mamba: A Dual-domain Attention Mamba-based Image Deraining Network

Kang Chen (Jiangxi Normal University), Qiu Hai Yan (Jiangxi Normal University), Aiwen Jiang (Jiangxi Normal University)

PORTIA: A Multi-Granularity APT Detection Model Based on Provenance Graphs

Yiming Ren (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Haoyang Chen (The University of Sydney), Haoqiang Wang (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Yilong Chen (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Zhou Zhou (Institute of Information Engineering, Chinese Academy of Sciences), Chengxiang Si (National Computer Network Emergency Response Technical Team/Coordination Center of China (CNCERT/CC)), Qingyun Liu (Institute of Information Engineering, Chinese Academy of Sciences)

RaS-EAE: A Retrieval-Augmented and Structure-aware Generation Model for Document-Level Event Argument Extraction.

Yuhan Liu (Institute of Information Engineering, University of Chinese Academy of Sciences.), Neng Gao (Institute of Information Engineering, Chinese Academy of Sciences.), Chenyang Tu (Institute of Information Engineering, Chinese Academy of Sciences.)

Adaptive Feature Fusion Network for Camouflaged Object Detection

Xiuhong Li (Xinjiang University), Kuan Wang (Xinjiang University), Yulong Bai (Xinjiang University)

MOLE: Provenance Graph Generation Framework Based on LLM Prompting

Yiming Ren (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Haoqiang Wang (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Yilong Chen (Institute of Information Engineering Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Zhou Zhou (Institute of Information Engineering, Chinese Academy of Sciences), Chengxiang Si (National Computer Network Emergency Response Technical Team/Coordination Center of China (CNCERT/CC)), Qingyun Liu (Institute of Information Engineering, Chinese Academy of Sciences)

A Unified Multi-Scenario Framework for Schema Matching based on LLM

Qiang Gao (Information Research Center of Military Science, Academy of Military Science), Yunhao Xiao (Huazhong Agricultural University), Yuren Hu (Huazhong Agricultural University), Ruifang Zhao (Information Research Center of Military Science, Academy of Military Science), Baoqi Liu (Information Research Center of Military Science, Academy of Military Science), Zaiwen Feng (Huazhong Agricultural University), Ying Wang (Huazhong Agricultural University), Xiaoxia Li (Huazhong Agricultural University)

Real-Time Misinformation Detection with Cyclic Evidence-Based Framework

Zhiwen Hu (Zhejiang Gongshang University), Lv Han (Zhejiang Gongshang University), Haihua Jiang (Zhejiang Gongshang University), Xi-Ao Ma (Zhejiang Gongshang University), Saihua Lei (Zhejiang Gongshang University), Yang Qiu (Zhejiang Gongshang University), Haojia Niu (Zhejiang Gongshang University), Zehui Zhou (Zhejiang Gongshang University), Xun Wang (Zhejiang Gongshang University)

SOD-DETR: Small Object Detection with Attention Enhancement and Multi-scale Feature Fusion for UAV Imagery

Xinjie Zheng (Huzhou University), Bin Shao (Huzhou University)

ESSI-KG: Enhancing Structural Semantic Integration in KG-to-Text Pretraining Models

xin tie (Shanghai University), Liu Ruishen (Shanghai University), Xiangfeng Luo (Shanghai University), Xie Shaorong (Shanghai University), Wang Xinzhi (Shanghai University)

Temperature Inversion Guided Attention for Infrared Small Target Detection

Yuxiang Zhang (Beijing University of Technology), Ting Zhang (Beijing University of Technology), Zhaoying Liu (Beijing University of Technology), Bo Liu (Beijing University of Technology), Changming Sun (Data61 CSIRO)

Enhancing Neural Fictitious Self-Play for Symmetric Zero-Sum Team Games: A Two-Stage Training Framework

Baofeng Zhang (Institute of Automation, Chinese Academy of Sciences, School of Artificial Intelligence, University of Chinese Academy of Sciences), Hao Liang (Institute of Automation, Chinese Academy of Sciences), Zhijun Zhao (Institute of Automation, Chinese Academy of Sciences)

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Sciences), Hui Chang (Institute of Automation, Chinese Academy of Sciences), Yang Gao (Institute of Automation, Chinese Academy of Sciences)

Multi-view Fake News Detection Model Based on Dynamic Hypergraph

RongPing Ye (Huazhong University of Science and Technology), Xiaobing Pei (Huazhong University of Science and Technology), Ruiqi Wang (Huazhong University of Science and Technology)

CHAIR-Classifier of Hallucination as Improver

Ao Sun (National Taiwan University)

SoCDev: SoC Design Automation through TCL Code Generation via LLM-Based Agents

Wenjie Zhao (Shenzhen University), Yunlong Gao (Shenzhen University), Linlin Shen (Shenzhen University), Qiuming Luo (Shenzhen University)

VLLMs Provide Better Context for Emotion Understanding Through Common Sense Reasoning

Alexandros Xenos (Queen Mary University of London), Niki Foteinopoulou (SnT, University of Luxembourg), Ioanna Ntinou (Queen Mary University of London), Ioannis Patras (Queen Mary University of London), Georgios Tzimiropoulos (Queen Mary University of London)

Leveraging Statistical Machine Learning to Boost Large Language Models

Zhiyu Ding (North China University of Technology), Wenpeng Hu (AMS), Jianyong Duan (North China University of Technology), Jiaxin Bai (AMS), Minghao Hu (AMS), Xian Zhou (AMS), Zhunchen Luo (AMS), Wei Luo (AMS)

RA-Gen: A Controllable Code Generation Framework Using ReAct for Multi-Agent Task Execution

Aofan Liu (Peking University), Haoxuan Li (Tsinghua University), Bin Wang (Peking University), Ao Yang (Peking University), Hui Li (Peking University)

ConvGAN: A ConvNeXt-Enhanced CycleGAN for Chinese Calligraphy and Painting Fusion

Yonglong Peng (Chongqing University), Min Xiong (Chongqing University), Qirong Zhao (Chongqing University)

AGNS: Adversarial Attack against Human Trajectory Model Based on Attention-guidance and Node-selection

Xin Guo (School of Cyber Science and Engineering, Zhengzhou University), Yucheng Shi (School of Computer Science and Artificial Intelligence Zhengzhou University), Lei Shi (School of Cyber Science and Engineering, Zhengzhou University), Yufei Gao (School of Cyber Science and Engineering, Zhengzhou University), Wenwen Li (China Mobile Online Services Company Limited)

High-Precision Fabric Defect Detection via Adaptive Shape Convolutions and Large Kernel Spatial Modeling

Shuai Wang (Shandong Youth University of Political Science), Yang Xu (Shandong Youth University of Political Science), Hui Zheng (Shandong Youth University of Political Science), Baotian Li (Shandong Youth University of Political Science)

CECAT: Certainty-guaranteed Environment for Computerized Adaptive Testing

Jingwei Yu (Shanghai Jiao Tong University), Zhenyu Mu (Shanghai Jiao Tong University), Weiwen Liu (Huawei Noah's Ark Lab), Ting Long (Jilin University), Weiming Zhang (Shanghai Jiao Tong University), Weinan Zhang (Shanghai Jiao Tong University), Yong Yu (Shanghai Jiao Tong University)

IECAT: an Individualized High-Efficiency Ability Assessment for Computerized Adaptive Testing

Jingwei Yu (Shanghai Jiao Tong University), Zhenyu Mu (Shanghai Jiao Tong University), Weiwen Liu (Huawei Noah's Ark Lab), Hangyu Wang (Shanghai Jiao Tong University), Ting Long (Jilin University), Weinan Zhang (Shanghai Jiao Tong University), Yong Yu (Shanghai Jiao Tong University)

H²D-Net: High-resolution Guided Hierarchical Discriminative Network for Infrared Small Target Detection

Zekai Zhang (Beijing Information Science and Technology University), Xiangpan Fan (Beijing Information Science and Technology University), Shichao Zhou (Beijing Information Science and Technology University), Wenzheng Wang (Beijing Institute of Technology), Dongshun Cui (Mind PointEye), Shuigen Wang (Yantai IRay Technologies Lt. Co.)

Exploring Hierarchical Multi-modal Prompts Learning for HOI Detection via Hybrid Learning

Xiaoqian Han (Qingdao University), Xiaowei Zhang (Qingdao University)

PMM: Post-Min-Max Augmentation for Semantic Segmentation of Underground Parking Lots

Ye Li (University of Chinese Academy of Sciences), Dekun Lin (University of Chinese Academy of Sciences), Zhe Cui (Chengdu Institute of Computer Applications, Chinese Academy of Sciences), Xiaolin Qin (Chengdu Institute of Computer Applications, Chinese Academy of Sciences)

Improving Fast Adversarial Training with Adversarial Sample Fusion

Chunlong Fan (Shenyang Aerospace University), Jiru Sun (Shenyang Aerospace University), Li Xu (Shenyang Aerospace University)

Token Selection Acceleration: A Structure-Guided Approach for Diffusion Transformer Model

Weikang Zhong (Yunnan University), Xiayong Li (Yunnan University), Hao Wu (Yunnan University), Guowu Yuan (Yunnan University)

FedFAS: Federated Few-shot Abdominal Organs Segmentation across Heterogeneous Clients

Yi Zhang (Tianjin University of Technology), Junpeng Wu (Tianjin University of Technology), Meng Zhao (Tianjin University of Technology), Xu Cheng (Tianjin University of Technology), Yao Zhang (Tianjin University of Technology), Fan Shi (Tianjin University of Technology)

An STE-Guided Machine Translation Method based on Evidence Theory

Na Ye (Shenyang Aerospace University), Chen Yang (Shenyang Aerospace University), Guiping Zhang (Shenyang Aerospace University)

Enhancing the "Immunity" of Mixture-of-Experts Networks for Adversarial Defense

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QuantBEVFusion: A Fully Quantized Framework for LiDAR-camera 3D Object Detection

Xubin Wen (Southeast University), Ming Shao (University of Massachusetts Dartmouth), Libo Sun (Southeast University), Wenhui Qin (Southeast University), Siyu Xia (Southeast University, China)

UGS-MedSeg: An Intelligent Pathology Images Semi-Segmentation System

Baotian Li (Shandong Youth University of Political Science), Wendong Chen (Jiangxi University of Chinese Medicine), Ruina Mao (Shandong Youth University of Political Science), Shuai Wang (Shandong Youth University of Political Science)

Physical Perception Network: An Enhanced Dehazing U-Net Framework for Color and Texture Recovery

Guoyu Fang (North University of China), Zhanxia Jin (North University of China), Pinle Qin (North University of China), Jianchao Zeng (North University of China)

Diff-DETR: Differential Attention Transformer for Video Moment Retrieval and Highlight Detection

Peng Wang (Beijing Normal University-Hong Kong Baptist University United International College), Rui Meng (Beijing Normal University-Hong Kong Baptist University United International College), Bingqing Qu (Beijing Normal University-Hong Kong Baptist University United International College)

A Novel Anchor-Based Supervised Learning Framework for Solving Traveling Salesman Problem

Zebin Huang (Xiamen University of Technology), Huayi Yin (Xiamen University of Technology)

High-Fidelity Face Swapping via Fine-grained Attribute Control with Diffusion Models

Zikang Zhou (Sun Yat-sen University), Keze Wang (Sun Yat-sen University)

Repository-Level Code Smell Detection Based on Multi-Scale Code Information and LLM Assistance

Wenjie Liang (Tsinghua University), Yongqin Zeng (Tsinghua University), Hai-Tao Zheng (Tsinghua University), Jiale Wang (Tsinghua University), Haiye Lin (Tsinghua University), Hong-Gee Kim (Seoul National University), Bingxu An (Tencent), Zhao Wei (Tencent), Yong Xu (Tencent)

Federated Out-of-Distribution Generalization: A Causal Augmentation View

Runhui Zhang (Shandong University), Sijin Zhou (Monash University), Zhuang Qi (Shandong University)

MAUM: Document-Level Relation Extraction with Memory Augmentation and U-Mamba

Hu Ruiqi (SouthEast University), Li Huiying (SouthEast University), Xue Han (SouthEast University)

Multi-Frequency Aware Reconstruction Model for Unsupervised Graph Anomaly Detection

Xinyi Wan (East China Normal University), Pengda Li (East China Normal University), Yihong Huang (Bilibili Inc.), LIPING WANG (East China Normal University)

Contrastive Learning Method for Behavior Prediction and Sequential Recommendation based on Multi-Intention Disentanglement

Zeyu Hu (QHNU), Yuzhi Xiao (QHNU), Tao Huang (QHNU), Xuanrong Huo (QHNU)

CoRPL: A Novel Contrastive and Reciprocal Points Learning Framework for Open-Set Hyperspectral Image Classification

Minhui Zhao (Hunan Institute of Science and Technology), Lin Zhao (Hunan Institute of Science and Technology), Zhuoxuan Chen (Hunan Institute of Science and Technology), Jia Li (Hunan Institute of Science and Technology), Tian Luo (Hunan Institute of Science and Technology), Tiantian Zhu (Hunan Institute of Science and Technology)

A Lightweight Architecture for Predicting Neutronic Parameters via Neural Architecture Search

Minxiao Zhong (Sichuan University), Jingrong Xie (Sichuan University), Qing Li (Nuclear Power Institute of China), Yanan Sun (Sichuan University)

DMIMHD: Dynamic Modality Interaction for Multi-modal Human Desire Understanding

Xiangrui Zhang (Lomonosov Moscow State University)

Adaptive and Scalable Reinforcement Learning Method for Multi-Site Transportation Optimization

Ashraful Islam (Sichuan University), Chuan Li (Sichuan University)

The Active Suspension Control Strategy Based on Deep Reinforcement Learning Proximal Policy Optimization Algorithm

Xiaotian Gao (University of Jinan), Keyao Chang (University of Jinan), Beibei Liu (University of Jinan), Yu Du (University of Jinan)

HyLiteNet: A Lightweight Hybrid Network for Single Image Super-Resolution

Hengwei Fu (Zhejiang Sci-Tech University), Jijun Tong (College of Information Science and Engineering Zhejiang Sci-Tech University)

Denoising GER: A Noise-Robust Generative Error Correction with LLM for Speech Recognition

yanyan Liu (Xinjiang University), Minqiang Xu (Hefei iFly Digital Technology Co. Ltd.), Yihao Chen (University of Science and Technology of China), Liang He (Xinjiang University, Urumqi, China), Lei Fang (Hefei iFly Digital Technology Co. Ltd.), Sian Fang (Hefei iFly Digital Technology Co. Ltd.), Lin Liu (Hefei iFly Digital Technology Co. Ltd.)

mimicSAM: Guided Knowledge Transfer for SAM via Key Regions and Boundary Information

Yixing Ma (College of Computer Science, Chongqing University), Chengliang Wang (College of Computer Science, Chongqing University), Xing Wu (College of Computer Science, Chongqing University), Lingqiu Zeng (College of Computer Science, Chongqing University), Peng Wang (Medical big data center, Southwest Hospital of Army Medical University, Chongqing), Hongqian Wang (Medical big data center, Southwest Hospital of Army Medical University, Chongqing)

Learning from the Best: High-Quality Sample Guidance for Oriented Object Detection

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Yuying Pan (Jiangnan University), Qin Wu (Jiangnan University), Hui Shen (Jiangnan University), Zeda Chen (Jiangnan University), Yin Liu (Jiangnan University), Shengnan Fan (Jiangnan University), Haojie Zhou (Jiangnan University)

Analyzing Face Image Inpainting with Attribute-Driven Generative Network

Rishabh Shukla (Indian Institute of Technology Jammu), Harkeerat Kaur (Indian Institute of Technology, Jammu), Isao Echizen (National Institute of Informatics Japan)

DualScaleNet: A Self-Supervised Dual-Branch Contrastive Learning Framework for Enhanced Medical Image Segmentation

Ximeng Zhang (Xi'an University of Architecture and Technology), Shumao Wang (Xi'an University of Architecture and Technology), Song Guo (Xi'an University of Architecture and Technology)

Less is Better: Exploiting Label Bias to Enhance Instruction Tuning-based Backdoor Attack on Large Language Models

Heng-yang Lu (Jiangnan University), Yi Zhong (Jiangnan University), Chang Xia (Anhui University)

FedSS: A Federated Semantic Segmentation Framework with Domain-Agnostic Feature Extraction and Fair Aggregation

Liwen Liang (Harbin institute of technology), Jiyuan Feng (Pengcheng Laboratory), Lingzhi Wang (Harbin institute of technology), Qing Liao (Harbin institute of technology)

Dual Augmentation Semi-Supervised Learning for Classification of Alzheimer's Disease and Mild Cognitive Impairment

Lei Shi (Zhengzhou University), Huaqiu Chen (Zhengzhou University), Chenming Liu (Zhengzhou University), Yufei Gao (Zhengzhou University)

SEMU-Net: A Boundary Semantic-Aware Network for Medical Image Segmentation

Zongying Jiang (East China University of Science and Technology), Li Dai (East China University of Science and Technology), Yuxiong Jin (East China University of Science and Technology), Jianhua Li (East China University of Science and Technology)

Distributed Drones Marine Emergency Search and Rescue Framework based on Probability Prediction Deep Reinforcement Learning

Fengqi Li (Dalian Jiaotong Universt, School of Railway Intelligent Engineering, The Dalian Key Laboratory of Blockchain Technology and Application), Yan Dong (Dalian Jiaotong Universt, School of Railway Intelligent Engineering, The Dalian Key Laboratory of Blockchain Technology and Application), Xuefeng Du (Dalian Jiaotong University, School of Mechanical Engineering, Dalian Key Laboratory of Blockchain Technology and Application), Jiayu Jin (Dalian Jiaotong Universt, School of Railway Intelligent Engineering, The Dalian Key Laboratory of Blockchain Technology and Application), Ning Tong (Dalian Jiaotong Universt, School of Railway Intelligent Engineering, The Dalian Key Laboratory of Blockchain Technology and Application), Fengqiang Xu (Dalian Jiaotong Universt, School of Railway Intelligent Engineering, The Dalian Key Laboratory of Blockchain Technology and Application), Deguang Wang (Dalian Jiaotong Universt, School of

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Railway Intelligent Engineering, The Dalian Key Laboratory of Blockchain Technology and Application)

GAFE: Enhancing Fraud Detection Performance in Multi-Relational Heterogeneous Graphs through Grouping Aggregation and Feature Extraction

Desen Yang (Southwest University of Science and Technology), Qingming Zhang (Southwest University of Science and Technology), Gou Jian (Southwest University of Science and Technology), PeiDong Chen (Southwest University of Science and Technology)

SFPA-Net: Second-Order Feature Enhancement Prototype Aggregation Network for MRI Brain Tumor Segmentation

Yujia Chen (Dalian Minzu University), Zhenwei Wang (Dalian University of Technology), Yao Wang (Hubei Provincial Hospital of Traditional Chinese Medicine), Dongwei Liu (Wuhan Mingke Rail Transit Equipment Co., Ltd), Jianxin Zhang (Dalian Minzu University), Qiang Zhang (Dalian University of Technology)

Membership Inference Attacks against Fine-tuned Stable Diffusion Models Based on Semantic Loss Trajectory

Jing Lai (China University of Geosciences), Yongfeng Qian (China University of Geosciences), Yixue Hao (Huazhong University of Science and Technology)

A Study on Road Damage Detection Methods Based on YOLOv11

Yin Chen (Xinjiang University), Jiong Yu (Xinjiang University)

Chinese Multimodal NER Base on Hierarchical Subnetwork and Feature Fusion

Mingyan Lin (Xinjiang University), Jiaying Chen (Xinjiang University), Yurong Qian (Xinjiang University), Huiyong Lv (Xinjiang University), Jiyuan Zhang (Xinjiang University)

Non-Stationary Time Series Forecasting Based on Fourier Analysis and Cross Attention Mechanism

Yuqi Xiong (Shenzhen University), Yang Wen (Shenzhen University)

Region Contrast Distillation for Medical Image Segmentation

Jiahao Pu (Southwest University of Science and Technology), Wanli Dong (Southwest University of Science and Technology), Jiachuan Fan (Southwest University of Science and Technology), Ning Jiang (Southwest University of Science and Technology)

Dual teacher Dual student with Pixel Refinement for Weakly Supervised Semantic Segmentation

Shibo Chen (Heilongjiang University), Jun Lu (Heilongjiang University)

HiCAN: Hierarchical Cross-Modal Attention Fusion Network for Rumor Detection

Zongliang Han (School of Engineering Science, University of Chinese Academy of Sciences), Shun Mao (School of Engineering Science, University of Chinese Academy of Sciences), Jie Sui (School of Engineering Science, University of Chinese Academy of Sciences)

Multi-Representation Local-Global Deep Learning Architecture for Molecular Property Prediction

Kewei Zhang (Taiyuan University of Technology), Wen Xin (Taiyuan University of Technology), Jie Xiang (Taiyuan University of Technology), Xin Wang (Maastricht University), Yuan Gao (Netherlands Cancer Institute (NKI)), Rui Cao (Taiyuan University of Technology)

CS-LightGCL: Composition-Supervised LightGCL for Interactive Web API Recommendation

Jiayu Li (Hunan University of Science and Technology), Qingping Li (Hunan University of Science and Technology), Yan Li (Hunan University of Science and Technology), Xin Ai (Hunan University of Science and Technology), Jie Chen (Hunan University of Science and Technology), Jiayan Xiang (Hunan University of Science and Technology), Guosheng Kang (Hunan University of Science and Technology)

A Saliency-Guided Residual Network Based on Interactive-Aware Attention for Medical Image Fusion

Haozhe Tang (Chongqing Normal University), Lei Yu (Chongqing Normal University)

DQ3D: Depth-guided Query for Transformer-Based 3D Object Detection in Traffic Scenarios

Ziyu Wang (Beihang University), Wenhao Li (Sydney University), Ji Wu (Beihang University)

A Cross-Domain Neural-based Method to Emotional-Aesthetic Evaluation: From Chinese Painting to Character

Qirong Zhao (Chongqing University), Min Xiong (Chongqing University), Guoqing Chen (Chongqing University), Yonglong Peng (Chongqing University)

DP-MuLP: A Differentially Private Framework for Link Prediction in Multiplex Networks

Longgang He (North China Electric Power University), Zhenhua Wei (North China Electric Power University)

Advancing Social Governance through AI: A Large Language Model Approach to Government Response Analysis

Jie Teng (Nanjing University), Huanglan He (Nanjing University), Yiyang Sun (Jilin University), Tongshu Li (OnkoCare Life Science Technology (Suzhou) Co., Ltd), Guangwei Hu (Nanjing University)

IRGV: An Interpretable Reinforced Graph Contrastive Framework for Diagenetic Facies Identification

Liyang Zhang (China University of Petroleum, Beijing), Jingyu He (China University of Petroleum, Beijing), Deshuai Mu (China University of Petroleum, Beijing), Zhiguo Mao (Research Institute of Petroleum Exploration and Development)

A Geometric Constraints based Bayesian Neural Network for Virtual Surgery Assessment

He Yuan (Henan Institute of Advanced Technology, Zhengzhou University, Zhengzhou, China), Fan Dong (Institute of Computing Technology, Chinese Academy of Sciences, Beijing, China), Weiwei Dai (Aier Institute of Digital Ophthalmology & Visual Science, Changsha Aier Eye Hospital,

Changsha, China), Danmin Cao (Department of Ophthalmology, The First Affiliated Hospital of Guangzhou Medical University, Guangzhou, China), Min Hu (Aier Institute of Digital Ophthalmology & Visual Science, Changsha Aier Eye Hospital, Changsha, China), Yang Gu (Institute of Computing Technology, Chinese Academy of Sciences, Beijing, China)

Knowledge-Optimized Multi-Agent Dynamics Framework for Zero-Shot Relation Triplet Extraction

Yu Tian (North China University of Technology), Minghao Hu (Center of Information Research, Academy of Military Science), Jianyong Duan (North China University of Technology), Wenpeng Hu (Center of Information Research, Academy of Military Science), Zhunchen Luo (Center of Information Research, Academy of Military Science), Wei Luo (Center of Information Research, Academy of Military Science)

MEAN: Multi-Modal Explainability Analysis Network for Fake News Detection

Linlin Gao (Dalian Minzu University), Jiana Meng (Dalian Minzu University), Di Zhao (Dalian Minzu University), Bolin Wang (Dalian Minzu University)

A Multimodal LLM for Chart Understanding and Generation

YUCHENG HAN (Nanyang Technological University), Chi Zhang (Tencent), Xin Chen (University of Chinese Academy Sciences (ShanghaiTech)), Fukun Yin (Fudan University), Xu Yang (Southeast University), Zhibin Wang (Tencent), Gang Yu (Tencent), Bin Fu (Tencent), Hanwang Zhang (Nanyang Technological University)

A Real-time Small Object Detection Model for UAV Aerial Images in Renewable Energy and Power Systems

Li Tan (Beijing Technology and Business University), Chen Zhang (Beijing Technology and Business University), Xiaofeng Lian (Beijing Technology and Business University), Zikang Liu (Beijing Technology and Business University), Yibo Li (Beijing Technology and Business University)

Predefined-Time Synchronization Control of Fractional-Order Multi-modal Memristive Neural Networks

Mengwei Niu (Shandong Key Laboratory of Ubiquitous Intelligent Computing, School of Information Science and Engineering, University of Jinan), Pengxiang Fu (Shandong Key Laboratory of Ubiquitous Intelligent Computing, School of Information Science and Engineering, University of Jinan), Hui Zhao (University of Jinan), Sijie Niu (Shandong Key Laboratory of Ubiquitous Intelligent Computing, School of Information Science and Engineering, University of Jinan), Xizhan Gao (Shandong Key Laboratory of Ubiquitous Intelligent Computing, School of Information Science and Engineering, University of Jinan), Mingwen Zheng (School of Mathematics and Statistics, Shandong University of Technology), Lixiang Li (Information Security Center, State Key Laboratory of Networking and Switching Technology, Beijing University of Posts and Telecommunications)

Quick Sense Temporal Graph Transformer with Effective Representation Augmentation

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Ziqi Huang (Zhejiang University), Tongya Zheng (Hangzhou City University), Rui Wang (Zhejiang University), Longjiao Zhang (Zhejiang University), Wenjie Huang (Zhejiang University), Xinyu Wang (Zhejiang University)

MSTC-Net : Multi-Scale TransConv Network for Non-Invasive Blood Pressure Prediction

Zhou Yong (Zhejiang Gongshang University), Zhou Yunliang (Zhejiang Gongshang University), Xu Xiaogang (Zhejiang Gongshang University)

A Novel Forgetting Mitigation Approach for YOLOv7-Enabled Incremental Object Detection

Qing Wang (Shenyang aerospace University), Fang Liu (Shenyang aerospace University), Jiawei Yue (Shenyang aerospace University), Qin Dai (Shenyang Institute of Engineering), Xiangbin Shi (Shenyang aerospace University)

DBFC²: Dual-Branch Fusion Convolution and Correction Underwater Image enhancement network

KeXin Xu (Chengdu University of Technology)

Multi-View Graph Learning with Dynamic Evidential Fusion for Response Forecasting

Lu Yin (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Jinchuan Zhang (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Yan Zhou (Institute of Information Engineering, Chinese Academy of Sciences), Liangjun Zang (Institute of Information Engineering, Chinese Academy of Sciences), Zhaoxing Li (Institute of Information Engineering, Chinese Academy of Sciences), Songlin Hu (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences)

EMMA: Your Text-to-Image Diffusion Model Can Secretly Accept Multi-Modal Prompts

YUCHENG HAN (Nanyang Technological University), Rui Wang (Tencent), Chi Zhang (Tencent), Juntao Hu (Tencent), Pei Cheng (Tencent), Bin Fu (Tencent), Hanwang Zhang (Nanyang Technological University)

Fair Post-Pruning Decision Tree

Hui Zhang (Southwest University of Science and Technology), Qingsong Yang (Southwest University of Science and Technology), Tao Wi (Southwest University of Science and Technology)

TOT-DS: Demonstration Selection for Enhancing the Reasoning Capabilities of Large Language Models

Xinyuan Liu (Northwestern)

Study of YOLOv8-Based Techniques for Detecting Road Surface Damage

Yin Chen (Xinjiang University), Jiong Yu (Xinjiang University), Shu Li (Xinjiang University)

Meta-optimized Session-based Recommendation with Adaptive Multi-level User Intent Integration

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Zhenchao Wu (Renmin University of China), Hongteng Xu (Renmin University of China), Xu Chen (Renmin University of China)

YOLO-HDM: Small Target Cell Micronucleus Detection Based on Re-parameterization Multi-layer Adaptive Feature Fusion

Weiyi Wei (Northwest Normal University), Linfeng Cao (Northwest Normal University), Yangzhi Zhen (Northwest Normal University), Yibin Wang (Northwest Normal University)

SleepEFT: Signal Reconstruction and Contrastive Learning for Sleep Staging

Jiaxu Jiang (Yunnan University), Weina Zhu (Yunnan University)

OPSeg: Adapting Segment Anything Model 2 with Prompt for Efficient Instance Shadow Detection

Yanfei Li (Southern University of Science and Technology), Jun Xu (Southern University of Science and Technology), Yuan Zeng (Shenzhen Technology University), Yi Gong (Southern University of Science and Technology)

DiffGFormer: A Data Augmentation Recommender Model Using Diffusion and Graph Transformer

Kaiyan Song (Xinjiang University), Haocun Li (Xinjiang University), Ping Zhang (Xinjiang University), Haizheng Yu (Xinjiang University), Hong Bian (Xinjiang Normal University)

ST-LCNet: A Dual-Stream Transformer for Interpretable EEG-Based Anxiety Diagnosis

Ling Yan (Zhejiang University of Technology), Junhao Chen (Zhejiang University of Technology), Kaichen Shen (Zhejiang University of Technology), Ruiji Xu (Zhejiang University of Technology), Keji Mao (Zhejiang University of Technology)

VMC-UNet: A U-shaped structure combining Mamba and CNN for medical image segmentation

Haocun Li (Xinjiang University), Kaiyan Song (Xinjiang University), Ping Zhang (Xinjiang University), Haizheng Yu (Xinjiang University), Hong Bian (Xinjiang University)

Latent Space Semantic Alignment Network Based on Momentum Contrast for Image-Text Retrieval

Bo Lu (Dalian Minzu University), Xiaojin Wu (Dalian Minzu University), Haibin Zhu (Dalian Minzu University), Tianyuan Zhong (Dalian Minzu University), Lin Gan (Dalian Minzu University), Ying Gao (Dalian Minzu University)

MHFL: A Semi-Asynchronous Personalized Federated Learning Framework Based on Model Migration for Edge Clients with Heterogeneous Data

Jia Chen (Inner Mongolia University), Yongqiang Gao (Inner Mongolia University), Rao Fu (Inner Mongolia University)

TIFTrack: Visual Object Tracking by Target Trajectory and Inter Frame Relationship

Zhongqin Bi (Shanghai University of Electric Power), Haojin Lu (Shanghai University of Electric Power), Weina Zhang (Shanghai University of Electric Power), Dan Dai (The University of Warwick)

Unsupervised Speech Unit Boundary Detection Guided by Linguistic Rule Knowledge

Sanlong Jiang (Kunming University of Science and Technology), Ling Dong (Kunming University of Science and Technology), Wenjun Wang (Kunming University of Science and Technology), Zhengtao Yu (Kunming University of Science and Technology), Shengxiang Gao (Kunming University of Science and Technology)

Foundation Models in Federated Learning: Assessing Backdoor Vulnerabilities

Xi Li (University of Alabama at Birmingham), Chen Wu (The Pennsylvania State University), Jiaqi Wang (The Pennsylvania State University)

GETN: A Graph-Based EEG Transformer Network for Driver Takeover Reliability Assessment in Conditionally Automated Driving

Xinzhi Zhao (Zhejiang University of Illinois Urbana-Champaign Institute), Yifan Wang (Zhejiang University of Illinois Urbana-Champaign Institute), Khaled Alkilane (Zhejiang University of Illinois Urbana-Champaign Institute), Shixiao Wang (Zhejiang University), Zhiwu Dong (Zhejiang University), Der-Horng Lee (Zhejiang University of Illinois Urbana-Champaign Institute)

BDARec: Balancing Diversity and Accuracy of Recommendation Model with Graph Neural Networks

Mengmeng Li (Academy of Military Sciences), Jinlong Tian (National University of Defense Technology), Qiyuan Zhang (National University of Defense Technology), Hongmei Li (Academy of Military Sciences), Yaqing Li (First Medical Center of Chinese PLA General Hospital), Xianglong Li (Academy of Military Sciences)

SimCNet:Leveraging Similarity-Aware and Multi-Scale Features for Robust Cell Segmentation

Jiajie Huang (Guangdong University of Technology), Guoheng Huang (Guangdong University of Technology), Xiaoxue Ling (Guangxi Normal University), Yumian Yu (Guangdong University of Technology), Hao Tang (Guangdong University of Technology), Yihang Dong (University of Chinese Academy of Sciences, CAS), Yuancong Feng (Guangdong University of Technology), Lianglun Cheng (Guangdong University of Technology)

ADSeq-Uplift: Attention-based Deep Uplift Modeling for Imbalanced Sequential Outcomes

Shuangxue Zhao (Zhejiang University)

A Point Cloud Classification Model Based on Dynamic Graph Attention Convolution and Multi-Feature Fusion

Yuanqing Feng (Shenyang Aerospace University), Xiangbin Shi (Shenyang Aerospace University), Jingjing Zhang (Shenyang Aerospace University)

Enhancing Script Event Prediction Through Contrastive Fine-Tuning on Semantic Similarity

Jialiang Wu (Hainan University), Chunyang Ye (Hainan University), Yongji Sui (Hainan University)

A Dual Quaternion Embedding Method of Link Prediction based on Orthogonalization and Rotation

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Xinyu Mao (University of Electronic Science and Technology of China), Ming Sun (University of Electronic Science and Technology of China), Jinchuan Zhang (University of Electronic Science and Technology of China), Kui Wu (University of Electronic Science and Technology of China)

Resources-Efficient Accelerated K-Asynchronous Adaptive Federated Learning

Xiang Ao (The Hongshen Honors School, Chongqing University), Maolan Zhang (The College of Computer Science, Chongqing University), Zhenyan Wang (The Department of Information, Xinqiao Hospital, Army Medical University (Third Military Medical University)), Jiamiao Liu (The Department of Information, Xinqiao Hospital, Army Medical University (Third Military Medical University)), Yu Zhang (The Department of Information, Xinqiao Hospital, Army Medical University (Third Military Medical University)), Xuetao Chen (The Department of Information, Xinqiao Hospital, Army Medical University (Third Military Medical University)), Dewen Qiao (The Department of Information, Xinqiao Hospital, Army Medical University (Third Military Medical University))

Adaptive mask attention dual branch network with multi-modal data for Alzheimer's Disease diagnosis

An Zeng (Guangdong University of Technology), Zhuxuan Ou (Guangdong University of Technology), Dan Pan (Guangdong Polytechnic Normal University)

RKDCSE: Relational Knowledge Distillation for Sentence Representation Learning

Wenjun Du (Harbin Engineering University), Rongsheng Li (Harbin Engineering University), Yanxia Wu (Harbin Engineering University), Xianghui Wang (Harbin Engineering University)

Discriminative Pruning Networks for Visual Tracking with Adaptive Foreground Prediction

Zheng Wang (Sun Yat-sen University), Zhiyong Zhang (Sun Yat-sen University)

Gaussian Splatting-based Scene Reconstruction with Adaptive Sampling and Region-based Rendering

Ming Ye (Hangzhou Dianzi University), Zhenzhong Kuang (Hangzhou Dianzi University), Takahiko Furuya (University of Yamanashi), Xiaoling Gu (Hangzhou Dianzi University), Jiajun Ding (Hangzhou Dianzi University)

Change Detection Method for Nighttime Large-Field Video Images Combining Anisotropic Diffusion and Non-Negative Matrix Factorization

Tianyu Ren (Xinjiang University), Zhenhong Jia (Xinjiang University), Jia He (Xinjiang University), Xiaohui Huang (Xinjiang University), Sensen Song (Xinjiang University), Jiajia Wang (Xinjiang University), Gang Zhou (Xinjiang University), Fei Shi (Xinjiang University), Ming Lv (Xinjiang University)

IFENet: SAR Imaging on the Missing Echo via Image Formation and Enhance Network

Shuang Li (National Key Laboratory of Radar Signal Processing, Xidian University), Ganggang Dong (National Key Laboratory of Radar Signal Processing, Xidian University)

DAPN: Domain-Aligned Prototypical Network for Cross-Domain Few-Shot Image Classification

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mengting wang (Fuyang Normal University), ying yang (Fuyang Normal University), jia zhao (Fuyang Normal University), huiling wang (Fuyang Normal University), ziyang cao (Fuyang Normal University), xu wang (Fuyang Normal University)

COLD-QA: A Complex Long-Distance Numerical Reasoning Dataset for Hybrid Tabular-Textual Question Answering

Xiaoqing Cheng (Zhengzhou University), Honying Zan (Zhengzhou University), Tengxun Zhang (Agricultural Bank of China, Henan Branch), Hongfei Xu (Zhengzhou University)

MoEFuse: Degradation-Aware Fusion of Infrared and Visible Images Using Mixture of Experts

Aowei Yu (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Yueyang Li (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Weimiao Feng (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences)

TDA-Net: A novel attention-based model with temporal feature fusion for Motor Imagery Classification

Zhouyang Lv (Yunnan university), Weina Zhu (Yunnan university)

Abnormal Behavior Detection Method in Surveillance Videos Based on a Lightweight Cross-Modal Attention Network

Xingquan Cai (North China University of Technology), Shanshan He (North China University of Technology), JiaWei Tang (North China University of Technology), Jiaming Wang (North China University of Technology), Ying Li (North China University of Technology)

Hybrid Polynomial Neural Network Based on Input Set Enhancement Strategy

Xuemin Gui (Tianjin University of Technology), Sheng Lin (Tianjin University of Technology), Honghao Zhang (Tianjin University of Technology)

Hierarchical Feature Learning Based on Memory for Skin Lesion Recognition

Wenjia Yang (School of Computing and Artificial Intelligence, Southwest Jiaotong University), Xiaole Zhao (School of Computing and Artificial Intelligence, Southwest Jiaotong University), Xiaobo Zhang (School of Computing and Artificial Intelligence, Southwest Jiaotong University), Yan Yang (School of Computing and Artificial Intelligence, Southwest Jiaotong University), Tianrui Li (School of Computing and Artificial Intelligence, Southwest Jiaotong University)

Cold Start Point-of-Interest Representation Learning with Conditional Diffusion Model

Liang Zhang (Nanyang Technological University), Sijie Ruan (Beijing Institute of Technology), Kaijun Liu (Nanyang Technological University), Cheng Long (Nanyang Technological University)

SAFD Enhanced Multi-Level Collaborative Network for EEG Biometric Authentication

Chunyu Tan (Anhui University), Jun Wu (Anhui University), Liming Zhang (University of Macau), Yun Zhou (Anhui University), Qiaoyun Wu (Anhui University)

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A Multi-Person Motion Prediction Method Based on Multi-Angle Coding of Joint-Relation for Intangible Cultural Heritage Dance Videos

Xingquan Cai (North China University of Technology), Xiaoyu Wang (North China University of Technology), Kaijie Qu (North China University of Technology), Mengrui Dai (North China University of Technology), Ying Li (North China University of Technology)

Multi-stage Refined Graph Neural Network for Few-shot Anomaly Detection

Tian Zhao (Henan University), Chunjing Xiao (Henan University)

An Architecture for Fully Decentralized Opportunistic Learning

Dequn Kong (China Mobile Research Institute), Xiaotao Li (China Mobile Research Institute), Wai Chen (China Mobile Research Institute)

TACR-YOLO: A Real-time Detection Framework for Abnormal Human Behaviors Enhanced with Coordinate and Task-Aware Representations

Xinyi Yin (Zhengzhou University), Wenbo Yuan (Zhengzhou University), Xuecheng Wu (Xi'an Jiaotong University), Liangyu Fu (Northwestern Polytechnical University), Danlei Huang (Xi'an Jiaotong University)

MIND: A Unified Multi-Modal Context-Knowledge Model for Task-Oriented Dialogue

Xuelian Dong (South China Normal University), Jiale Chen (South China Normal University), Chaoyu Wei (South China Normal University), Chehao Ke (Sun Yat-sen University), Tianyong Hao (South China Normal University)

Backdoor Defense via Malicious Knowledge Capturing and Machine Unlearning with Out-of-Distribution Data

Dongyang Liang (Institute of Artificial Intelligence, Guangzhou University), Keyu Chen (Institute of Artificial Intelligence, Guangzhou University), Hongyang Yan (Institute of Artificial Intelligence, Guangzhou University), Changyu Dong (Institute of Artificial Intelligence, Guangzhou University)

CMAN: Compact Modality Alignment Network with Dual Stream Transformer for Visible-Infrared Person Re-identification

Xuyang Song (Xiamen University), Pingyang Dai (Xiamen University)

GMCWare: A Greedy Modularity Community-based Simplification Algorithm for Malware Detection

Xingyuan Wei (Institute of Information Engineering, Chinese Academy of Sciences, Beijing, China), Zijun Cheng (Space Engineering University), Ning Li (Institute of Information Engineering, Chinese Academy of Sciences, Beijing, China), Congying Liu (University of Chinese Academy of Sciences), Yan Wang (Institute of Information Engineering, Chinese Academy of Sciences, Beijing, China), Degang Sun (Computer Network Information Center Chinese Academy of Sciences Beijing, China)

FedAFW: Adaptive Feature-Driven Weighting Based Personalized Federated Learning

Wenzheng Liu (School of Computer and Communication Engineering, Changsha University of Science and Technology), Jing Xu (School of Computer and Communication Engineering,

Changsha University of Science and Technology), Cheng Fu (School of Computer and Communication Engineering, Changsha University of Science and Technology), Ronghui Cao (School of Computer and Communication Engineering, Changsha University of Science and Technology), Xiaoyong Tang (School of Computer and Communication Engineering, Changsha University of Science and Technology), Xiaofeng Wang (College of Computer, National University of Defense Technology, Changsha, Hunan, China), Hanjing Li (School of Computer and Communication Engineering, Changsha University of Science and Technology), Tan Deng (School of Computer and Communication Engineering, Changsha University of Science and Technology), Mingfeng Huang (School of Computer and Communication Engineering, Changsha University of Science and Technology), Qianqian Xin (College of Computer, National University of Defense Technology, Changsha, Hunan, China)

Expanding the View: A Frequency-Aware Network with Large Receptive Field for Super-Resolution

Dongliang Wang (Beijing University of Posts and Telecommunications), BinBin Yan (Beijing University of Posts and Telecommunications), Ziyi Huang (Beijing University of Posts and Telecommunications), Lu Yang (Beijing University of Posts and Telecommunications), Shuo Chen (Beijing University of Posts and Telecommunications)

V-CASS: Vision-context-aware Expressive Speech Synthesis for Enhancing User Understanding of Videos

Qixin Wang (Tsinghua University), Songtao Zhou (Tsinghua University), Zeyu Jin (Tsinghua University), Chenglin Guo (New York University), Shikun Sun (Tsinghua University), Xiaoyu Qin (Tsinghua University)

CFC-GMixer: Closed-Form Continuous-Time Graph Networks with Multi-Scale Feature Mixer for Stock Predictions

lele gao (Jinan University), Zhihao Li (Jinan University), Junpeng Yu (Jinan University), Jianning Zhang (Jinan University), Wenjie Yao (Jinan University), Hongnian Wang (Jinan University)

MGFI-Net: A Multi-Grained Feature Integration Network for Enhanced Medical Image Segmentation

Yucheng Zeng (Shanghai University)

RSMF-Net: A remote sensing target detection method combining efficient feature modeling and multi-scale fusion

Jun kai Ding (Hefei University), Jiayan Gu (Hefei University)

Multi-modal Feature Enhancement and Prototype Optimization for Few-Shot Segmentation

Ruizhe Zhang (Inner Mongolia Normal University), Yanjun Yin (Inner Mongolia Normal University)

Differentially Private Diffusion Model for Graph Generation

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Guanhong Zhang (Beijing University of Posts and Telecommunications), Xiang Cheng (Beijing University of Posts and Telecommunications), Ying Zhang (Beijing University of Posts and Telecommunications), Sen Su (Beijing University of Posts and Telecommunications)

STGNet: Spatio-Temporal aware GCN-Based Model for Autism Prediction in Brain fMRI Data

Hongyan Li (University of Science and Technology of China), Tao Jin (University of Science and Technology of China), Li Xiao (University of Science and Technology of China)

Collaborative Management for Spatial Safety for Unmanned Intelligent Vehicles in Human-Machine Coexistence Environment

Haida Zhang (Shanghai Jiao Tong University), Yidong Jin (University of Waterloo), Lin Sun (Shanghai Jiao Tong University), Fanmeng Hong (Shanghai Jiao Tong University), Han Zhu (Shanghai Jiao Tong University), Haopeng Chen (Shanghai Jiao Tong University), Yan Jiao (Shanghai Shapere Information Technology Co., Ltd.), Yongming Xu (Shanghai Shapere Information Technology Co., Ltd.)

Knowledge-Enhanced Question Generation Guided by Interrogative Words

Jinhong Li (Yunnan University), Xuejie Zhang (Yunnan University), Jin Wang (Yunnan University), Xiaobing Zhou (Yunnan University)

Test Time Prompt Adaption for Domain Generalization

Zheng Haiting (Shanghai University), Ma Rui (Shanghai University), Xie Shaorong (Shanghai University), Yu Hang (Shanghai University)

EmoAssist: Emotional Assistant for Visual Impairment Community

Xingyu Qi (Beijing University of Posts and Telecommunications), He Li (Beijing University of Posts and Telecommunications), Linjie Li (Beijing University of Posts and Telecommunications), Zhenyu Wu (Beijing University of Posts and Telecommunications)

Temporal Knowledge Graph Incremental Evolution Model for Sequential Recommendation

Yongwang Zhang (TravelSky Technology Limited), Xiongqing Li (TravelSky Technology Limited), Jinsong Li (TravelSky Technology Limited), Xiaoming Wu (TravelSky Technology Limited), Ranhao Guo (College of Computer Science and Technology, Civil Aviation University of China), Chunjing Xiao (College of Computer Science and Technology, Civil Aviation University of China)

Evolutionary Multi-task Feature Selection Algorithm Enhanced by Heterogeneous Auxiliary Tasks

Hao Li (Sun Yat-sen University), Zefeng Chen (Sun Yat-sen University), Yuren Zhou (Sun Yat-sen University), Xiaoyun Xia (Jiaxing University)

Monocular Endoscopic Tissue 3D Reconstruction with Multi-Level Geometry Regularization

Yangsens Chen (HKUSTGZ), Hao Wang (The Hong Kong University of Science and Technology (Guangzhou))

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Decoding the Mind of Large Language Models: A Quantitative Evaluation of Ideology and Biases

Manari Hirose (Waseda University), Masato Uchida (Waseda University)

A weighted converging and radiating feature pyramid network for object detection

Taizhe Tan (Guangdong University of Technology), Guiming Pan (Guangdong University of Technology)

Feature Fusion Contrastive Learning and Adaptive Correction Framework for Unsupervised Graph Anomaly Detection

Yicheng Zhang (Shanghai University), Shaorong Xie (Shanghai University), Junquan Gu (Shanghai University), Xiangfeng Luo (Shanghai University), Hang Yu (Shanghai University)

OCAGE: An Input-level One-class Backdoor Detection Method Using Feature Map Extraction for DNN

HAN LIN TUN (Shanghai Jiao Tong University), Haiyang Yu (Shanghai Jiao Tong University), Tian Xie (Shanghai Jiao Tong University), Ping Yi (Shanghai Jiao Tong University)

MIGFM: A Multi-grained Interaction Guided Fusion Model for Multi-modal Aspect-Based Sentiment Analysis

Xuelin Xu (Heilongjiang University), Jun Lu (Heilongjiang University)

Neural Adaptive Dependent Task Placement for IoT Streaming Applications

Yue Ding (Shanghai University), Yufeng Li (Shanghai University), Chenhong Cao (University of Science and Technology of China), Qi Liu (Shanghai University)

Coarse-Grained Dynamic Differential Privacy Federated Learning based on D3QN

Jingbo Yu (National University of Defense Technology), Tao Wu (National University of Defense Technology), Nina Shu (National University of Defense Technology), Huaixi Wang (National University of Defense Technology), Kang Yan (National University of Defense Technology), Lanlan Qi (National University of Defense Technology), Ruhao Jiang (National University of Defense Technology), Chao Chang (National University of Defense Technology)

Dynamic Multi-Source Domain Transfer Learning for Robust Ultra-Short-Term Wind Power Forecasting with Echo State Networks

cheng xie (Central South University), Xi Li (Central South University), Jing Bi (Central South University)

GASGM-GFT: Gaussian Attenuation Singing Graph Model and Graph Fourier Transform for Singing Voice Deepfake Detection

Bingxiang Wu (GuiZhou University of Finance and Economics), Qing Qian (Guizhou University of Finance and Economics), Longwen Ran (Guizhou University of Finance and Economics), Huan Wang (Guizhou University of Finance and Economics)

Contrastive Denoising Variational Recurrent Neural Network for Noise-Agnostic State Modeling of Soft Robotic Systems

Shageenderan Sapai (Monash University), Vishnu Monn Baskaran (Monash University), Junn Yong Loo (Monash University), Chee Pin Tan (Monash University), Surya Nurzaman (Monash University)

Collaborative Enhancement of Long-term and Short-term Interests with Diffusion Optimization for Conversational Recommendation

Xinyu Chen (Chongqing University of Technology), Xianying Huang (Chongqing University of Technology), Fengjin Liu (Chongqing University of Technology), Huan Li (Chongqing University of Technology)

D2Former: Dynamic Sketch Decomposition and Selection Transformer for Sketch-Based 3D Shape Retrieval

Gan Lin (North Minzu University), Jing Bai (North Minzu University), YaWen Su (North Minzu University)

FDENet: Improving CTR Prediction via Feature Dynamic Enhancement

Zilong Jiang (Guizhou University of Finance and Economics), Meiyi Wang (Guizhou University of Finance and Economics), Xiang Zuo (Guizhou University of Finance and Economics), Yongping Wang (Guizhou University of Finance and Economics), Wei Deng (Guizhou University of Finance and Economics), Xiuzhang Yang (Guizhou University)

Weakly Supervised Lesion Detection Guides Diabetic Retinopathy Grading

Jun Li (School of Computer Science and Technology, University of Science and Technology of China, Institute of Artificial Intelligence, Hefei Comprehensive National Science Center), Hantao Zhang (School of Computer Science and Technology, University of Science and Technology of China, Institute of Artificial Intelligence, Hefei Comprehensive National Science Center), Shouhong Wan (School of Computer Science and Technology, University of Science and Technology of China, Institute of Artificial Intelligence, Hefei Comprehensive National Science Center), Qingshan Hou (School of Computer Science and Engineering, Northeastern University), Peng Cao (School of Computer Science and Engineering, Northeastern University), Banghao Yin (School of Computer Science and Technology, University of Science and Technology of China)

Meta-GraphKAN:Few-Shot Graph Kolmogorov Arnold learning Networks for Molecular Property Prediction

Yu Liu (Inner Mongolia University), Xianguo Zhang (Inner Mongolia University), Xinqi Li (Inner Mongolia University)

GGANet: A Geometry-Enhanced Gated Attention Network for Drug-Target Interaction Prediction

Hong Luo (Chengdu University of Information Technology), Yongqing Zhang (Chengdu University of Information Technology)

Single Cell Mosaic Integration via Regulatory Graph Guided Variational Cross-modal Fusion

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Jiaheng Lv (Chengdu University of Information Technology), Zixuan Wang (Sichuan University), Zhigan Zhou (Chengdu University of Information Technology), Yongqing Zhang (Chengdu University of Information Technology)

Global and Local Structure SPD Manifold Network for Image set Classification

Yipan Song (Chongqi Normal University), Yongsheng Zhao (Chongqi Normal University), Jinping Wang (Chongqi University), Ruisheng Ran (Chongqi Normal University)

TrajPred-MSM: A Multi-Scale Interactive High-Definition Map Encoding Approach for Trajectory Prediction

Zuotao Ning (Neusoft Reach Automotive Technology (Shenyang) Co., Ltd.), Haolin Xing (Northeastern University), Jiwei Nie (Northeastern University), Zhe Peng (Northeastern University), Shuai Cheng (Neusoft Reach Automotive Technology (Shenyang) Co., Ltd.), Wei Liu (Northeastern University)

AD-MAE: Contrastive Learning and Masked Autoencoder for Early Alzheimer's disease classification

An Zeng (Guangdong University of Technology), Jiasheng Li (Guangdong University of Technology), Dan Pan (Guangdong Polytechnic Normal University)

Delving into Imbalance in Imbalance: Attribute Rebalancing for Generalizing Long-tailed Learning

Shurui Zhang (Northeastern University), Pengkun Wang (University of Science and Technology of China), Hao Zheng (China Mobile (Suzhou) Software Technology Co., Ltd), Jason Zeng (Zero Gravity Labs), Michael Heinrich Michael Heinrich (Zero Gravity Labs), Ming Wu (Zero Gravity Labs), Ji Qi (China Mobile (Suzhou) Software Technology Co., Ltd)

DiffWR: Diffusion for Watermark Removal

Lingli Tang (Wuhan University of Technology, Wuhan, Hubei), Tian Qin (Wuhan University of Technology, Wuhan, Hubei), Yanchun Ma (Wuhan Vocational College of Software and Engineering, Wuhan, Hubei), Qing Xie (Wuhan University of Technology, Wuhan, Hubei), Anshu Hu (Wuhan University of Technology, Wuhan, Hubei), Wenbo Jiang (University of Electronic Science and Technology of China, Chengdu, Sichuan)

An Adaptive Multi-Indicator Contrastive Predictive Coding Framework for Patient Representation Learning

Hongxu Yuan (Macao Polytechnic University), Yuzheng Yan (Macao Polytechnic University), Xiaozhu Jing (Macao Polytechnic University), Wuman Luo (Macao Polytechnic University)

S2N: A Synthetic Data-Driven Approach for Speaker-to-Dialogue Attribution in Novels

Yiqian Huang (Institute of Science Toyko), Ying Zhang (RIKEN Center for Advanced Intelligence Project), Kotaro Funakoshi (Institute of Science Tokyo), Manabu Okumura (Institute of Science Tokyo), Yang Cao (Institute of Science Tokyo)

Federated Distillation Meets Correlation-Based Pruning: Improving Accuracy under Differential Privacy

Xiaoyan Zhang (Inner Mongolia University), Xiangyu Bai (Inner Mongolia University)

Multi-Stage Feature Fusion Network for infrared and visible image fusion

Kailun Yang (Southwest University of Science and Technology), Xiaoming Gao (Southwest University of Science and Technology)

MDA-ML: A Multi-source Domain Adaptation Network with Multi-view Learning for Emotion Recognition

Wang Xin (Shenyang Aerospace University), Song Jiawen (Shenyang Aerospace University), Zhao Yi (Shenyang Aerospace University), Chang Zhiqiang (Shenyang Aerospace University), Zhou Qiaoli (Shenyang Aerospace University)

Dual-level Concept-aware Network for Video Captioning with Augmented Semantics

Sijia Lu (Shanghai University), Yinsai Guo (Shanghai University), Xue Chen (Shanghai University), Liyan Ma (Shanghai University)

Multi-Source Feature Fusion and Spatio-Temporal Unet for Precipitation Nowcasting

Dufu Liu (Chengdu University of information Technology), Peng Zheng (Chengdu University of information Technology), Hui Deng (Chengdu University of information Technology), Xia Yuan (Chengdu University of information Technology), Xi Wu (Chengdu University of information Technology), Jing Hu (Chengdu University of information Technology)

Temporal Attention Mechanism Echo State Network for Ultra-Short-Term Wind Power Forecasting

Xi Li (Central South University), cheng xie (Central South University), Jing Bi (Central South University)

FPE-Net: Face Privacy-Enhancing Method Using Biometric Encryption

Donghua Jiang (School of Computer Science and Engineering, Sun Yat-sen University), Jiangqun Ni (School of Cyber Science and Technology, Sun Yat-sen University), Qingliang Liu (School of Mathematics and Physics, Qingdao University of Science and Technology), Jawad Ahmad (Cybersecurity Center, Prince Mohammad Bin Fahd University), Wadii Boulila (Robotics and Internet-of-Things Laboratory, Prince Sultan University)

Multi-level Feature Interaction and Local-global Dynamic Fusion Network for Medical Image Segmentation

Fengyuan Xu (China Three Gorges University), Junqing Liu (China Three Gorges University)

Self-Supervised Time Series Classification Method Based on FRFT Cross-Channel Fusion

ZhongHeng Sun (East China University of Science and Technology), Yiyang Wang (East China University of Science and Technology), Meihui Wang (East China University of Science and Technology), Cuiling Jiang (East China University of Science and Technology), Yongjing Wan (East China University of Science and Technology)

Modality-Independent Graph Convolutional Networks with Multi-task and Hybrid cross-attention for Subject-independent Emotion Recognition

Zhou Qiaoli (Shenyang Aerospace University), Song Jiawen (Shenyang Aerospace University), Du Qiang (Shenyang University of Technology), Ke Li (Shenyang University of Technology), Zhao Yi (Shenyang Aerospace University)

Clustering of Single-cell RNA-seq Data using Multi-hop Graph Embedding Autoencoder

Xintong Yi (Jilin University), Tieru Wu (Jilin University), Zhuohan Yu (Jilin University), Xiangtao Li (Jilin University)

M-SAT: Multi-State-Action Tokenisation in Decision Transformers for Multi-Discrete Actions

Perusha Moodley (Independent), Dhillu Thambi (IIIT Hyderabad), Mark Trovinger (Mississippi State University), Pramod Kaushik (Independent), Praveen Paruchuri (IIIT Hyderabad), Xia Hong (University of Reading), Benjamin Rosman (University of the Witwatersrand)

Smart Contract Vulnerability Detection Based on Inverted Residual Network and Transfer Learning

Shuhui Zhang (Qilu University of Technology (Shandong Academy of Sciences), Shandong Computer Science Center (National Supercomputer Center in Jinan)), Rendong Han (Qilu University of Technology (Shandong Academy of Sciences), Shandong Computer Science Center (National Supercomputer Center in Jinan)), Lianhai Wang (Qilu University of Technology (Shandong Academy of Sciences), Shandong Computer Science Center (National Supercomputer Center in Jinan)), Shujiang Xu (Qilu University of Technology (Shandong Academy of Sciences), Shandong Computer Science Center (National Supercomputer Center in Jinan)), Wei Shao (Qilu University of Technology (Shandong Academy of Sciences), Shandong Computer Science Center (National Supercomputer Center in Jinan)), Qizheng Wang (Qilu University of Technology (Shandong Academy of Sciences), Shandong Computer Science Center (National Supercomputer Center in Jinan))

Seeing Through Changes: Clothing Information Suppression and Momentum Enhancement for Cloth-Changing Person Re-Identification

Shijuan Huang (Huazhong University of Science and Technology), Hefei Ling (Huazhong University of Science and Technology)

MH-CL: Self-Supervised Action Recognition Method Based on Multi-view Hypergraphic Contrastive Learning for Intangible Cultural Heritage Dance

Xingquan Cai (North China University of Technology), Xiaoyu Wang (North China University of Technology), Pengyan Cheng (North China University of Technology), Kaijie Qu (North China University of Technology), Haiyan Sun (North China University of Technology)

ARNet: An Aggregation and Recalibration Network for Small Object Detection in Aerial Imagery

Xin Deng (School of Cyber Security and Computer, Hebei University, Baoding, 071002, China.), Zheng Xu (Comprehensive Experimental Teaching Center of Liberal Arts, Hebei University), Wenzhu Yang (School of Cyber Security and Computer, Hebei University, Machine Vision

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Engineering Research Center, Hebei University), Hao Li (School of Cyber Security and Computer, Hebei University), Tong Zhou (School of Cyber Security and Computer, Hebei University)

Instance-Specific Learning for Skeleton-Based Action Recognition with Varying Data Quality

Liang Zhu (Shenyang Aerospace University), Huaijun Qiu (Shenyang Aerospace University), Zhuo Yan (Shenyang Aerospace University), Cuiwei Liu (Shenyang Aerospace University)

A Domain-adversarial and Multi-scale Contrastive Method for Few-Shot Graph Node Classification

Zhiqiang Wang (Shanxi University), Jiaxin Zhang (Shanxi University), Feng Wang (Shanxi University)

FDTest: Prioritizing Test Inputs for Object Detection Models via Foundation Model Exploitation

Chong Zhang (Harbin Institute of Technology (Shen Zhen)), Qiuxia Lai (Communication University of China), Yu Li (Zhejiang University)

STGNet: Adaptive Millimeter-Wave Gesture Recognition via Spatial-Temporal Gesture Network

Haizhou Wu (Huizhou University), Xiaoye Wang (Huizhou University), Yihang Dong (Huizhou University), Zitao Du (Huizhou University)

TFDB-EENet: A Time-Frequency Dual-Branch EEG Embedding Network for Multi-Task User Intention Classification

Qiaoli Zhou (Shenyang Aerospace University), Yi Zhao (Shenyang Aerospace University), xiyuan ye (Shenyang Aerospace University), Jiawen Song (Shenyang Aerospace University), Qiang Du (Shenyang University of Technology), Li Ke (Shenyang University of Technology)

Unsupervised Temporal Action Segmentation Based on Wavelet Feature Processing

Xianghan Lin (Dalian University of Technology), Jinrong Zhang (Dalian University of Technology), Lin Feng (Dalian University of Technology)

Contrastive Learning with Knowledge-Enhanced Prompts for Insider Threat Detection

Haoyang Yu (Institute of Information Engineering, CAS), Yunchuan Guo (Institute of Information Engineering, CAS), Jing Wang (Institute of Information Engineering, CAS), Mengxiang Zhu (Institute of Information Engineering, CAS), Yongqiang Xu (Institute of Information Engineering, CAS), Zifu Li (Institute of Information Engineering, CAS)

CRAVE: A Conflicting Reasoning Approach for Explainable Claim Verification Using LLMs

Yingming Zheng (Shanghai Jiao Tong University), Xiaoliang Liu (Shanghai Jiao Tong University), Peng Wu (Shanghai Jiao Tong University), Li Pan (Shanghai Jiao Tong University)

R²FND: Reinforced Rationale Learning for Fake News Detection with LLMs

Zhao Tong (Institute of Information Engineering, CAS), Yimeng Gu (UK), Haichao Shi (IIE, CAS), Qiang Liu (IA.CAS), Shu Wu (IA.CAS), Xiao-Yu Zhang (IIE, CAS)

A Cardinality Estimation Model based on Orthogonal Matching Pursuit and Sparse Attention Mechanism

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Yutong Han (Dalian Minzu University), Zhengxuan Yang (Dalian Minzu University), Jianxin Zhang (Dalian Minzu University)

Federated Transformed Sampling Comparison for Multi-client Missing Value Imputation

Duyu Chen (Huazhong University of Science and Technology), Haozhao Wang (Huazhong University of Science and Technology), Zhiwei Chen (Huazhong University of Science and Technology), Ruixuan Li (Huazhong University of Science and Technology)

A Bag-Instance Network for Dysarthria Detection

Junhong Liu (Guangdong University of Technology)

Interpretable Modeling of Aesthetic Evaluation in Calligraphy Imitation

Wen Sun (JiangNan University), Cheng Yongle (JiangNan University), Lyu Ruimin (Jiangnan University)

Multi-Stream Collective Deliberation Network for Open-Set Fine-Grained Visual Classification

Shangjun Zhong (The High School Affiliated to Renmin University of China), Dan Wan (The High School Affiliated to Renmin University of China)

A2CHoldem: An Intelligent Agent for Texas Hold'em Based on Deep Reinforcement Learning

Qilong Guo (Shenyang Aerospace University), Yajie Wang (Shenyang Aerospace University), Shipeng Wang (Shenyang Aerospace University), Tianyu Zhao (Shenyang Aerospace University)

Pyramid Hierarchical Masked Diffusion Model for Imaging Synthesis

xiaojiao xiao (Toronto Metropolitan University), Qinmin Hu (Toronto Metropolitan University), Guanghui Wang (Toronto Metropolitan University)

ESSTPNet: Enhancing Spatio-Temporal Forecasting with Deep Echo State Networks and Adaptive Multi-Scale Decoding

Lingyan Zhang (Central South University), Genwei Zhang (Central South University)

Multi-Modal Multi-Domain Fake News Detection Based on Global-Local Contrastive Learning

Siyu Li (Inner Mongolia University), Jianhua Chi (Inner Mongolia University), Xianguo Zhang (Inner Mongolia University)

Lightweight Transformer with Enhanced Inverted Residual Blocks for Bird Sound Recognition

Xiangyu Cheng (Jiangnan University), Shengnan Fan (Jiangnan University), Jianyang Ding (Jiangnan University), Qin Wu (Jiangnan University), Long Cheng (Jiangnan University), Zhilei Chai (Jiangnan University)

Exploring Multi-aspect Information for Knowledge Graph Completion with Large Language Model

Linghui Wang (Institute of Information Engineering, Chinese Academy of Sciences), Jiawei Sheng (Institute of Information Engineering, Chinese Academy of Sciences), Wen Yuan Zhang (Institute of Information Engineering, Chinese Academy of Sciences), Tingwen Liu (Institute of Information

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Engineering, Chinese Academy of Sciences), Chuang Zhang (Institute of Information Engineering, Chinese Academy of Sciences)

3D-DPANet: A Novel Direction-Perception Attention Network Integrating Tumor Microenvironment and Shape Features for 1p/19q Co-Deletion Prediction in Brain Gliomas

Junshan Chen (Chongqing Normal University), Fumin Cheng (Chongqing Normal University), Shaoguo Cui (Chongqing Normal University)

DBF-UNet: A Two-Stage Framework for Carotid Artery Segmentation with Pseudo-Label Generation

Haoxuan Li (Tsinghua University), Wei Song (Guangdong University of Technology), Aofan Liu (Peking University), Peiwu Qin (Tsinghua University)

HADFF: Composed Image Retrieval Based on Hybrid-Attention and Dynamic Feature Fusion

Xiaoyun Zhang (Hunan University of Technology), Ruihui Yi (Hunan University of Technology), Liujie Hua (Hunan University of Technology), Bin Yu (Hunan University of Technology), Pinjie He (Hunan University of Technology), Xinpan Yuan (Hunan University of Technology)

Matrix Factorization with Dynamic Multi-view Clustering for Recommender System

Shangde Gao (Zhejiang University), Ke Liu (Zhejiang University), Yichao Fu (Zhejiang University), Hongxia Xu (Zhejiang University), Jian Wu (Zhejiang University)

CreditARF: A Framework for Corporate Credit Rating with Annual Report and Financial Feature Integration

Shi YuMeng (School of Cyberspace Security, Beijing University of Posts and Telecommunications), Wang Yisi (Guotai Junan Securities, Shanghai), Zhou Yiting (Hebei University of Technology, Langfang), Lu DiYang (School of Cyberspace Security, Beijing University of Posts and Telecommunications), Zhou Linna (School of Cyberspace Security, Beijing University of Posts and Telecommunications), Yang Zhongliang (School of Cyberspace Security, Beijing University of Posts and Telecommunications)

DDYOLO: Efficient Rainy Scene Object Detection with Deraining Guidance

Xianglong Chen (Jiangnan University), Tao Yan (Jiangnan University), Chenglong Wang (Jiangnan University), Jinsheng Liu (Jiangnan University), Zhineng Zhang (Jiangnan University), Weilong Huang (Jiangnan University)

GCGP-YOLO: Global-Local and Channel Grouping Perception Network for Small Object Detection based on YOLOv8

Jinsheng Liu (Jiangnan University), Tao Yan (Jiangnan University), Xianglong Chen (Jiangnan University), Zhineng Zhang (Jiangnan University), Chenglong Wang (Jiangnan University), Weilong Huang (Jiangnan University)

Deep Spiking Neural Network with Adaptive Temporal Feature Fusion for Energy-efficient Event-based Person Re-Identification

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Qingfeng Shi (Zhejiang University of Technology), Jiaqiang Jiang (Zhejiang University of Technology), Huajin Tang (Zhejiang University), Rui Yan (Zhejiang University of Technology)

Reliable Low-Resource Entity Resolution Enhanced by Rules

Rong Zhang (National University of Defense Technology), Dong Wang (National University of Defense Technology), Jintao Huang (National University of Defense Technology), Cheng Zhu (National University of Defense Technology)

Vehicle-Arm Coordination-Based Active 3D Reconstruction using Deep Reinforcement Learning

liangbai liu (Central South University), Zhong Ping (Central South University), Bolei Chen (Central South University), Jiaxu Kang (Central South University), Haonan Yang (Central South University), Yifei Wang (Central South University)

Neural Algorithmic Reasoners informed Large Language Model for Multi-Agent Path Finding

Pu Feng (Beihang University), Size Wang (Beihang University), Yuhong Cao (National University of Singapore), Junkang Liang Liang (Beihang University), Rongye Shi (Beihang University), Wenjun Wu (Beihang university)

PAROD: Real-time High-resolution Object Detection in Outdoor Scenes via Parallel Edge Offloading of Regions of Interest

Jiahao Xiang (Zhejiang University of Technology), Liukai Zheng (Zhejiang University of Technology), Liang Huang (Zhejiang University of Technology)

SWR-BIDeN: An Improved BIDeN Model for Severe Weather Removal in Image Processing

Yixin Zhang (Xinjiang University), Tianze Zhang (University of Melbourne), Xingbiao Zhou (Xinjiang University), Gang Shi (Xinjiang University)

DFM-Net: A Lightweight Network for Remote Sensing Image Detection

Yue Yang (Harbin Engineering University), Xiaoqiang Song (Harbin Engineering University), Xu Wang (Harbin Engineering University), Jinhao Song (Harbin Engineering University), Zilong Li (Harbin Engineering University)

DEO: Jailbreak a Black-box Multimodal Large Language Model with Dual-Embedding Alignment

Lijie Zhang (Institute of Information Engineering, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Mingsi Wang (Institute of Information Engineering, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Yue Zhao (Institute of Information Engineering, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Zijin Lin (Institute of Information Engineering, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Kai Chen (Institute of Information Engineering, Chinese Academy of Sciences, University of Chinese Academy of Sciences)

GLFormer: Efficient HRFormer for Animal Pose Estimation with Global and Local Attention

Ziyang Rong (Engineering Research Center of Intelligent Technology for Agriculture, Ministry of Education, College of Informatics, Huazhong Agricultural University), Ge Wang (Engineering Research Center of Intelligent Technology for Agriculture, Ministry of Education, College of

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Informatics, Huazhong Agricultural University), Sunan Xiang (University of Chicago), Bo Huang (School of Electronic and Electrical Engineering, Shanghai University of Engineering Science), Yi Wang (College of Informatics, Huazhong Agricultural University), Jin Liu (School of Computer Science, Wuhan University), Fuchuan Ni (Engineering Research Center of Intelligent Technology for Agriculture, Ministry of Education, College of Informatics, Huazhong Agricultural University), Guoliang Li (Engineering Research Center of Intelligent Technology for Agriculture, Ministry of Education, College of Informatics, Huazhong Agricultural University)

PanelTR: Zero-Shot Table Reasoning Framework Through Multi-Agent Scientific Discussion

Yiran Rex Ma (Beijing University of Posts and Telecommunications)

MarIns3D: An Open Vocabulary 3D Instance Segmentation Model with Mask Refinement

Haiyang Li (The College of Computer Engineering, JiMei University), Mengyun Cao (The College of Computer Engineering, JiMei University)

HAVEN: From Human Guidance to Assistant by Evolution Network in Vision-and-Language Navigation

Pingrui Lai (Shanghai Jiaotong University), Zihao Xie (Shanghai Jiaotong University), Hua Yang (Shanghai Jiaotong University)

Convolutional Self-Attention Network with Disentangled Intents for Course Sequence Recommendation

Kai Yu (Hangzhou Dianzi University), Dongjin Yu (Hangzhou Dianzi University), Dongjing Wang (Hangzhou Dianzi University)

Hypergraph-Encoder: A Dynamic Hypergraph-based Approach for Predicting Synergistic Effects in Multi-Drug Combinations

Xiaolin Li (Inner Mongolia University), Xianguo Zhang (Inner Mongolia University)

HMCFA-DTI: A hybrid Multi-scale CNN and cross flow-attention network for drug-target interaction prediction

Peiyuan Wu (Wuhan University of Technology), Jing Peng (Wuhan University of Technology), An Li (Wuhan University of Technology)

From Echo Distillation to Chat-Driven: A Multi-Task VLM is OK for Object Detection and Fine-Grained Classification in Remote Sensing Images

Liuqian Wang (Beijing University of Technology), Jing Zhang (Beijing University of Technology), Guangming Mi (Beijing University of Technology), Li Zhuo (Beijing University of Technology)

DRL-MR: Multipath Routing Based on Multi-Agent Deep Reinforcement Learning for SDN-Based Data Center Networks

Peixin Liu (Inner Mongolia University), Xiangyu Bai (Inner Mongolia University), Haoran Cheng (Inner Mongolia University)

MSTDA: Multi-Syntax Template Data Augmentation for Aspect Sentiment Quad Prediction

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Liulong Gao (School of Cyber Security and Computer, Hebei University), Shaokang Zhang (School of Cyber Security and Computer, Hebei University), Ning Ran (College of Electronic & Information Engineering, Hebei University), Liang Wang (School of Cyber Security and Computer, Hebei University)

Incremental Tucker Decomposition for Scalable and Efficient Multilingual Speech Recognition

Guanghai Song (Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Ye Hong (Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Xitong Gao (Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, Shenzhen University of Advanced Technology), Juanjuan Zhao (Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences), Kejiang Ye (Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, Shenzhen University of Advanced Technology)

Active Suspension Performance Enhancement Based on Improved DDPG Algorithms

Shuyu Cao (University of Jinan), Xiaotian Gao (University of Jinan), Guoce Zhang (University of Jinan), Shiyuan Han (Shandong Women's University), Yu Du (University of Jinan)

Visual Intelligence for Driving Assistance on Multi-Hardware Platforms via Architecture Search

Ke Xu (Anhui University), Tianyu Zhou (Anhui University), Xiaoyun Wang (Hefei Zhongke Brain Intelligence Technology), Juan Xie (Anhui Jianzhu University), Xueliang Ma (Anhui University), Jianfeng Qiu (Anhui University)

Enhancing Person Re-Identification with TF-SS: A Transformer Model based on Shifted Windows Division and Skipping Sub-Layer Techniques

Kun Lu (Beihang University), Yuqing Lan (Beihang University), Xinyan Lu (Beihang University)

Quality-Diversity Driven Action Swarm Evolution in Reinforcement Learning

Liyao Sun (Fudan University), Kang Xu (Fudan University), Yan Ma (Fudan University), Wei Li (Fudan University)

AI-Enhanced Interactive Storytelling for Cultural Heritage: A Prototype System for Dunhuang Murals

Yejuan Xie (Xi'an Jiaotong-Liverpool University), Yuehan Dou (Xi'an Jiaotong-Liverpool University), Lijie Yao (Xi'an Jiaotong-Liverpool University), Yunzhe Wang (Suzhou University of Science and Technology), Yushi Li (Xi'an Jiaotong-Liverpool University), Chengtao Ji (Xi'an Jiaotong-Liverpool University)

Dual-Path Collaborative Optimization Network for Continuous Sign Language Recognition

Cuihong Xue (Tianjin University of Technology), Longcan Yuan (Tianjin University of Technology), Tiantian Yuan (Tianjin University of Technology), Xiaoyan Yang (Tianjin University of Technology)

3D-Telepathy: Reconstructing 3D Objects from EEG Signals

YuXiang Ge (HangZhou DianZi University), Jionghao Cheng (HangZhou DianZi University), Ruiquan Ge (HangZhou DianZi University), Zhaojie Fang (HangZhou DianZi University), Gangyong Jia

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(HangZhou DianZi University), Xiang Wan (Medical Big Data Lab, Shenzhen Research Institute of Big Data, Shenzhen), Nannan Li (Macau University of Science and Technology, Macau), Ahmed Elazab (School of Biomedical Engineering, Shenzhen University, Shenzhen), Changmiao Wang (Medical Big Data Lab, Shenzhen Research Institute of Big Data, Shenzhen)

Cross-Domain Chinese Event Argument Extraction based on Attention-Enhanced Machine Reading Comprehension

Shihao Xu (Shanghai University), Yawei Ma (Shanghai University), Wei Liu (Shanghai University)

Iterative Progressive Reasoning Network for Event Causality Identification

Xinzhi Wang (Shanghai University), Ao Huang (Shanghai University), Xiangfeng Luo (Shanghai University), Huizhe Su (Shanghai University)

DiffusionHead: Dense crowd target head detection based on diffusion model

Yifeng Xu (Qilu University of Technology), Xingang Wang (Qilu University of Technology), Wenzhe Liu (Qilu University of Technology), Xiaohan Qi (Qilu University of Technology), Fengxin Du (Qilu University of Technology)

Detecting Large Aspect Ratio Objects with Geometry-Aware in Remote Sensing Images

Pinqing Song (Xiamen University), Yunuo Yang (Xiamen University), Cheng Wang (Xiamen University)

A Novel Continuous Peephole LSTM with Neural Controlled Differential Equations for Timely Financial Risk Prediction

han xu (East China Normal University), Liu Jin (East China Normal University), Yuxin Mei (East China Normal University), Luxi Zhang (East China Normal University)

Multi-view Continual Learning with Scarce Annotation

Jin Yuan (Changsha University of Science and Technology), Sheng Wu (Changsha University of Science and Technology)

MFPD: Multi-feature Prompt-Driven Industrial Real-Time Semantic Segmentation

Wang Li (SHANDONG SCICOM Information and Economy Research Institute Co., Ltd.), Xiaoming Sun (Key Laboratory of Computing Power Network and Information Security, Ministry of Education, Shandong Computer Science Center (National Supercomputer Center in Jinan), Qilu University of Technology), Yongqiao You (Yantai Shandong Big Data Center), Zhengqian Feng (SHANDONG SCICOM Information and Economy Research Institute Co., Ltd.), Mingle Zhou (Key Laboratory of Computing Power Network and Information Security, Ministry of Education, Shandong Computer Science Center (National Supercomputer Center in Jinan), Qilu University of Technology)

Mutual Information-Guided Subtask Selection for Zero-Shot Generalization in Multi-Agent Reinforcement Learning

Shijie Wu (Northwestern Polytechnical University), Yuan Yao (Northwestern Polytechnical University), Wenqi Zhang (Northwestern Polytechnical University), Yining Zhu (Northwestern

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Polytechnical University), Yujiao Hu (Northwestern Polytechnical University), Gang Yang (Northwestern Polytechnical University), Xingshe Zhou (Northwestern Polytechnical University)

Long-tailed Image Classification on the Specimens of Herbarium Dataset

Raiyan Ahmed (North South University), Intisar Tahmid Naheen (North South University), Yashfinul Haque (North South University), Md. Towsif Abir (North South University), Moshir Farazi (University of Doha for Science and Technology), Shafin Rahman (North South University)

HCNN-CasForest6: A Hybrid Deep Learning and Ensemble Framework for Fault Diagnosis

Zicheng Hu (Chongqing Normal University), Weizhe Ding (Chongqing Normal University), Ruisheng Ran (Chongqing Normal University)

PFC-TTA: Parameter-Free Classifier for Test Time Adaptation in Emotion Recognition

Hengyi Shao (Beijing University), Liang Dong (Beijing University), Lei Li (Beijing University), Lin Zhang (Beijing University, Beijing BigData Center)

ViviDance: Human Image Animation through Feature-Guided Diffusion and Decoupled Multi-Adapter

Weicong Li (Sun Yat-sen University), Guangrun Wang (Sun Yat-sen University), Keze Wang (Sun Yat-sen University), Honghao Xu (Sun Yat-sen University)

Research on Judgement Questions Based on Label Guided Prompt Generation and Adapter Mapping

Xiang Peng (Central China Normal University), Yong Zhang (Central China Normal University)

Force of Attraction-Based Distribution Calibration for Enhancing Minority Class Representation

Priyobrata Mondal (Indian Statistical Institute), Faizanuddin Ansari (Indian Statistical Institute), Swagatam Das (Indian Statistical Institute), Pourya Shamsolmoali (School of Communication, East China Normal University, Shanghai, China)

MAFD-GCN Multi-view Adaptive Frequency Dynamic Graph Convolutional Networks

Tinglong Zhou (Tiangong University), Yongxin Su (Tiangong University), Yukuan Sun (Tiangong University)

EyeTransGAN: End-to-End Generation of Corneal Fluorescein Staining Images from Anterior Segment Photography with Unsupervised Semantic Consistency

Xin Long (School of Mathematics and Computer Science, Nanchang University), Xinrui Liu (Queen Mary college of Nanchang University), Weifeng Zhang (Jiluan Academy, Nanchang University), Zeyu Zhang (School of Mathematics and Computer Science, Nanchang University), Shuangjun Wu (Jinan University-University of Birmingham Joint Institute at Jinan University), Fan Gan (The Affiliated Eye Hospital, Jiangxi Medical College, Nanchang University), Lei Chen (The Second School of Clinical Medicine, Nanchang University), Qiegen Liu (Introduction of the School of Information Engineering, Nanchang University)

DSER-TTE: Driving Style Enhanced En Route Travel Time Estimation via Attentional Network

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Yingzhuo Dong (Dalian University of Technology), Yuxin Wang (Dalian University of Technology), Jianing Sun (Dalian University of Technology)

k-Odd One Clear (k-OOC), A Novel GPU Kernel That Improves Quantization Accuracy and Speed of GPTQ Algorithm

Loi Huynh (Auburn University)

DiTAGInt: A Diffusion-Based Transformer Network with Augmented-Graph Embedding Integration for Cross-Domain Sequential Recommendation

Song Ying (IIE), Xin Bada (IIE), Wu Hongwei (IIE), Li Fulian (IIE), Jiang Zhuojun (IIE), Yang Rong (IIE)

ETELTLf: A Recursive Embedding Approach for LTLf Satisfiability Checking in CPSs

Luxi Zhang (East China Normal University), Yuxin Mei (East China Normal University), Han Xu (East China Normal University), Jing Liu (East China Normal University)

Adaptive Multi-Domain Joint Decoding Algorithm for SSVEP Signal Classification

jia shuting (Taiyuan University of Technology), Rui Cao (Taiyuan University of Technology)

CFD: A Novel Cylindrical Feature Fusion and Mapping Pipeline for Multi-view Self-Supervised Depth Estimation

Ruihang Li (College of Computer Science and Technology, Zhejiang University), Tao Li (College of Computer Science and Technology, Zhejiang University), Zhe Yin (College of Computer Science and Technology, Zhejiang University), Huangnan Zheng (College of Computer Science and Technology, Zhejiang University), KaiKai Xiao (College of Computer Science and Technology, Zhejiang University), Zhijie Pan (Zhejiang University)

Cross-Modal Integrative Feature Network for Sketch-based 3D Shape Retrieval

Xiaoheng Li (Tongji University), Feng Tian (Duke Kunshan University), Jinyuan Jia (Tongji University, The Hong Kong University of Science and Technology), Peng Ren (Tongji University), Yunfeng Bai (Tongji University), Dong Liang (Tongji University), Zhongyuan Wang (Wuhan University)

Federated Low-Rank Tensor Estimation for Multimodal Image Reconstruction

Anh Nguyen (Northwestern University), Diego Klabjan (Northwestern University), Minseok Ryu (Arizona State University), Kibaek Kim (Argonne National Laboratory), Zichao Di (Argonne National Laboratory)

Distribution and Knowledge Alignment-based Single-cell Multi-omics Cell Type Annotation

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Improving Personality Alignment in Role-Playing Dialogue Agents for Small LLMs

Yixiao Wang (LG Electronics), Homa Fashandi (LG Electronics), Kevin Ferreira (LG Electronics)

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A Robust Multimodal Model with Context-Rich Prompts for Traffic Light State Detection

Jianzhang Zheng (University of Michigan-Dearborn), Yi Murphey (University of Michigan-Dearborn), Bruno Giordani (University of Michigan Medical School), Carol Persad (University of Michigan Medical School), Amanda Maher (University of Michigan Medical School)

Understanding the Difficulty of Low-Precision Post-Training Quantization for LLMs

Zifei Xu (d-Matrix), Sayeh Sharify (d-Matrix), Wanzin Yazar (d-Matrix), Tristan Webb (d-Matrix), Xin Wang (d-Matrix)

You Don't Need All Attentions: Distributed Dynamic Fine-Tuning for Foundation Models

Shiwei Ding (Michigan Tech University), Lan Zhang (Clemson University), Zhenlin Wang (Michigan Tech University), Giuseppe Ateniese (George Mason University), Xiaoyong Yuan (Clemson University)

HyperGCL: Multi-Modal Graph Contrastive Learning via Learnable Hypergraph Views

Khaled Mohammed Saifuddin (Northeastern University), Shihao Ji (University of Connecticut), Esra Akbas (Georgia State University)

Koopman-based Prediction of Connectivity for Flying Ad Hoc Networks

Sivaram Krishnan (University of Adelaide), Jinho Choi (University of Adelaide), Jihong Park (Singapore University of Technology and Design), Gregory Sherman (Defense, Science and Technology Group), Benjamin Campbell (Defense, Science and Technology Group)

ExpFormer: Cross-lingual One-shot Talking Head Generation via Enhanced 3D Expression Modeling

Kangwei Liu (Institute of Information Engineering, Chinese Academy of Sciences), Xiaowei Yi (Institute of Information Engineering, Chinese Academy of Sciences), Junwu Liu (Institute of Information Engineering, Chinese Academy of Sciences), Yun Cao (Institute of Information Engineering, Chinese Academy of Sciences)

Dual-Strategy Knowledge-Semantics Guided Network for Video Captioning

Yingtian Qian (College of Computer Science, Chongqing University), Bin Fang (College of Computer Science, Chongqing University)

Injecting Commonsense into Object Detection Algorithms

Dizhao Jiang (University of Wollongong)

Coupled Multi-view Graph Convolutional Networks Based on Multi-scale Attention and Knowledge Embedding for Parkinson's Disease Diagnosis

Ruizhi Zhang (Shenzhen University), Chengjia Liang (Shenzhen University), Songxi Liang (Shenzhen University), Haijun Lei (Shenzhen University)

MASTP: More Accurate and Safer Trajectory Prediction Based on a Trajectory Planner

jiaxiang wang (HW), ran ding (HW), yaode wang (HW), zhiwei dong (HW), qian hou (HW), jia guo (HW)

Vocalization-based Fine-grained Prediction of Giant Panda Ovulation Time

Jinlong Tang (Sichuan University), Qijun Zhao (Sichuan University), Peng Chen (Chengdu Research Base of Giant Panda Breeding), Rong Hou (Chengdu Research Base of Giant Panda Breeding), Tie Liu (Sichuan University), Fan Pan (Sichuan University), Wei Sun (Sichuan University), Mengnan He (Chengdu Research Base of Giant Panda Breeding), Pengcheng Wu (Chengdu Research Base of Giant Panda Breeding)

High-Adaptive Edge AIGC Collaborative Inference Optimization Mechanism

Xianzhou Meng (Beijing University of Posts and Telecommunications), Yuanyuan Qi (Beijing University of Posts and Telecommunications), Yan Sun (Beijing University of Posts and Telecommunications), Feng Qi (Beijing University of Posts and Telecommunications), Shaoyong Guo (Beijing University of Posts and Telecommunications), Jiakai Hao (State Grid Beijing Electric Power Company)

Tag2Graph: A Multi-Agent Framework for Mining Knowledge Graphs from Industrial Time Series Data

Zhen Zhao (University of Technology Sydney), Brian Erickson (AVEVA), Shantanu Chakraborty (AVEVA), Wei Liu (University of Technology Sydney)

Crowd-Aware Robot Navigation for Scenario Generalization via Deep Reinforcement Learning and Knowledge Distillation

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Slide-CLIP: A Simple and Effective Pruning Method for CLIP

Jiaxin Shi (USTC), Xin Luo (USTC), S. Kevin Zhou (USTC)

Test-Time Adaptation for Cross-Subject Motor Imagery EEG Classification Using Information-Aggregation and Source-Guided Weighting

Yiheng Peng (the Institute of AI and Robotics, Academy for Engineering and Technology, Fudan University), Jingjing Luo (the Institute of AI and Robotics, Academy for Engineering and Technology, Fudan University), Hongbo Wang (the Institute of AI and Robotics, Academy for Engineering and Technology, Fudan University), Shijie Guo (the Institute of AI and Robotics, Academy for Engineering and Technology, Fudan University), Yuzhu Guo (Department of Automation Sciences and Electrical Engineering, Beihang University), Dongsheng Xu (Shanghai University of Traditional Chinese Medicine), Yang Li (Department of Automation Sciences and Electrical Engineering, Beihang University)

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Simple Legal Compliance: Automating Regulatory Audits with Explainable LLMs

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Modeling Relational Correlations with Dual-view Transformation for Temporal Knowledge Graph Forecasting

Yao Xiao (Wuhan University), Zihao Jiang (Wuhan University), Enqiang Wang (Wuhan University), Jin Liu (Wuhan University)

Towards Lightweight and Robust MCMT Tracking: Dual-Retrieval Knowledge Distillation and Scene-Aware Fusion

Sixian Chan (Zhejiang University of Technology), Xiaoxiang Chen (Zhejiang University of Technology), Chunping Wang (Zhejiang University of Technology), Wei Wang (College of Information Engineering, China Jiliang University), Jiafa Mao (Zhejiang University of Technology), Jie Hu (The Key Laboratory of Intelligent Informatics for Safety and Emergency of Zhejiang Province, Wenzhou university)

MCRO-YOLO: An evolved Version of YOLO for Small Object Detection

Junhui Li (Hebei University), Qingxuan Shi (Hebei University), Fang Yang (Hebei University), Sijia Fu (Hebei University), Fangxin Hou (Hebei University)

Intriguing Differences Between Zero-Shot and Systematic Evaluations of Vision-Language Transformer Models

Shaeke Salman (Florida State University), Montasir Shams (Florida State University), Xiuwen Liu (Florida State University), Lingjiong Zhu (Florida State University)

Residual-Based Attention in Kolmogorov–Arnold Networks for Solving Partial Differential Equations

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Dynamic Multi-Scale Spatial-Motion Feature Learning for Continuous Sign Language Recognition

Cuihong Xue (Tianjin University of Technology), Xiaoyan Yang (Tianjin University of Technology), Tiantian Yuan (Tianjin University of Technology), Longcan Yuan (Tianjin University of Technology)

Reinforcement Learning for Option Hedging Using Quantile Regression and Curriculum Learning with Historical Data Fusion

Qiao Pan (Donghua University), Long Zhu (Donghua University), Zhaoju Wang (Donghua University)

LW-DETR: Vision Transformer-Based Network for Transmission Line Fittings Defect Detection

Daming Liu (Shanghai University of Electric Power), Peiyu Liu (Shanghai University of Electric Power)

Enhancing Drug Synergy Prediction via flexible Fusion of Multimodal Heterogeneous Data

Yugui Xu (School of Computer Science, Chengdu University of Information Technology), Hao Yuan (School of Computer Science, Chengdu University of Information Technology), Xinyu Mao (School of Computer Science, Chengdu University of Information Technology), Zhigan Zhou (School of Computer Science, Chengdu University of Information Technology), Yuhang Liu (Faculty of Applied Science, Macao Polytechnic University), Shuwen Xiong (Faculty of Applied Science, Macao Polytechnic University), Zixuan Wang (College of electronics and Information Engineering Sichuan University), Yongqing Zhang (School of Computer Science, Chengdu University of Information Technology)

ETRT-Net: Efficient Non-Local Transformer and Residual Triplet Attention for Breast Lesion Segmentation

Chun Wang (Taiyuan University of Technology), Jingxing Cao (Taiyuan University of Technology), Jianfeng Wang (Taiyuan University of Technology), Shaohui Liu (Harbin Institute of Technology)

GraphLIP: Graph-enhanced Lightweight Indoor Positioning Model Leveraging Channel State Information

Chuhao Chen (Jiangsu Automation Research Institute, Electronic Equipment Business Unit), Zihan Zhou (School of Track Intelligent Engineering, Dalian Jiaotong University), Xiang Li (Harbin Engineering University), Wei Li (Harbin Engineering University), Xiangxu Meng (Harbin Engineering University)

LMFA-UNet: A Lightweight Multi-Granularity Feature Adaptation UNet for Skin Lesion

Qizhou Huang (Taiyuan University of Technology), Pan Fan (Taiyuan University of Technology), Zhian Xu (Taiyuan University of Technology), Jianfeng Wang (Taiyuan University of Technology)

KAN-RCBEVDepth: Integrating Multi-modal Sensor Data for Robust 3D Object Detection in Autonomous Driving

Zhihao Lai (Xi'an Jiaotong-Liverpool University), Mingsheng Ren (Xi'an Jiaotong-Liverpool University), Shihui Sheng (Xi'an Jiaotong-Liverpool University), Chuanhao Liu (Xi'an Jiaotong-Liverpool University), Zhiqiang Zhang (Communication University of China)

DLBacktrace: Model Agnostic Explainability for any Deep Learning Model

Vinay Kumar Sankarapu (Arya.ai), Chintan Chitroda (Arya.ai), Yashwardhan Rathore (Arya.ai), Neeraj Singh (Arya.ai), Pratinav Seth (Arya.ai)

STFNet: A Spatio-Temporal Feature Fusion Network for Human Activity Recognition Based on mmWave Radar Point Clouds

Zishuo Wang (University of Electronic Science and Technology of China), Yizhen Jia (University of Electronic Science and Technology of China), Cong Yang (University of Electronic Science and Technology of China), Xianchao Zhang (Jiaxing University)

EPLQ-UIE: Enhancing Pseudo Label Quality for Semi-Supervised Underwater Image Enhancement

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Novel AI Frameworks for ESG Performance Prediction: ESG-RAG and SSA-iLSTM

Lingyan Zhao (Xi'an Jiaotong University), Xin Tang (Southern University of Science and Technology), Yongqiang Ma (Xi'an Jiaotong University), Wei Huang (Southern University of Science and Technology), Nanning Zheng (Xi'an Jiaotong University)

Lightweight Adaptive PPO-Transformer Enhanced System for Task Offloading in Vehicular Edge Computing

ZHIJIE WU (China Academy of Space Technology, Xi'an, China), HAI FANG (China Academy of Space Technology, Xi'an, China), JIADONG TANG (Beijing Institute of Technology), XU YANG (China Academy of Space Technology, Xi'an, China)

Time Scale Gradient Aggregation Strategy for Systems Biology Parameter Identification

Songyang Tong (Guangxi Normal University), Jiayang Su (Guangxi Normal University), Zhirong Huang (Guangxi Normal University), Guoqiu Wen (Guangxi Normal University)

Federated Learning with Patient-Annotated Data in Epileptic Seizure Detection

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Applying Large Language Models with Active Learning and Ensemble Learning for Sentiment Recognition in Children's Reading

Hongtao Mao (Central China Normal University), Jincan Yang (Central China Normal University), Xusheng Yang (Central China Normal University), Zhanghao Qin (Nanyang Technology University), Zeyu Zhang (The Australian National University)

YOLO-Wide: A Complex Background Small Object Detection Network for Wide-Field High-Resolution Cameras

Xiaomin Chen (Sun Yat-sen University), Yue Zhang (Sun Yat-sen University), Zengping Chen (Sun Yat-sen University)

DiCLIP: Integrating DINOv2 and CLIP for Zero-Shot and Few-Shot Anomaly Detection with Versatile Combination Prompts

Xinxu Cai (Harbin Institute of Technology), Lihang Sun (Xi'an Jiaotong University), Zhenshen Qu (Harbin Institute of Technology), Jiazheng Xu (Harbin Institute of Technology)

ISL-MED: A General Iterative Self-Learning Framework for Speech Complex Emotion Detection

Xiaolong Wu (Xinjiang University), Xinxin Luo (Xinjiang University), Chang Feng (Tsinghua University), Hankiz Yilahun (Xinjiang University), Mingxing Xu (Tsinghua University), Askar Hamdulla (Xinjiang University), Thomas Fang Zheng (Tsinghua University)

MMSOD: Mixture-of-experts with Adapter for Multimodal Salient Object Detection

Chaojun Cen (China Agricultural University), Fei Li (University of Wisconsin-Madison), Zhenbo Li (China Agricultural University)

Cross-Network Relationship Learning via Optimal Transport for Link Prediction

Zhifeng Hao (Guangdong University of Technology), Zihan Chen (Guangdong University of Technology), Zhiwei Chen (Guangdong University of Technology), Yuguang Yan (Guangdong University of Technology), Ruichu Cai (Guangdong University of Technology)

Alleviating Directional Bias in Non-Autoregressive Transformers

Songsheng Wang (NLP2CT Lab, Department of Computer and Information Science, University of Macau), Yu Wan (Tongyi Lab, Alibaba Group Inc), Derek F. Wong (NLP2CT Lab, Department of Computer and Information Science, University of Macau), Shijie Zhang (NLP2CT Lab, Department of Computer and Information Science, University of Macau), Yuchu Lin (DeepTranx), Lidia S. Chao (NLP2CT Lab, Department of Computer and Information Science, University of Macau)

STVGN: Spatiotemporal Visibility Graph for Short-Term Traffic Speed Prediction

Yuzhu Zhang (Tsinghua University), Xinyue Ren (Tsinghua University), Ting Chen (Tsinghua University), Wai Kin Chan (Tsinghua University)

Attention-Enhanced Convolutional Deep Architecture with Adaptive Jacobian Regularization for Joint Multi-Modal Optical and X-Ray Screening of Silicon-Carbide Power Devices

Francesco Rundo (University of Catania), Carmelo Pino (STMicroelectronics), Giulia Castagnolo (STMicroelectronics), Angelo A. Messina (STMicroelectronics), Michele Calabretta (STMicroelectronics), Sebastiano Battiato (University of Catania)

SF-MVSNet: Siamese-like Fusion for Multi-View Stereo

Xiangji Kong (ZhengZhou University), Yinghao Li (ZhengZhou University), Zhao Tian (ZhengZhou University), Shipeng Liu (ZhengZhou University), Wei She (ZhengZhou University)

DIPF: Dual-Intervention Prompt Framework for Emotion Recognition in Conversation

YuKun Cao (Shanghai University of Electric Power), Luobin Huang (Shanghai University of Electric Power), Lisheng Wang (Shanghai University of Electric Power)

KairosRAG: Enhancing On-Demand Retrieval and Filtering with Lightweight Adapters

Yani Luo (South China University of Technology)

NH-YOLOv5: An Improved YOLOv5 for Real-Time Traffic Sign Detection

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Kolmogorov-Arnold Network-Enhanced Cross-Modal Alignment for Textual Attribute Graph Reasoning with Large Language Models

Qihao Huang (Southeast University), Chen Jin (Zhejiang Scientific Research Institute of Transport, Zhejiang Jiande Institute of General Aviation, Tianmushan Institute of Aeronautics), Shuke He (Zhejiang Scientific Research Institute of Transport, Zhejiang Jiande Institute of General Aviation, Tianmushan Institute of Aeronautics), Lisheng Shu (Zhejiang Scientific Research Institute

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of Transport, Zhejiang Jiande Institute of General Aviation, Tianmushan Institute of Aeronautics),
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Research on Community Search Based on Representation Learning and Latent Relationships

ShaSha Peng (Inner Mongolia University), Na Li (Inner Mongolia University), Zhijie Ban (Inner Mongolia University)

Think Before Retrieving: Query-Response Relevance Retrieval Augmented Generation

Sisi Peng (Information Engineering University), Wenlin Zhang (Information Engineering University), Dan Qu (Information Engineering University)

Talking to the Mona Lisa? LLM-based Role-playing Agent Enables Artworks in Virtual Exhibitions to Speak

Yifan Li (Xiamen University), jun meng (Xiamen University), qingqiang Wu (Xiamen University)

ASTP-VS: Adaptive Stock Trend Prediction Framework with a Variable Structure

jianning zhang (Jinan University), lele Gao (Jinan University), zhihao Li (Jinan University)

Multi-View Hallucinatory Feature Generation Network for Isolated Sign Language Recognition

Zhong Guan (School of Information Science and Technology, Beijing University of Technology),
Yongli Hu (School of Information Science and Technology, Beijing University of Technology),
Yanfeng Sun (School of Information Science and Technology, Beijing University of Technology),
Baocai Yin (School of Information Science and Technology, Beijing University of Technology)

UMOS-Net: Unsupervised Multi-stage Online Video Stabilization Network

Pengyuan Wang (North University of China), Pinle Qin (North University of China), Jia Qin (North University of China), Rui Chai (North University of China), Jianchao Zeng (North University of China), Pengcheng Zhao (North University of China)

U3PNet: Three-Branch Spatial-Spectral Fusion for Super-Resolution with Prompt Tuning

Shengjie Zhang (Jilin University), Xingwang Wang (Jilin University), Meiming Yu (Jilin University)

Multimodal Object Detection by Adaptive Channel Enhancement and Attention Fusion

Mei Yaqi (BUAA), Zhang Tianyuan (BUAA), Tan Huobin (BUAA)

Exploiting Spatial-Temporal Joint Information from the Frequency Domain for Multivariate Time Series Forecasting

Jingyi Huo (Nanjing University of Science and Technology), Yuan Gao (Nanjing University of Science and Technology), Yuxin Chen (Nanjing University of Science and Technology), Fangru Lin (Nanjing University of Science and Technology), Ziniu Wang (Jiangsu Academy of Safety Science and Technology), Qian Zhu (Jiangsu Academy of Chemical Inherent Safety), Hui Yan (Nanjing University of Science and Technology)

Bias Mitigation in Federated Few-Shot Class-Incremental Learning via Multi-Prototype Collaboration

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Siang Xu (Shenyang Aerospace University), Huaijun Qiu (Shenyang Aerospace University), Zhuo Yan (Shenyang Aerospace University), Cuiwei Liu (Shenyang Aerospace University)

MeFacialNet: High-Accuracy Micro-expression Recognition on Facial Optical Flow

Shenggang Qian (Zhejiang University of Technology), Pinyi Chen (Zhejiang University of Technology), Runzhe Zhang (Zhejiang University of Technology), Zhihu Zhou (Zhejiang University of Technology), Keji Mao (Zhejiang University of Technology)

Enhancing Vector Data Quality through Negative Learning for Retrieval-augmented Large Models

Limei Yao (Department of Intelligent Data Science, College of Computer Science and Technology, National University of Defense Technology), Kexin Ma (Institute for Quantum Information & State Key Laboratory of High Performance Computing, College of Computer Science and Technology, National University of Defense Technology), Ruochun Jin (Department of Intelligent Data Science, College of Computer Science and Technology, National University of Defense Technology), Haoqi Zheng (Department of Intelligent Data Science, College of Computer Science and Technology, National University of Defense Technology), Dong Wang (Department of Intelligent Data Science, College of Computer Science and Technology, National University of Defense Technology)

Weakly Supervised Video Anomaly Detection Via Contrastive Clustering

Weihua Meng (Northwestern Polytechnical University), Hengbo Xu (Northwest Polytechnical University), Qinyi Lv (Northwestern Polytechnical University), Congqi Cao (School of Computer Science, Northwestern Polytechnical University), Yanning Zhang (Northwestern Polytechnical University)

ABRMS-Net: An Attention-Based Residual Multi-Scale CNN for image classification

Pingyue Jia (GUET), Yan Hu (GUET), Binbin Wen (GUET), Xianrui Chen (GUET), Ahmad Chaddad (GUET)

Mutual Information and Trajectory-Aware Reinforcement Learning for Multi-Agent Path Finding

Chuang Zhao (University of Chinese Academy of Sciences), Ying Liu (University of Chinese Academy of Sciences)

Towards importance of periodicity estimation in long-term spatio-temporal data prediction

Julia Borisova (ITMO University), Nikolay Nikitin (ITMO University)

BSP-YOLOv10: A Small Object Detection Model for Detecting Appearance Scratches in Barrel-Shaped Products

Chao Ye (Soochow University), Wei Chen (Soochow University), Lei Zhao (Soochow University)

Multi-Behavior Graph Recommendation with Fusion of Sequential Information

Chunjing Xiao (Civil Aviation University of China), Peng Han (Civil Aviation University of China), Ranhao Guo (Civil Aviation University of China), Wei Fan (Civil Aviation University of China), Lan Liu (Civil Aviation University of China)

Decentralized Multi-Agent Task Offloading in LEO Satellite Edge Computing

Juan Luo (Hunan University), Changyuan Ren (Hunan University), Ying Qiao (Hunan University), Kexuan Feng (Hunan University), Shuyang Teng (Hunan University), Fan Li (Hunan University)

SEmgFormer: Muscle Synergy Channel Attention Enhanced Vision Transformer Network For sEMG Motion Recognition Using STFT Spectrogram

Zhuangzhuang Li (Tsinghua University), Yuxuan Tian (Tsinghua University), Chenyi Guo (Tsinghua University), Ji Wu (Tsinghua University)

A Hybrid Graph Neural Network for Enhanced EEG-Based Depression Detection

Yiye Wang (Southeast University), Wenming Zheng (Southeast University), Yang Li (Southeast University), Hao Yang (Southeast University)

Enhanced Temporal Graph Networks for Fraud Detection in Transactional Blockchain Networks

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Lesion Boundary-Aware Adaptation of Segment Anything Model for 2D Medical Image

Jianyuan Li (University of Science and Technology Beijing), Xiong Luo (University of Science and Technology Beijing), Boyu Wang (Western University)

SALP: Augmenting Link Prediction by Graph Structure Denoising

Guojia Wan (Wuhan University), Wenkai Tu (Wuhan University), Dong Zhao (Wuhan University), Zhigao Zheng (Wuhan University), Jiawei Jiang (Wuhan University), Bo Du (Wuhan University)

A Model-Based Federated Semi-Supervised Learning

Binbin Wen (Guilin University of Electronic Technology), Yan Hu (Guilin University of Electronic Technology), Ahmad Chaddad (Guilin University of Electronic Technology)

Chinese Named Entity Recognition Based on UCB and Levitated Marker

ShunRan Duan (Information Engineering University), Meijuan Yin (Information Engineering University), Xiangyang Luo (Information Engineering University), Shengyuan Dai (Information Engineering University)

HSDNet: Hybrid Super-Resolution Assisted Detection Network for Surface Defect Detection

Xinzhi Lin (Fudan University), Xuan Yang (Fudan University), Yunquan Sun (Fudan University), Lizhe Qi (Fudan University)

STPYOLO: A Lightweight and Efficient Model for Small Target Pest Detection

Jianyi Wang (Xinjiang University), Zhenhong Jia (Xinjiang University), Gang Zhou (Xinjiang University), Jiajia Wang (Xinjiang University), Ao Guo (Xinjiang University)

Traffic Sign Small Object Detection Algorithm Based on Lightweight Structure Design

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SDEFormer: Neural Stochastic Differential Equations for Continuous-Time Transformers in Irregular Time Series Modeling

Chong Wang (Beijing Jiaotong University), Huafeng Liu (Beijing Jiaotong University), Liping Jing (Beijing Jiaotong University)

Logic Consistency Makes Large Language Models Personalized Reasoning Teachers

Bingyuan Zhang (Ping An Technology (Shenzhen) Co., Ltd.), Xulong Zhang (Ping An Technology (Shenzhen) Co., Ltd.), Yong Zhang (Ping An Technology (Shenzhen) Co., Ltd.), Jun Yu (University of Science and Technology of China), Jianzong Wang (Ping An Technology (Shenzhen) Co., Ltd.)

Multi-scale Adaptively-aware and Recalibration Network for Brain Tumor Segmentation with Missing Modalities

Xin Li (Guangdong University of Technology), Guoheng Huang (Guangdong University of Technology), Zhipeng Zheng (Guangdong University of Technology), Xuhang Chen (Huizhou University), Zhixin Huang (The Affiliated Guangdong Second Provincial General Hospital of Jinan University), Lianglun Cheng (Guangdong University of Technology)

GeNGuide: Generalized Neighbour Guidance Framework for Noisy Class Incremental Learning

Avnish Kumar (Indian Institute of Science), Jayateja Kalla (Indian Institute of Science), Soma Biswas (Indian Institute of Science)

RecLGB: Enhancing LightGBM using Recursive VAE with Mixed Attention for Time-Series Forecasting

Yuxin Mei (East China Normal University), Jing Liu (East China Normal University), Luxi Zhang (East China Normal University), Xu Han (East China Normal University)

An Effective GANs-Based Method for High-Information-Value Multimodal Wearable Sensor Data Synthesis

Jiwei Wang (Shandong Artificial Intelligence Institute, Qilu University of Technology (Shandong Academy of Sciences)), Yang Gu (Institute of Computing Technology, Chinese Academy of Sciences), Shuwang Zhou (Shandong Artificial Intelligence Institute, Qilu University of Technology (Shandong Academy of Sciences)), Zhaoyang Liu (Shandong Artificial Intelligence Institute, Qilu University of Technology (Shandong Academy of Sciences))

Prediction of Coronary Artery Dissection Hemodynamics based on Physics-informed PointNet and Difference Graph Convolution

Yan Pei (Southwest University of Science and Technology), Kaiyue Zhang (Southwest University of Science and Technology), Pan Song (Mianyang Central Hospital), Ming Dai (Mianyang Central Hospital), Gang He (Southwest University of Science and Technology), Jun Wen (Southwest University of Science and Technology)

Enhance Object Detection via Instance Transformation Between Categories Using Diffusion Models

Ma Haoyuan (Sun Yat-sen University), Jiangtao Ren (Sun Yat-sen University)

A Low-Noise Web Content Extraction Framework for LLM Data Pipelines: Integrating XGBoost Classification and Reverse Coloring

Bin Wang (Peking University), Ziyang Zhang (University of Electronic Science and Technology of China), Lexi Chen (University of Electronic Science and Technology of China), HUI Li (Peking University)

ASOD-Net: Arbitrary Sampling and Offset-based Detection Network for Remote Sensing Image

Xiwei Liu (Mohamed bin Zayed University of Artificial Intelligence)

A Comparative Study of Graph-Based Learning Methods for Multivariate Time-Series Anomaly Detection in Cloud Microservice Applications

Ming Yu (Insight Centre for Data Analytics, Dublin City University), Kevin O'Shea (Insight Centre for Data Analytics, Dublin City University), Yihan Li (Wuhan University), Sen Yan (Insight Centre for Data Analytics, Dublin City University), Mingming Liu (Insight Centre for Data Analytics, Dublin City University)

Ultrasonic-based Gesture Recognition for Five-stroke Character Model Input Method Implemented on Smartphone

Yu Long Sun (Shandong Normal University), Huamei Xin (Shandong Normal University), Daichi Guo (Self-affiliated), Chaoran Yang (Independent Researcher), Linlin Guo (Shandong Normal University), Jiande Sun (Shandong Normal University)

CotexFinger: Enhancing IoT Device Identification with Context-Packet Fingerprinting and Lightweight Mamba

Junjie Yang (Institute of Information Engineering, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Xiu Zhang (Institute of Information Engineering, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Zelin Cui (Institute of Information Engineering, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Bo Jiang (Institute of Information Engineering, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Zhigang Lu (Institute of Information Engineering, Chinese Academy of Sciences, University of Chinese Academy of Sciences), Huamin Feng (Institute of Information Engineering, Chinese Academy of Sciences, University of Chinese Academy of Sciences)

Mamba-based Layer-wise Progressive Fusion Network with Depthwise Enhancement for Low-resource Speech Recognition

Xuanda Chen (Research Institute of Shandong University Shenzhen), Dingxin Cheng (Research Institute of Shandong University Shenzhen), Fei Hou (Wendeng Branch of Weihai Public Security Bureau, Shandong University), Bin Jiang (Research Institute of Shandong University Shenzhen), Xuchen Li (Research Institute of Shandong University Shenzhen), Wenyu Wang (Research Institute

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PG-CE: A Progressive Generation Dataset with Constraint Enhancement for Controllable Text Generation

Yan Zhuang (Minzu University of China), Yuan Sun (Minzu University of China)

DMSnet: Dual multi-scale background stripping nested network for single-frame infrared small target detection

Zichang Hu (Wuhan University of science and technology), Xuhao Guo (university of melbourne), He Deng (Wuhan University of science and technology)

Weakly Supervised Video Anomaly Detection Based on Spatiotemporal Dual-Memory Enhancement and Contrastive Magnitude

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Adversarial Style Interpolation for High-fidelity Stroke-aware Chinese Character Image Synthesis

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SNT: Explore transformers for more efficient pollen classification

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Covert Backdoor Attacks to Pre-trained Encoders in Self-Supervised Learning

jinxue zhao (Chongqing University), hongyu huang (Chongqing University), Mahabubur Rahman Miraj (Chongqing University)

REIA: Entity Relation Extraction Based on Interaction Policy and Data Augmentation

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EDGRNet: An Error Detection and Guided Refinement Network for Skin Lesion Segmentation

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Rano: Restorable Speaker Anonymization via Conditional Invertible Neural Network

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FA-KPConv: Introducing Euclidean Symmetries to KPConv via Frame Averaging

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Anomaly Detection Method Based on Compressed Sensing and Multi-Channel Feature Fusion

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GCL-Vid: Efficient Video Foundation Model via Generative and Contrastive Encoding with LLMs

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SAMPLE: Spatiotemporal-Aware Microservice Pre-deployment with LLMs for Edge Computing

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Probabilistic Deep Learning Model for Time Series Analysis

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FBD: Fact-Based Debating for Fact Verification through Large Language Models

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Contribution-Driven Personalization for Model Heterogeneous Federated Learning

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TCGPN: Temporal-Correlation Graph Pre-trained Network for Stock Forecasting

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Multi-scale Collaborative Diffusion Autoencoder

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Integrating Paragraph Structural Information into Discourse Semantic Comprehension for Implicit Discourse Relation Recognition

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HACL: A Hybrid Adaptive Curriculum Learning Framework for Multi-modal Sarcasm Detection

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DABART: Dynamic Semantic Optimization Framework for Dialogue Summarization via Adaptive Topic Analysis and Semantic Bridging

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Event-Frame Temporal Information Fusion for Visual Object Tracking

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Unaligning Everything: Or Aligning Any Text to Any Image in Multimodal Models

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DH-YOLO: Double-Head YOLO for Detecting Refrigerant Leakage Smoke in Air Conditioners

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CSF-DSRE: A Distantly Supervised Relation Extraction Model Based on Contextual Semantic Fusion

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CMSPA-Former: Causal Multi-Scale Pyramid Attention Former for Estimating Counterfactual Outcomes

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Two-Stage Loss and Anaphor Information Fusion for Document-Level Relation Extraction

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Reinforcement Learning Distillation: Adaptive Weight Optimization for Knowledge Transfer

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Dual Representation Space Optimization for Multi-Label Text Classification

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Effective Intermediate Knowledge Distillation for Image Classification

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FINE: LLM Prompt Tuning Fused with Internal and External Knowledge for EAE

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RAECAE: A Multi-Scale Attention Residual Convolutional Autoencoder-Based Method for Denoising Vibration Signals of Wind Turbine Rolling Bearings

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NeckLymphNet: An Efficient Neck Lymph Node Detection Network for Ultrasound Images

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B-PL-PINN: Stabilizing PINN Training with Bayesian Pseudo Labeling

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WaveletLoc: A Lightweight Deep Learning Model for Indoor Positioning Based on Wavelet Transform

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Speaker Intention Enhanced Dialogue Discourse Parsing

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Data-free Black-box Knowledge Amalgamation

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FactorArmor: A Hierarchical Dual-Factor Framework with Attack Resilience for Face Forgery Detection

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DAV: An Adaptive Defense Framework for Model Extraction Attacks

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KTCR: Improving Implicit Hate Detection with Knowledge Transfer driven Concept Refinement

Samarth Garg (IIIT, Gwalior), Vivek Hruday Kavuri (IIIT, Hyderabad), Gargi Shroff (IIIT, Hyderabad), Rahul Mishra (IIIT, Hyderabad)

UPTPHE: Leveraging Hybrid Attention and Hierarchical Structure for Enhanced Extraction of Patent Technical Phrases

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Enhancing Self-Supervised Speaker Verification Using Similarity-Connected Graphs and GCN

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Uncertainty-Guided Prototype Mixture Model for Skin Lesion Segmentation

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HI-SQL: Optimizing Text-to-SQL Systems through Dynamic Hint Integration

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Towards Initialization-Agnostic Clustering with Iterative Adaptive Resonance Theory

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FedDefense: An Integrated Robust Defense Against Backdoor Attacks in Federated Learning

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Multi-Scale Loss Components in 3DGS-based RGB-D SLAM Systems

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An Improved Generative Adversarial Networks-Based Oversampling Method for Imbalanced Data Classification

Kuan Zhang (Key Laboratory of Aerospace Information Security and Trusted Computing, Ministry of Education, School of Cyber Science and Engineering Wuhan University), Xiaohui Cui (Key Laboratory of Aerospace Information Security and Trusted Computing, Ministry of Education, School of Cyber Science and Engineering, Wuhan University)

UTSC: Uncertainty-Aware Framework for Early Time Series Classification

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Looks Great, Functions Better: Physics Compliance Text-to-3D Shape Generation

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Head-Tail-Aware KL Divergence in Knowledge Distillation for Spiking Neural Networks

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Pan Zhang (University of Jinan), Liangliang Zhang (University of Jinan), Ruiqi Han (University of Jinan), Lin Wang (University of Jinan), Bo Yang (University of Jinan), Pengwei Guan (Shandong Qiuqi Analysis Instrument Co., Ltd.), Yang Zhang (University of Jinan)

Bridging Privacy Preservation and Optimization in Heterogeneous Decentralized Learning: Regularization Tuning and Model Pruning

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NP4Q: Nice Point for Post-training Quantization of Object Detection Models

Shunan Zhou (National University of Defense Technology), Jingfei Jiang (National University of Defense Technology), Jinwei Xu (National University of Defense Technology), Liangwei Li (National University of Defense Technology), Minghua Zhu (National University of Defense Technology)

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Deep Learning Based Captioning of Toys in a Smart Monitoring System

Kritika Jindal (Vellore Institute of Technology Chennai), Govind Agarwal (Vellore Institute of Technology Chennai), Abishi Chowdhury (Vellore Institute of Technology Chennai), Vishal Krishna Singh (University of Essex, Colchester Campus), Rahmat Ullah (University of Essex, Colchester Campus), Mujeeb Ur Rehman (Institute of Artificial Intelligence, De Montfort University), Amrit Pal (Vellore Institute of Technology Chennai)

View-Robust Backbone and Discriminative Reconstruction for Few-Shot Fine-Grained Image Classification

Jiawen Jiang (Shaanxi University of Science & Technology), Jiahang Li (Tianjin Normal University), Jin Lu (Shaanxi University of Science & Technology)

V²AD: A Dual-View Graph Representation Learning Framework for Multivariate Time Series Anomaly Detection

Zilu Xiu (Chengdu Institute of Computer Application, Chinese Academy of Sciences University of Chinese Academy of Sciences), Qixue He (Chengdu Institute of Computer Application, Chinese Academy of Sciences University of Chinese Academy of Sciences), Yong Zhong (Chengdu Institute of Computer Application, Chinese Academy of Sciences University of Chinese Academy of Sciences), Jionghuan Chen (Chengdu Institute of Computer Application, Chinese Academy of Sciences University of Chinese Academy of Sciences)

DGAN-TRL: Deep Graph Attention Network Based Trajectory Representation Learning

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Yu Sang (Jiangnan University), Jiafeng Du (Soochow University), Xie Zhenping (Jiangnan University)

DDN-Turbo: Enhanced Deconvolutional Density Networks for Data-Scarce Conditional Density Estimation

Junjie Mao (University of Jinan), Lin Wang (University of Jinan), Chenglong Song (University of Jinan), Pan Zhang (University of Jinan)

Bridging Clustering and Training Gap in Unsupervised Vessel Re-identification

Jianqing Zhu (HuaQiao University), Heng Xu (Huaqiao University), Yutao Chen (HuaQiao University), Linhan Huang (HuaQiao University), Huanqiang Zeng (HuaQiao University)

A Multi-Task Learning Framework for Multi-View Predictive Business Process Monitoring

Chenying Zhao (Hangzhou Dianzi University), Xiaoxiao Sun (Hangzhou Dianzi University), Dongjin Yu (Hangzhou Dianzi University), Shicong Han (Hangzhou Dianzi University), Yi Xu (Hangzhou Dianzi University)

Enhancing Features in Long-tailed Data Using Large Vision Model

Pengxiao Han (Australian National University), Changkun Ye (Australian National University), Jinguang Tong (Australian National University), Cuicui Jiang (Hong Kong University of Science and Technology), Jie Hong (University of Hong Kong), Li Fang (Chinese academy of science), Xuesong Li (Australian National University)

An Integrated Scheme of Image Encryption and Steganography Based on the Improved 2D-CLSHS Chaotic System

Lingzhi Zhou (Guangdong University of Technology), Hongjing Chen (Guangdong University of Technology), Boyang Chen (Guangdong University of Technology), Ziqing You (Guangdong University of Technology), Yuhuan Liao (Guangdong University of Technology), Qing Liu (Guangdong University of Technology), Jiawen Yi (Guangdong Ocean University), DeMin Pang (Huaiyin Institute of Technology), Jinze Wang (Swinburne University of Technology)

Cancer Drug Response Prediction Based on Graph Neural Networks and Cross-Attention

Junming Zhang (Chengdu University of Information Technology), Yongqing Zhang (Chengdu University of Information Technology)

RoseNet: A Cross-Modal Incongruity Adaptive Graph Learning Network in Multimodal Sentiment Recognition

Guangyu Wang (Key Lab of Bigdata Management-Optimization-Decision of Liaoning, Dongbei University of Finance and Economics,), Yujie Chen (Key Lab of Bigdata Management-Optimization-Decision of Liaoning, Dongbei University of Finance and Economics,), Ming Gao (School of MSE, Key Lab of Bigdata Management-Optimization-Decision of Liaoning, Dongbei University of Finance and Economics, Post-doctoral Center of Computer Science, Northeastern University), Zhiqiao Wu (Key Lab of Bigdata Management-Optimization-Decision of Liaoning, Dongbei University of Finance and Economics,), Jiafu Tang (Key Lab of Bigdata Management-Optimization-Decision of Liaoning, Dongbei University of Finance and Economics,)

Pre-trained Latent Diffusion Model-based Image Enhancement with Cross-Fusion Transformer Network for Expression Recognition

Liu Fan (Hunan University), Dou Yutao (Hunan University), He Changfeng (Hunan University), Chen Xianliang (Central South University), Zhou Jiansou (Central South University), Peng Si (Hunan University)

From Metaphor to Mechanism: How LLMs Decode Traditional Chinese Medicine Symbolic Language for Modern Clinical Relevance

Jiacheng Tang (Shandong Normal University), Nankai Wu (China Pharmaceutical University), Fan Gao (The University of Tokyo), Chengxiao Dai (Universiti Tunku Abdul Rahman), Mengyao Zhao (Shandong Normal University), Xinjie Zhao (The University of Tokyo)

M2SOPT: Multi-scale Multi-modal Survival Outcome Prediction Transformer

Yu Su (Changchun University of Science and Technology), Peng Wang (Changchun University of Science and Technology)

ASP-CLIP: Adaptive and Static Prompts Learning for Zero-shot Anomaly Detection

Buqing Zou (University of Jinan), Xiaofeng Qu (University of Jinan), Fenghang Zhang (University of Jinan), Guang Feng (University of Jinan), Xizhan Gao (University of Jinan), Sijie Niu (University of Jinan)

Exploring Linear Attention Alternative for Single Image Super-Resolution

Rongchang Lu (Qinghai University), Changyu Li (Qinghai University), Donghang Li (Qinghai University), Guojing Zhang (Qinghai University), Jianqiang Huang (Qinghai University), Xilai Li (Qinghai University)

DNWHCN: Dynamic Node Weights-based Hypergraph Convolution Network for Neurodevelopmental Disorder Classification

WANG Peng (taiyuan university of technology), Rui Cao (Taiyuan University of Technology)

SESA-KAN: Simultaneous estimation of sex and age from dental panoramic radiographs

Julian Liang (UFBA), Igor Prado (UFBA), David Lima (UFBA), Marcio Santos (UFBA), Patrícia Cury (UFBA), Luciano Oliveira (UFBA)

The Multi-Period Time Series Forecasting Method Based on Temporal Decoupling: TimeShaper

Xinghao Wang (Zhejiang University), Zhengong Cai (Zhejiang University), Bowei Yang (Zhejiang University), Xinhua Miao (Zhejiang University), Aoyu Wang (Hangzhou HarmonyCloud Technology Co., Ltd.)

MSEU-Net: Multi-Scale Segmentation and Baseline Estimation in Fetal Heart Rate Time Series

Yu Lu (Shenzhen Technology University), Qiong Zhu (Shenzhen Technology University), Laya Li (Shenzhen Technology University), Heng Zhao (Shenzhen Technology University), Yuting Peng (Shenzhen Technology University), Pufan Cai (Shenzhen Technology University), Shijie Shi (Shenzhen Technology University)

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Adversarial Attack on Large Language Models using Exponentiated Gradient Descent

Sajib Biswas (Florida State University), Mao Nishino (Florida State University), Samuel Jacob Chacko (Florida State University), Xiuwen Liu (Florida State University)

A Pluggable Multi-Task Learning Framework for Sentiment-Aware Financial Relation Extraction

Jinming Luo (Southwestern University of Finance and Economics), Hailin Wang (Southwestern University of Finance and Economics)

Non-Intrusive Load Monitoring Missing Data Recovery via Nonlinear PID-Incorporated Latent Factorization of Tensors

Yiran Wang (Southwest university), Tangtang Xie (Southwest university), Hao Wu (Southwest university)

Modelling Reinforcement Learning in the Basal Ganglia: A Neuromodulated Approach on SpiNNaker

Pavan Kumar Enuganti (BITS Pilani K K Birla Goa Campus), Basabdatta Sen Bhattacharya (BITS Pilani K K Birla Goa Campus)

PreSem-Surf: RGB-D Surface Reconstruction with Progressive Semantic Modeling and SG-MLP Pre-Rendering Mechanism

YuYan Ye (Fuzhou University), Hang Xu (Fuzhou University), YangHang Huang (Fuzhou University), Jiali Huang (Fuzhou University), Qian Weng (College of Computer and Data Science, Fuzhou University, Fuzhou 350108, China)

Cross-View Image Geo-Localization Based on Weighted InfoNCE

Zhongju Ma (Zhengzhou University), Chunfang Yang (the Henan Key Laboratory of Cyberspace Situation Awareness), Ma Zhu (the Henan Key Laboratory of Cyberspace Situation Awareness)

MFSF-NET: Building Extraction Based on Fusion of Spatial Domain and Multi-scale Frequency Domain

Xiyan Gan (School of Computer Science, China University of Geosciences,Wuhan, China), Zihan Gu (School of Computer Science, China University of Geosciences,Wuhan, China), Linqun Yang (School of Computer Science, China University of Geosciences,Wuhan, China)

CADRAG: Credibility-Aware Dynamic Retrieval-Augmented Generation for LLMs

Longgang He (North China Electric Power University), Zhenhua Wei (North China Electric Power University)

EROCNet: Multi-Scale Spectral Synergy for Resource-Efficient Retinal Optical Coherence Tomography Diagnosis

Tuersunjiang Baidi (Xinjiang University), Kurban Ubul (Xinjiang University)

CLIPPose: Using Language Prompts for Human Pose Estimation

Yubo Zhang (JiangNan University), Jiayong Zhu (JiangNan University)

A Chinese Document-Level Event Causality Extraction Method Based on Auto-Cot

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Guangshuai Ding (China Satellite Maritime Measurement and Control Department), Shuang Liu (China Satellite Maritime Tracking and Control Department,)

SCGS: Interactive Scale-Controlled 3D Object Segmentation with Gaussian Splatting

Yue JIN (Southeast University), Yilong Liu (Southeast University), Yuanyang Zhang (Southeast University), Tianchen Zhou (Southeast University), Li Yao (Southeast University)

BACKTRACKER: A Novel Background Traffic Identification System for Mobile Apps

Yuyi Liu (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Yitong Cai (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Shu Li (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Hongfei Zhang (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Rong Yang (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences), Qingyun Liu (Institute of Information Engineering, Chinese Academy of Sciences, School of Cyber Security, University of Chinese Academy of Sciences)

Enhancing Knowledge Tracing with Residual GRU and k-Attention for Student Response Prediction

Ke Xu (South-Central Minzu University), Yi Wang (South-Central Minzu University), Yongqiang Zhang (Wuhan Dameng Database Co.,Ltd / HUST), Lu Zheng (South-Central Minzu University), Songfeng Lu (Huazhong University of Science and Technology), Jun Tie (South-Central Minzu University)

Exploring Reconstructed AMR Graph for Generative Event Extraction

Junting Li (School of Computer Science & Technology, Soochow University), Zhongqing Wang (School of Computer Science & Technology, Soochow University), Peifeng Li (School of Computer Science & Technology, Soochow University)

Optimization of Task Offloading Strategy based on Lyapunov and Deep Reinforcement Learning in Multi MEC Systems

Shuang Liang (Guilin University of Technology), Xiaolan Xie (Guilin University of Technology)

Edge-Enabled Federated Learning for Predictive Energy Modeling in Multi-Building Systems

Faizan Hamayat (University of Engineering and Technology Taxila), Haider Ali (Pak-Austria Fachhochschule IAST), Maha Driss (Prince Sultan University), Jan Sher Khan (Air University)

Gradient-Threshold-Based Integrity Tree Optimization for Secure GPU Memory

Shaofeng Lin (Institute of Software, Chinese Academy of Sciences, China), Mingshu Li (Institute of Software, Chinese Academy of Sciences, China), Yeping He (Institute of Software, Chinese Academy of Sciences, China), Qiming Zhou (Institute of Software, Chinese Academy of Sciences,

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China), Hengtai Ma (Institute of Software, Chinese Academy of Sciences, China), Xiaohui Wu (Institute of Software, Chinese Academy of Sciences, China)

Exploring the Potential and Boundaries of KAN in Encrypted Traffic Classification

Shituo Ma (University of Chinese Academy of Sciences), Wei Xia (Institute of Information Engineering, Chinese Academy of Sciences & School of Cyber Security, University of Chinese Academy of Sciences), Zhen Li (Institute of Information Engineering, Chinese Academy of Sciences & School of Cyber Security, University of Chinese Academy of Sciences), Zhenzhen Li (Institute of Information Engineering, Chinese Academy of Sciences & School of Cyber Security, University of Chinese Academy of Sciences), Gang Xiong (Institute of Information Engineering, Chinese Academy of Sciences & School of Cyber Security, University of Chinese Academy of Sciences), Gaopeng Gou (Institute of Information Engineering, Chinese Academy of Sciences & School of Cyber Security, University of Chinese Academy of Sciences)

MSCANet: A Multi-Scale Convolutional Attention Network for Cardiac Image Segmentation

Jianing Li (Qilu University of Technology (Shandong Academy of Sciences)), Changfang Chen (Qilu University of Technology (Shandong Academy of Sciences)), Zhaoyang Liu (Qilu University of Technology (Shandong Academy of Sciences)), Hongkuan Zhang (Qilu University of Technology (Shandong Academy of Sciences))

Dynamic Similarity Weighted Regression

Wenfang Xiang (Xiamen University), Nannan Zong (Xiamen University), Songzhi Su (Xiamen University)

Zero-shot Stance Detection with Sentiment Signals and Contrastive Learning

Guangzhen Liu (Xinjiang University), Kai Zhao (XinJiang University), LinLin Zhang (Xinjiang University), Xuehua Bi (Xinjiang Medical University), Xiaoyi Lv (Xinjiang University), Cheng Chen (Xinjiang University)

HyperDiscover: Advancing Scientific Discovery through Concept Co-occurrence and Hypergraph Neural Networks

Jiyong Qu (Inner Mongolia University), Zhijie Ban (Inner Mongolia University)

Rethinking Generalized Long-Tailed Classification: A Constrained Optimization Formulation and Exact Penalty Method

Jiarui Sun (Peking University Shenzhen Graduate School), Canmiao Fu (Tencent Inc.), Yong Zhao (Peking University Shenzhen Graduate School), Xinan Wang (Peking University Shenzhen Graduate School)

Evaluating and Enhancing LLMs for Multi-turn Text-to-SQL with Multiple Question Types

Ziming Guo (Harbin University of Science and Technology), Chao Ma (Harbin University of Science and Technology), Yinggang Sun (Harbin Institute of Technology), Tiancheng Zhao (Harbin University of Science and Technology), Guangyao Wang (Harbin University of Science and Technology), Hai Huang (Harbin University of Science and Technology)

User to Video: A Model for Spammer Detection Inspired by Video Classification Technology

Haoyang Zhang (Chongqing University of Posts and Telecommunications), Zhou Yang (Sichuan Vocational and Technical College), Yucai Pang (Sichuan Vocational and Technical College)

SigmaCam: Exact Decision Boundary Extraction for DNNs with Smooth Nonlinearities

Nikkat Afrin (Department of Graduate Computer Science and Engineering, Katz School of Science and Health, Yeshiva University), Mohammadzubair Khan (Department of Graduate Computer Science and Engineering, Katz School of Science and Health, Yeshiva University), Likun Xia (Capital Normal University), Yading Yuan (Department of Radiation Oncology, Columbia University Irving Medical Center), Ming Ma (Department of Graduate Computer Science and Engineering, Katz School of Science and Health, Yeshiva University)

NPMTiny: A Group-Decision-Oriented Non-Performing Mind Benchmark

Jiaxiang Li (Institute of Automation, Chinese Academy of Sciences), Danli Wang (Institute of Automation, Chinese Academy of Sciences), Xinyuan Wang (Institute of Automation, Chinese Academy of Sciences)

Efficient Encrypted Traffic Classification with Multiple Knowledge Distillation

Guozheng Yang (National University of Defense Technology), Ze Chen (National University of Defense Technology), Zijia Song (National University of Defense Technology)

Informative Discrimination Network for Efficient Single Image Super-Resolution

Yuzheng Tu (National University of Defense Technology), Xinhai Chen (National University of Defense Technology), Chunye Gong (National University of Defense Technology), Jie Liu (National University of Defense Technology), Bo Yang (National University of Defense Technology), Xiang Gao (National University of Defense Technology), Xiang Zhang (National University of Defense Technology)

Improving Generalization of Medical Image Registration Foundation Model

Jing Hu (Chengdu University of Information Technology), Kaiwei Yu (Chengdu University of Information Technology), Hongjiang Xian (Chengdu University of Information Technology), Shu Hu (University at Buffalo), Xin Wang (Keya Medical)

Distribution Features Based on Normalizing Flow for Anomaly Detection

Juntao Chen (School of Computer Engineering and Science Shanghai University), Lu Wang (School of Computer Engineering and Science Shanghai University)

Invertible TabMap: An Invertible Self-supervised Mapping for Imbalanced Classification of Tabular Data

Ruoxue Liu (The Hong Kong University of Science and Technology), Wenjia Wang (The Hong Kong University of Science and Technology (Guangzhou)), Chi Zhang (Kuaishou Technologies), Yuan Yao (The Hong Kong University of Science and Technology)

Enhancing Long-Tailed Recognition with Skill-specialized Experts and Bootstrap Latent Consistency

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Jianfu Li (South China University of Technology), Yang Xue (South China University of Technology)

QFARE: Quantum Feedforward Adaptive Reinforcement Ensemble for MNIST Classification

Eason Xie (La Salle College)

How can we trust opaque systems? Criteria for robust explanations in XAI

Annika Schuster (TU Dortmund), Florian J. Boge (TU Dortmund)

SaSa: Semantic-aware Sequence Augmentor for Recommendation

Yucheng Zhong (Hangzhou Dianzi University), Jin Fan (Hangzhou Dianzi University), Danfeng Sun (Hangzhou Dianzi University), Jiajun Yang (Hangzhou Dianzi University), Huifeng Wu (Hangzhou Dianzi University)

ALM-KD: Adaptive Layer Mapping Knowledge Distillation for LLMs

Baizhou Xu (National University of Defense Technology), Zhilin Yang (National University of Defense Technology), Xin Niu (National University of Defense Technology), Zhaoning Zhang (National University of Defense Technology), Zhen Huang (National University of Defense Technology), Linbo Qiao (National University of Defense Technology), Yafei Qi (Central South University)

TSNet: A Transformer-based Medical Image Segmentation Algorithm for Improving Channel Interaction

Tan Deng (Changsha University of Science & Technology, School of Computer and Communication Engineering)

Learning With Spiking Neural Assembly-Based State Machine

Mitra Rahmatinezhad (Carleton University, Ottawa, Canada), Arash Ahmadi (Carleton University, Ottawa, Canada)

LOVD: Open-Vocabulary Object Detection Based on LLM-Enhanced Agents

Xinhao Li (University of Chinese Academy of Sciences), Jungang Xu (University of Chinese Academy of Sciences)

HDTPose: A Hierarchical Decoding Transformer for End-to-End Single-Stage Multi-Person Pose Estimation

WEI ZHANG (CASIA), Bin Xue (CASIA), Qi Li (CASIA), Zhenan Sun (CASIA)

EPSILON: Adaptive Fault Mitigation in Approximate Deep Neural Network using Statistical Signatures

Khurram Khalil (University of Missouri), Khaza Anuarul Hoque (University of Missouri)

PSNet: A Multi-Period and Multi-Scale Model for Long-term Time Series Forecasting

Zehang Chen (Xiamen University), Licun Dai (Xiamen University), Fan Lin (Xiamen University)

What is Wrong with Visual Brain Decoding? A Saliency-based Investigation

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Mohammad Moradi (University of Catania), Morteza Moradi (University of Catania), Marco Grassia (University of Catania), Giuseppe Mangioni (University of Catania)

Federated Adaptive Contrastive Prototype learning for heterogeneous settings on large-scale data

Tingting Leng (Southwest University), Man Zhao (Southwest University), Li Zou (Southwest University), Jun Zhou (Southwest University)

Efficient on-chip cross-subject local field potential decoding for implantable neural interfaces

Arnau Marin-Llobet (Harvard University), Victoria Clerico (Technical University of Madrid), Samuel López-Asunción (Technical University of Madrid), Arnau Manasanch (IDIBAPS, UB), Irene Merino (Technical University of Madrid), Melody Torao-Angosto (IDIBAPS), Pablo Ituero (Technical University of Madrid), Maria V. Sanchez-Vives (IDIBAPS, ICREA), Leonardo Dalla Porta (IDIBAPS)

Hy-Deft: A Hybrid Defense Technique for Vision Transformers against Adversarial Attacks in Medical Imaging

Neha A S (IIT Palakkad), Vivek Chaturvedi (IIT Palakkad), Muhammad Shafique (New York University Abu Dhabi)

ApproXAI: Energy-Efficient Hardware Acceleration of Explainable AI using Approximate Computing

Ayesha Siddique (University of Missouri), Khurram Khalil (University of Missouri), Khaza Anuarul Hoque (University of Missouri)

3DS-SLAM: Dynamic RGB-D Visual SLAM Integrating Deep Front-End and YOLOv7-Based Semantic Information

Yulong Qin (Northwest A&F University), Xin Wang (Northwest A&F University), Huijun Yang (Northwest A&F University)

MTS-Mixers: Multivariate Time Series Forecasting via Factorized Temporal and Channel Mixing

Zhe Li (Harbin Institute of Technology, Shenzhen), Xuanxuan Li (Harbin Institute of Technology, Shenzhen), Zhongwen Rao (Huawei Technologies Ltd), Lujia Pan (Huawei Technologies Ltd), Zenglin Xu (Artificial Intelligence Innovation and Incubation Institute of Fudan University)

FedCTTA: A Collaborative Approach to Continual Test-Time Adaptation in Federated Learning

Rakibul Hasan Rajib (Center for Computational and Data Sciences), Md Akil Raihan Iftee (Independent University, Bangladesh), Mir Sazzat Hossain (Independent University, Bangladesh), Sajib Mistry (Curtin University), A K M Mahbubur Rahman (Independent University, Bangladesh), Md Ashraful Amin (Independent University, Bangladesh), Amin Ahsan Ali (Independent University, Bangladesh)

Time2Text-PM: Reprogramming Pre-trained Models for Few-Shot Intention Recognition

Yantong Chen (Nanjing University of Aeronautics and Astronautics), Feng Hu (Nanjing University of Aeronautics and Astronautics)

Amurep: Adaptively Multi-layer Region Partitioning for Next POI Recommendation

Weiqiang Jiang (Xiamen University of Technology), Yan Wang (Xiamen University of Technology), Lijuan Liu (Xiamen University of Technology), Shunzhi Zhu (Xiamen University of Technology)

Fine-Grained Visual Classification Method Based on Semantically Guided Key Region Localization

Yueran Zhu (Beijing University of Posts and Telecommunications), Yu Yang (Beijing University of Posts and Telecommunications), Linna Zhou (Beijing University of Posts and Telecommunications), Min Lei (Beijing University of Posts and Telecommunications), Gang Wang (Police Integration Computing Key Laboratory of Sichuan Province)

UniROD: Unified Radar Object Detection with MAE-pretrained CNN-Transformer Fusion

Hongliang Chen (Xidian University), Kaitai Guo (Xidian University), Chen Wei (Xi'an University of Posts Telecommunications), Yang Zheng (Xidian University), Haihong Hu (Xidian University), Shenghan Ren (Xidian University), Jimin Liang (Xidian University)

Are Task-Specific Datasets the Be-All and End-All for LLM Performance?

Jintao Yang (Academy of Military Sciences), Yushan Tan (Academy of Military Sciences), Wenpeng Hu (Academy of Military Sciences), Zonghao Yang (Academy of Military Sciences), Junyao Zhou (Academy of Military Sciences), Zhunchen Luo (Academy of Military Sciences), Wei Luo (Academy of Military Sciences)

PromptHR: A Humor Recognition Network Integrating Deep Commonsense Prompt Learning and Semantic Incongruity

Xingwei Zeng (Guangzhou College of Applied Science and Technology), Jinta Weng (School of Cyber Security, University of Chinese Academy of Sciences), Hao Wu (School of Computer Science and Cyber Engineering, Guangzhou University), Tianxin Huang (Guangzhou College of Applied Science and Technology), Jing Qiu (School of Cyber intelligent, Guangzhou University), Heyan Huang (School of Computer Science and Technology Beijing Institute of Technology)

A High-Quality Sample Generation Method via Cross-Scale Diffusion for Steel Defect Detection

ZiYang Zhu (East China Normal University), Feng Wang (East China Normal University)

Designing Customized Lightweight Backbones for the Face Detection Task

Yogesh Aggarwal (Indian Institute of Technology, Guwahati), Prithwijit Guha (Indian Institute of Technology Guwahati)

Efficient Manifold-Constrained Neural ODE for High-Dimensional Datasets

Muhao Guo (Arizona State University), Haoran Li (Arizona State University), Yang Weng (Arizona State University)

Spatio-Temporal Bidirectional Fusion RGB-T Tracking

Fang Dong (National University of Defense Technology), Dianxi Shi (Advanced Institute of Big Data), Jianqiang Xia (Shanghai Jiao Tong University), Jing Xie (Intelligent Game and Decision Lab), Shaowu Yang (National University of Defense Technology)

Combat Misinformation: Dynamic User Credibility Prediction via State-Aware Neural Processes

Haoran Chen (Shanghai University of Finance and Economics), Dongmei Han (Shanghai University of Finance and Economics)

NoisConFuse-Net: Noise Perturbed Encoder with Complementary Fused Dual Decoder and CLIP based Contrastive Regulariser for CT Denoising

Munish Daroch (IIT Mandi), Ranjeet Ranjan Jha (IIT Patna), Aditya Nigam (IIT Mandi)

Unsupervised Dual-discriminative Graph Neural Network for Anomaly Detection

Yiran Liu (Xinjiang university), Jiong Yu (Xinjiang university), Zhuang Chu (Xinjiang university), Shu Li (Xinjiang university), Xusheng Du (Xinjiang university)

Efficient Bilinear Attention-based Fusion for Medical Visual Question Answering

Zhilin Zhang (New York University), Jie Wang (Tongji University), Zhanghao Qin (Nanyang Technology University), Ruiqi Zhu (Tongji University), Xiaoliang Gong (Tongji University)

An Image Hiding Scheme based on Bayesian Optimization Reinforcement Learning and Chaotic Encryption

Lingzhi Zhou (Guangdong University of Technology), Hongjing Chen (Guangdong University of Technology), Ziqing You (Guangdong University of Technology), Yuhuan Liao (Guangdong University of Technology), Qing Liu (Guangdong University of Technology), DeMin Pang (Huaiyin Institute of Technology), Jiawen Yi (Guangdong Ocean University), Yu Lu (Shenzhen Technology University)

DALFNet: A Lightweight Multimodal Fusion Network for Object Detection in In-Vehicle Scenarios with Depth Enhancement

Yehang Zhang (The Hong Kong University of Science and Technology (Guangzhou)), Zihang Shao (The Hong Kong University of Science and Technology (Guangzhou)), Doudou Zhang (The Hong Kong University of Science and Technology (Guangzhou))

AI-Driven Detection and Mitigation of Backdoor Data Infiltration Among IoT Networks

Syed Murtoza Mushrul Pasha (Chongqing University), Chunxiao Ye (Chongqing University), Shahidur Rahoman Sohag (University of Nevada, Las Vegas), Muhammad Mahin Ali (Taylor's University), MD Tanvir Islam (Chongqing University)

Kolmogorov–Arnold Representation for Symplectic Learning: Advancing Hamiltonian Neural Networks

Zongyu Wu (NO), Ruichen Xu (Brook Stony University), Luoyao Chen (New York University), Georgios Kementzidis (Stony Brook University), Siyao Wang (University of California, Davis), Yuefan Deng (Stony Brook University)

SE-Merging: A Self-Enhanced Approach for Dynamic Model Merging

Zijun Chen (Shanghai Jiao Tong University), Zhanpeng Zhou (Shanghai Jiao Tong University), Bo Zhang (Shanghai AI Laboratory), Weinan Zhang (Shanghai Jiao Tong University), Xi Sun (MetaLight HK Limited), Junchi Yan (Shanghai Jiao Tong University)

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Bound Propagation meets Constraint Simplification: Improving Logic-based XAI for Neural Networks

Ronaldo Gomes (Instituto Federal do Ceará), Jairo Ribeiro (Instituto Federal do Ceará), Luiz Queiroz (Instituto Federal do Ceará), Thiago Rocha (Instituto Federal do Ceará)

RFPO: Enhancing Mathematical Reasoning of Large Language Models with Fine-grained Preference Optimization

Fei Gao (Beijing University of Posts and Telecommunications)

PFedDST: Personalized Federated Learning with Decentralized Selection Training

Mengchen Fan (University of the Alabama at Birmingham), Keren Li (University of the Alabama at Birmingham), Tianyun Zhang (Cleveland State University), Qing Tian (University of the Alabama at Birmingham), Baocheng Geng (University of the Alabama at Birmingham)

Learning by Ranking: Data-Efficient Knowledge Distillation from Black-Box LLMs for Information Retrieval

Zizhong Li (University of California, Davis), Haopeng Zhang (University of Hawaii at Manoa), Jiawei Zhang (University of California, Davis)

CAMFeND: Credibility-Aware Multimodal Fake News Detection with Rotational Attention

Nidhi Gupta (University of Arkansas), Qinghua Li (University of Arkansas), Lu Zhang (University of Arkansas)

Robust-CLIP: End-to-End Fine-Tuning of Vision-Language Models under Noisy Labels

Guanyu Chen (Intelligent Game and Decision Lab (IGDL)), Ruihao Li (Intelligent Game and Decision Lab (IGDL)), Defu Liu (Intelligent Game and Decision Lab (IGDL)), Wei Yi (Intelligent Game and Decision Lab (IGDL))

SAM-RAG: A Self-adaptive Framework for Multimodal Retrieval-Augmented Generation

Wenjia Zhai (Independent)

Towards Accurate Federated Learning under Heterogeneous Local Models via Global Model Decoupling

Shijie He (Sichuan University of Science & Engineering), Jinshan Lai (University of Electronic Science and Technology of China)

A Combined Frequency-Domain Filtering and Multi-Scale Spatial Feature Communication Based Network for Hyperspectral Image Classification

Shanjiao Jiang (Xidian University), Yi Liu (Xidian University), Caihong Mu (Xidian University), Xinyu He (Xidian University)

R-LLaVA: Improving Med-VQA Understanding through Visual Region of Interest

Xupeng Chen (New York University), Zhixin Lai (Cornell University), Kangrui Ruan (Columbia University), Shichu Chen (New York University), Jiaxiang Liu (Zhejiang University), Zuozhu Liu (Zhejiang University)

MGF-RL: A Multi-level Graph Fusion and Reinforcement Learning Framework for Function Name Inference in Binaries

menglu wang (Qilu University of Technology (Shandong Academy of Sciences)), xiaohui han (Qilu University of Technology (Shandong Academy of Sciences)), peipei wang (Qilu University of Technology (Shandong Academy of Sciences)), chaoran cui (Shandong University of Finance and Economics)

Sample-to-Sample Learning and inverted bottleneck for Speaker Verification

Yihao Chen (speakin), Jialong Wang (Hefei IFytek Digital Technology Co., Ltd), Yunqi Hao (Xinjiang university), Minqiang Xu (Hefei IFytek Digital Technology Co., Ltd), Liang He (Tsinghua University), Lei Fang (Hefei IFytek Digital Technology Co., Ltd), Sian Fang (Hefei IFytek Digital Technology Co., Ltd)

Contextual Self-Learning Approach for Continuous Object Detections in Expansive Visual Domains

Dhroov Bharatia (ACM Student Member), Harshal Bharatia (University of Texas at Austin)

Using Language Models for Extracting Legal Decisions from Portuguese Consumer Law Texts

Santiago Vasquez Saavedra (PUC-Rio), Thiago Carvalho (UERJ), Diego Paez (PUC-Rio), João Verçosa (PUC-Rio), Eduardo Ramos (PUC-Rio), Alimed Celecia (Tecgraf PUC-Rio), Isabella Frajhof (EOA PUC-Rio), Ana Mangeth (EOA PUC-Rio), Maria Julia Lima (Tecgraf PUC-Rio), Karla Figueiredo (UERJ), Meyer Nigri (PUC-Rio), Marley Vellasco (PUC-Rio)

A Neural Network Approach to Image-Based Navigation and Localization

Daniel Short (Mississippi State University), Tingjun Lei (University of North Dakota), Lantao Liu (Indiana University Bloomington), Chaomin Luo (Mississippi State University), Erfu Yang (University of Strathclyde)

DMT-DHIN: A Dynamic Heterogeneous Information Network Framework for Detecting Malicious Encrypted Traffic

Xiaotong Li (Qilu University of Technology), Xiaohui Han (Qilu University of Technology), Hui Cui (Qilu University of Technology), Lei Guo (Shandong Normal University), Hua Ding (Qilu University of Technology), Chaoran Cui (Shandong University of Finance and Economics)

LBurst: Learning-Based Burst Features for Low-Light 3D Reconstruction

Ahalya Ravendran (CSIRO), Donald Dansereau (University of Sydney), Mitch Bryson (University of Sydney)

BAGNet: A Boundary-Aware Graph Attention Network for 3D Point Cloud Semantic Segmentation

Wei Tao (Huazhong University of Science and Technology), Xiaoyang Qu (Ping An Technology (Shenzhen) Co, Ltd.), Kai Lu (Huazhong University of Science and Technology), Jiguang Wan (Huazhong University of Science and Technology), Shenglin He (Huazhong University of Science and Technology), Jianzong Wang (Ping An Technology (Shenzhen) Co, Ltd.)

MOVie: GPU Memory Optimization for Large-Scale DNNs Training with Virtual Memory Management

Zijun Ma (National University of Defense Technology), Jiabao Tang (National University of Defense Technology), Songlei Jian (National University of Defense Technology), Jianfeng Zhang (National University of Defense Technology), Yusong Tan (National University of Defense Technology)

Diversity-Driven Offline-to-Online Multi-Player Policy Learning for Football Matches

Shijie Wang (Institute of Automation, Chinese Academy of Sciences), Zhiqiang Pu (Institute of Automation, Chinese Academy of Sciences), Tianyi Hu (Institute of Automation, Chinese Academy of Sciences), Hao Ma (Institute of Automation, Chinese Academy of Sciences), Huimu Wang (JD.COM), Jianqiang Yi (Institute of Automation, Chinese Academy of Sciences)

DLLaVA: A Novel Multimodal Architecture with Enhanced Vision Encoder and Curriculum Learning

Yuqi Mao (Nankai University), Jianyu Zhou (Nankai University)

SO-DETR: Leveraging Dual-Domain Features and Knowledge Distillation for Small Object Detection

Huaxiang Zhang (Fudan University), Hao Zhang (Fudan University), Aoran Mei (Fudan University), Zhongxue Gan (Fudan University), Guo-Niu Zhu (Fudan University)

JurisCTC: Enhancing Legal Judgment Prediction via Cross-Domain Transfer and Contrastive Learning

Zhaolu Kang (Peking University), Hongtian Cai (Jilin University), Xiangyang Ji (Jilin University), Jinzhe Li (Jilin University), Nanfei Gu (Shanghai Jiao Tong University)

MIPO: Mutual Integration of Patient Journey and Medical Ontology for Healthcare Representation Learning

Xueping Peng (University of Technology Sydney), Guodong Long (University of Technology Sydney), Tao Shen (University of Technology Sydney), Sen Wang (The University of Queensland), Chengqi Zhang (University of Technology Sydney), Allison Clarke (Australian Government Department of Health and Aged Care), Clement Schlegel (Australian Government Department of Health and Aged Care)

An Accurate, Explainable and Efficient Vision Transformer with Feature Selection and Class Activation Mapping

Luna Zhang (Stony Brook University)

OWAS-DRL: Online Workflow Application Scheduling in Dynamic Mobile Edge Computing with Deep Reinforcement Learning

Yuhua Ye (South China Normal University), Cheng Qian (South China Normal University), Gansen Zhao (South China Normal University)

Enhancing Intra-Modality Compactness in Text-to-Image Person ReID

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Zhanghao Qin (Nanyang Technology University), Hongming Zhang (Nanyang Technology University), Zhilin Zhang (New York University), Tianyu Wang (Hangzhou Institute of Advanced Study, Chinese Academy of Sciences), Hongtao Mao (Central China Normal University, Wuhan, Hubei, 430079), Guangzhen Yao (Northeast Normal University)

MTSR: Mamba-Transformer Network for Super-Resolution Reconstruction on Single Hyperspectral Image

Zhihua Xie (Jiangxi Sciences and Technology Normal University), Guohua Miao (Jiangxi Sciences and Technology Normal University), Haolin Chang (Jiangxi Sciences and Technology Normal University), Rui Chen (Jiangxi Sciences and Technology Normal University)

XGBoost6mA: A Framework for 6mA Site Prediction Based on Deep Learning and XGBoost

Zhixiang Xu (Dalian University of Technology), Jiaxin Zhong (Dalian University of Technology), Wen Wen (Dalian University of Technology), Yufei Bao (The university of Sydney), Xiaoya Fan (Dalian University of Technology), Xiangtao Liu (Xinjiang Medical University), Zhong Wang (Dalian University of Technology)

Dilated Point Spatio-Temporal Mesh Transformer for mmWave Radar-Based Human Mesh Reconstruction

Lin Chen (School of Computer Science and Engineering, Sun Yat-sen University), Guoli Wang (School of Software Engineering, Sun Yat-sen University)

ByteGT: A Hybrid Sequential-Attention Network for Enhancing File Fragment Classification on Raw Data

Yuhao Zhang (National University of Defense Technology), Fei Wang (National University of Defense Technology), Shuhui Chen (National University of Defense Technology), Ziling Wei (National University of Defense Technology)

YOLO-Driven Prompt Generation for SAM-Based Brain Tumor Segmentation

bolin lv (Lanzhou University), Min Yuan (School of Information Science & Engineering, Lanzhou University)

TRAIL: A Transformer-Enhanced Feature Embedding Approach for Unsupervised Anomaly Detection

Jingjing Feng (Institute of Information Engineering, Chinese Academy of Sciences), Wenzhuo Cui (Institute of Information Engineering, Chinese Academy of Sciences), Shuyi Zhang (Institute of Information Engineering, Chinese Academy of Sciences), Xulong Wei (Institute of Information Engineering, Chinese Academy of Sciences), Yingying Du (Institute of Information Engineering, Chinese Academy of Sciences), Yu Wen (Institute of Information Engineering, Chinese Academy of Sciences)

MAIF: Efficient Multi-agent Communication via Intention Filter

Chengcheng Wu (Beihang University Beijing), Jianwei Niu (Beihang University Beijing), Tao Ren (Institute of Software Chinese Academy of Science)

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AMFCNet: Adaptive Multi-Scale Fourier Contrastive Network for Seismic Signal Classification

xue fei xia (University of Science and Technology of China)

MSFF-SNet: An End-to-end Object Sorting Model with Multi-head Self-attention and Multi-scale Feature Fusion

XIAOYA FAN (Dalian University of Technology), Jiaxiao Wang (Dalian University of Technology), Zilu Wang (Dalian University of Technology), Zhonghua Huang (Dalian University of Technology), Wenjie Yang (Dalian University of Technology), Zhong Wang (Dalian University of Technology)

CoReGraph-CR: Credit Rating Method Based on the Corporate Feature Relationship Graph

Bingqian Wen (Beijing University of Posts and Telecommunications), Yisi Wang (Guotai Junan Securities), Yiting Zhou (Hebei University of Technology), Diyang Lu (Beijing University of Posts and Telecommunications), Linna Zhou (Beijing University of Posts and Telecommunications), zhongliang yang (Beijing University of Posts and Telecommunications)

LAPC: Large Language Model-Powered Adaptive Parameter Control for Evolutionary Algorithms

Yisong Zhang (Harbin Institute of Technology), Guoxing Yi (Harbin Institute of Technology), Hao Wang (Harbin Institute of Technology), Yu Cheng (Harbin Institute of Technology), Yiran Chen (Harbin Institute of Technology), Zhennan Wei (Harbin Institute of Technology)

Debiased Prompt Tuning for Vision-Language Models without Annotations

Chaoquan Jiang (Beijing Jiaotong University), Yunfan Yang (Beijing Jiaotong University), Rui Hu (Beijing Jiaotong University), Jitao Sang (Beijing Jiaotong University)

AIMR: An Auction-based Incentive Mechanism for Federated LLM Fine-Tuning

Mengqi Shan (Wuhan University), Mingxin Wang (Wuhan University), Yulan Yang (Wuhan University), Hao Huang (Wuhan University)

SPARC: Subspace-Aware Prompt Adaptation for Robust Continual Learning in LLMs

Dinithi Jayasuriya (University of Illinois Chicago), Sina Tayebati (University of Illinois Chicago), Davide Etti (University of Illinois Chicago), Ranganath Krishnan (Intel Labs), Amit Trivedi (University of Illinois Chicago)

Comparative Analysis of Foundation Models for EEG-based Alzheimer's Disease Detection

Nan Huang (University of North Carolina at Charlotte), Alexandros Tzallas (University of Ioannina), Xiang Zhang (University of North Carolina at Charlotte)

PHTop: Sketch Recognition Technology Based on Graph Topology Neural Network

Zhentao Liu (Shandong normal University), Xu Ye (Beijing Yineng Zhongwang Technology Co., Ltd), Fang Sun (Capital Normal University), Lu Yi (Shan Dong normal University)

A Domain-Adaptive Framework for Constructing Eventic Graphs

Haibo Liu (Harbin Engineering University), Shengze Wang (Harbin Engineering University), Jing Shen (Harbin Engineering University)

Privacy-Preserving PCA Based Face Recognition Scheme with Sparse Matrix Encryption

Tong Ji (School of Software, Shandong University), Fanyu Kong (School of Software, Shandong University), Yunting Tao (College of Information Engineering, Binzhou Polytechnic), Guoyan Zhang (School of Cyber Science and Technology, Shandong University), Qiuliang Xu (School of Software, Shandong University)

Through the Theory of Mind's Eye: Reading Minds with Multimodal Video Large Language Models

Zhanwen Chen (University of Virginia), Tianchun Wang (Pennsylvania State University), Yizhou Wang (Northeastern University), Michal Kosinski (Stanford University), Xiang Zhang (Pennsylvania State University), Yun Fu (Northeastern University), Sheng Li (University of Virginia)

A Dental Periapical X-ray Images Segmentation Network Based on Pixel-Wise Contrastive Learning with Dual Attention Mechanisms

Du Yanan (Chongqing Normal University), Zeng Zhi (Chongqing Normal University), Tian Yibin (Shenzhen University), Zhang Zhiyuan (Singapore Management University), Zhang Xueyang (Southern Medical University), Shan Lianlei (University of Chinese Academy of Sciences)

Debiasing Event Causality Identification in Large Language Models via Back-door Adjustment

Mingrui Xie (China University of Geosciences), Renda Han (School of Computer Science and Technology, Hainan University), Shengyin Yu (Guangdong University of Technology)

SPDou: Mastering the DouDiZhu Game with ISPPPO Models

Shipeng Wang (Shenyang Aerospace University), Yajie Wang (Shenyang Aerospace University), Qilong Guo (Shenyang Aerospace University), Tianyu Zhao (Shenyang Aerospace University)

MS-MoE: Multi-modal Structural Mixture of Experts Framework for Pan-Sharpening

Hao LUO (City University of Hong Kong), Zhiwei ZHONG (City University of Hong Kong), Lingyu ZHU (City University of Hong Kong), Yudong MAO (City University of Hong Kong), Shiqi WANG (City University of Hong Kong)

SAM-TransUnet: A framework for medical image segmentation combining TransUnet and automatic cueing information: methodology, optimization, and applications

Si-Yu Qi (Jiangnan University), Xiang Pan (Jiangnan University)

AMNET: Attention-Base Multiscale Network for Image-Text Matching

Jiabao Hai (Xinjiang University), Qing Yu (Xinjiang University), YuTong Gan (Xinjiang University), Mingshuo Wang (Xinjiang University), Yuhui Zhou (Xinjiang University)

AMNet: An Acoustic Model Network for Enhanced Mandarin Speech Synthesis

Yubing Cao (Xinjiang University), Yinfeng Yu (Xinjiang University), Yongming Li (Xinjiang University), Liejun Wang (Xinjiang University)

DSPA: Dual-Spiral Pyramid Network with Multi-scale Attention for Temporal Action Localization

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Xuhong Li (Beijing University of Technology), Shuai Zhang (Beijing University of Technology), Haiyu Liu (Beijing University of Technology), Hexiong Yang (Beijing University of Technology), Keyan Ren (Beijing University of Technology)

Toward Invisible Region Restoration for Single-View 3D Face Reconstruction

Zhijing Cheng (Soochow University), YuQing Wen (Soochow University), CongCong Zhu (University of Science and Technology of China), Rui Du (Soochow University)

Robust and Noise-resilient Long-Term Prediction of Spatiotemporal Data Using Variational Mode Graph Neural Networks with 3D Attention

Osama Ahmad (Lahore University of Management Sciences), Zubair Khalid (Lahore University of Management Sciences)

Modulo Video Recovery via Selective Spatiotemporal Vision Transformer

Tianyu Geng (Nanyang Technological University), Feng Ji (Nanyang Technological University), Wee Peng Tay (Nanyang Technological University)

Revisiting the Knowledge Recall and Selection in Chinese Spelling Correction

Zhengxu Hou (Alibaba), Bingren Yan (Alibaba), Zhibo Yang (Alibaba), Qiang Zhou (Alibaba), Luxi Xing (Alibaba), Chen Zhang (Alibaba), Xingsheng Zhang (Alibaba)

Enhanced Neural Architecture Search with Multi-Dimensional Curriculum Learning for Defect Detection

Yibo Yong (Northeastern University), Lianbo Ma (Northeastern University)

MDPO: Multi-Granularity Direct Preference Optimization for Mathematical Reasoning

Yunze Lin (Beijing University of Posts and Telecommunications)

CAD: Confidence-Aware Adaptive Displacement for Semi-Supervised Medical Image Segmentation

Wenbo Xiao (Hunan Agricultural University), Zhihao Xu (Hunan Agricultural University), Guiping Liang (Hunan Agricultural University), Yangjun Deng (Hunan Agricultural University), Yi Xiao (Hunan Agricultural University)

RS-LLAVA: Remote Sensing Large Models Based on Lower Illusion

Haosen Sun (Beihang University)

T²CT: Transformer-CTC Adaptive Framework for Continuous Sign Language Recognition

Murtadha Aljubran (Mohamed bin Zayed University of Artificial Intelligence), Muhammad Haris Khan (Mohamed bin Zayed University of Artificial Intelligence)

Towards Roman Urdu Named Entity Recognition: Standardized Dataset and Transformer-Based Approaches

Rafiul Haq (Tianjin University), Xiaowang Zhang (Tianjin University), Sofonias Yitagesu (Tianjin University), Wahab Khan (USTB), Zhiyong Feng (Tianjin University)

Optimizing Multi-Scale and Multi-Modal Fusion for Medical Image Segmentation: A Novel MedSwin-UNet Architecture

Zhiyue Chen (Shanghai University), Yunfeng Yang (Shanghai University), Huahu Xu (Shanghai University), Xueping Man (Shanghai University), Shuwen Xue (Shanghai University), Hailan Wang (Shanghai University)

Eliminating Retrieval Knowledge Conflicts: Cross-Validation Re-ranking with Large Language Models

Qirui Wu (Tsinghua University), Hai Lin (Tsinghua University), Hai-Tao Zheng (Tsinghua University), Ruobing Xie (Tencent), Saiyong Yang (Tsinghua University), Xingwu Sun (Tencent), Zhanhui Kang (Tencent), Hong-Gee Kim (Seoul National University)

Prior Enhancement Strategy Based on MAP for Few-shot Image Classification

Zheng Huang (Jiangsu Ocean University), Jiaying Wu (Jiangsu Ocean University), Jingyu Chen (Jiangsu Ocean University), Zhaoman Zhong (Jiangsu Ocean University), Can Gao (Jiangsu Ocean University)

Early Prediction Method for Remaining Useful Life of Lithium Batteries Based on GPR-SSA Model

Xunfei Cai (Xiamen University), Tundong Liu (Xiamen University), Xiaomin Wu (Xiamen University of Technology), Ruoyu Wang (Xiamen University)

Hybrid Multi-stage Decoding for Few-shot NER with Entity-aware Contrastive Learning

Congying Liu (University of Chinese Academy of Sciences), Gaosheng Wang (University of Chinese Academy of Sciences), Peipei Liu (ZGC Lab), Xingyuan Wei (University of Chinese Academy of Sciences), Hongsong Zhu (University of Chinese Academy of Sciences)

ECViT: Efficient Convolutional Vision Transformer with Local-Attention and Multi-scale Stages

Zhoujie Qian (Shanghai University)

Unveiling Hidden Gems: Enhancing Entity Resolution with a Data Perspective

Hongtao Song (Harbin Engineering University), Shuang Zhang (Harbin Engineering University), Yuhao Zhao (Hong Kong Baptist University), Qilong Han (Harbin Engineering University)

Dual-Stream Global-Local Feature Collaborative Representation Network for Scene Classification of Mining Area

Shuqi Fan (School of Computer Science China University of Geosciences), Haoyi Wang (School of Computer Science China University of Geosciences), Xianju Li (School of Computer Science China University of Geosciences)

DEval: Enhancing Large Language Models' Decoding with Evaluation for Better Generation

Ziqin Luo (Fudan University), Jinyi Han (Fudan University), Haokun Zhao (Fudan University), Dixuan Wang (Fudan University), Guochao Jiang (Fudan University), Jiaqing Liang (Fudan University), Deqing Yang (Fudan University)

HSR-KAN: Efficient Hyperspectral Image Super-Resolution via Kolmogorov-Arnold Networks

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Baisong Li (Jilin University), Xingwang Wang (Jilin University), Haixiao Xu (Jilin University)

EFSNet: Efficient Frequency Selective Network for Hyperspectral Image Super-Resolution

Baisong Li (Jilin University), Xingwang Wang (Jilin University), Haixiao Xu (Jilin University)

Knowledge Graph Self-Supervised Learning for Recommendation

Xinye Guan (Northeast Normal University), Guixin Chu (Northeast Normal University), Bangzuo Zhang (Northeast Normal University), Lingxuan Li (Northeast Normal University)

DualMixer: An Efficient and Robust Model for Multivariate Time Series Forecasting

Zhenlong Zou (Xinjiang University), Jiyang Wang (Xinjiang University), Chen Shen (Xinjiang University)

Selective Parameter Tuning in Large Language Models for Task Specific Adaptation

Weijie Wan (South China university), Jiangjiang Zhao (China mobile)

Towards Realistic Generation: A Multi-Task Agent for Imitating Diverse Character Linguistic Styles

Siyuan Chen (Institute of Information Engineering, Chinese Academy of Sciences), Qingyi Si (Huawei Technologies Co., Ltd), Chenxu Yang (Institute of Information Engineering, Chinese Academy of Sciences), Zheng Lin (Institute of Information Engineering, Chinese Academy of Sciences), Yunzhi Liang (Institute of Information Engineering, Chinese Academy of Sciences), Siyang Tao (University of Chinese Academy of Sciences), Zefeng Zhang (Institute of Information Engineering, Chinese Academy of Sciences), Weiping Wang (Institute of Information Engineering, Chinese Academy of Sciences)

STAR-UNet: Sinogram Transformation using Attention based Residual U-Net

Yuming Li (University of Southern California), Sreetama Sarkar (University of Southern California)

Boosting Temporal Question Answering via Two-Stage Entity Fusion

Jiangjiang Zhao (China mobile), Weijie Wan (South China university)

Multi-Reward Fusion: Learning from Other Policies through Distillation

Yiwen Zhu (Zhejiang University), Jinyi Liu (Tianjin University), Wenya Wei (Zhejiang University), Zhou Fang (Zhejiang University)

Multigrid-Inspired Graph Neural Networks for Selection of Solvers and Preconditioners in Sparse Linear Systems

Xingyu Zhou (Institute of Software, Chinese Academy of Sciences), Shuzi Niu (Institute of Software, Chinese Academy of Sciences), Huiyuan Li (Institute of Software, Chinese Academy of Sciences), Tao Yuan (Institute of Software, Chinese Academy of Sciences), Ziwei Li (Institute of Software, Chinese Academy of Sciences)

Towards Open-World Video Segmentation via Iterative Automatic Prompting

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Liangzhi Li (Qufu Normal University), Xinru Li (Qufu Normal University), Zhouqiang Jiang (Osaka University), Xingfu Cheng (Qufu Normal University), Zhaofeng Niu (Qufu Normal University), Bowen Wang (Osaka University), Guangshun Li (Qufu Normal University)

TROJAN-GUARD: Hardware Trojans Detection Using GNN in RTL Designs

Kiran Thorat (University of Connecticut), Amit Hasan (University of Connecticut), Caiwen Ding (University of Minnesota), Zhijie Shi (University of Connecticut)

Hybrid Visibility Graph and Long Short-Term Memory for Schizophrenia Detection

Asma Belhadi (OsloMet), Pedro Lind (OsloMet), Youcef Djenouri (University of South Eastern Norway), Anis Yazidi (OsloMet)

FMS-Net: Fine-Grained Multimodal Sentiment Graph Network for Rumor Detection

Jinghong Wang (Hebei normal university), Hongbo Yang (Hebei normal university), Yanan Li (Hebei normal university), Haokang Li (Hebei Polytechnic Institute College)

Local and Global: Multi-View Modeling for Duplicate Question Detection

Hailong Wang (baidu search), Jiehao Lei (Baidu Search), Jianting Liu (Google Search)

T³: Multi-level Tree-based Automatic Program Repair with Large Language Models

Quanming Liu (Shanxi University), Xupeng Bu (Shanxi University), Zhichao Yan (Shanxi University), Ru Li (Shanxi University)

Boosting Text Matching with Dependency Tree

Hailong Wang (Baidu Search), Jiehao Lei (Baidu Search), Jianting Liu (Google Search)

Role-Playing in Vision-Language Models: A Comprehensive Evaluation of Image Description Performance

Zhaofeng Niu (Qufu Normal University), Xiaoya Chang (Qufu Normal University), Bowen Wang (Osaka University), Xingfu Cheng (Qufu Normal University), Guangshun Li (Qufu Normal University), Liangzhi Li (Qufu Normal University)

MaISE: Malware Detection Based on Multi-Dimensional API Call Sensitivity Estimation

Ziqian Chen (University of Chinese Academy of Sciences), Wei Xia (University of Chinese Academy of Sciences), Zhen Li (University of Chinese Academy of Sciences), Gang Xiong (University of Chinese Academy of Sciences), Gaopeng Gou (University of Chinese Academy of Sciences), Haikuo Li (University of Chinese Academy of Sciences), Heng Zhang (University of Chinese Academy of Sciences)

DTEM: A Dynamic Trust Evaluation Method Based on GAT and Enhanced GRU

YuanHe Kuang (Hubei University), Dunhui Yu (Hubei University)

Enhancing Sequential Recommendations with Sequence Diffusion Models for Long-Tail Users

Qiyue Wu (Xiamen University), Jingyuan Feng (Xiamen University), Fan Lin (Xiamen University)

Long- and Short-Term Feature Fusion Network for River Velocity Forecasting: From Past to Future

Ruijie Gong (Tiangong University), Jinping Xie (Beifang Investigation, Design & Research CO.LTD), Kaitao Liu (Tiangong University), Lin Guo (Beifang Investigation, Design & Research CO.LTD), Minhong Dong (Tiangong University), Yu Pan (College of Intelligence and Computing, Tianjin University, Tianjin, China), Yude Bai (Tiangong University)

A Rationale-Guided Multi-Task Learning Framework for Hate Speech Detection

Qingqing Gao (Southeast University), Jiuxin Cao (Southeast University), Fengshan Song (Southeast University), Biwei Cao (Southeast University), Xin Guan (Southeast University), Bo Liu (Southeast University)

DAGNet: A Dual-View Attention-Guided Network for Efficient X-ray Security Inspection

Shilong Hong (Guangdong University of Technology), Yanzhou Zhou (Guangzhou Institute of Science and Technology), Weichao Xu (Guangdong University of Technology)

Enhancing Rumor Detection via Multi-modal User Credibility Learning

Lingyun Xiang (Changsha University of Science & Technology), Yangjie Xiong (Changsha University of Science & Technology), Hang Fu (Changsha University of Science & Technology)

DeepMF: Deep Motion Factorization for Closed-Loop Safety-Critical Driving Scenario Simulation

Yizhe Li (Tsinghua University), Linrui Zhang (Tsinghua University), Bo Xia (Tsinghua University), Xueqian Wang (Tsinghua University), Houde Liu (Tsinghua University)

Task-prompted Embedding Encoder for Multi-Task Dense Prediction

Yuhan Gao (Nanyang Technological University), Yun Liu (NanKai University)

Robust Natural Language Watermarking by Embedding Information into Key Components

Lingyun Xiang (Changsha University of Science and Technology), Song Jiang (Changsha University of Science and Technology)

Chain-of-Morphemes Tuning: Injecting Morphology in LLM-based Machine Translation

Telem Singh (IIT Guwahati), Sanasam Ranbir Singh (IIT Guwahati), Deepen Naorem (IIT Guwahati), Priyankoo Sarmah (IIT Guwahati)

GaitSE: Gait Recognition with Enhanced Spatial Extraction Capability

Kewen Dong (Software College of Hebei Normal University), Zijun Zhao (Software College of Hebei Normal University), Jiayi Zhang (Software College of Hebei Normal University)

Emotion-Aware Text Generation for Instructing Audio-Visual Emotion Recognition

Lin Wei (China University of Geosciences (Wuhan)), Yuanyuan Liu (China University of Geosciences (Wuhan)), Kejun Liu (China University of Geosciences (Wuhan)), Yuxuan Huang (China University of Geosciences (Wuhan)), Shaoze Feng (China University of Geosciences (Wuhan))

FedPTR: Enhancing Federated Prompt Learning with Server-Side Retraining for Non-IID Data

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Yufeng Chen (Institute of Computing Technology, Chinese Academy of Sciences, School of Computer Science and Technology, University of Chinese Academy of Sciences), Min Liu (Institute of Computing Technology, Chinese Academy of Sciences, School of Computer Science and Technology, University of Chinese Academy of Sciences), Sheng Sun (Institute of Computing Technology, Chinese Academy of Sciences), Zhongcheng Li (Institute of Computing Technology, Chinese Academy of Sciences, School of Computer Science and Technology, University of Chinese Academy of Sciences)

EGReg: Accurate and Efficient Registration of 3D Gaussian Splatting with Epipolar Geometry

Tuoyu Jin (Peking University), Shiqiang Long (Guangdong Bohua UHD Innovation Center Co., Ltd.), Weimin Zhang (Guangdong Bohua UHD Innovation Center Co., Ltd.), Hailong Jiao (Peking University), Ge Li (Peking University)

Cross-Domain Matrix Compression Adaptation for Zero-Shot Sketch-Based Image Retrieval

Decheng Liu (Xidian University), Xu Luo (Xidian University), Yu Zheng (Xidian University), Chunlei Peng (Xidian University)

Step-Aware Confidence Estimation in Natural Language Reasoning

Xia Changhong (Nanjing University), Liu Zhendong (Nanjing University), Chen Feng (Nanjing University), Zhou Haodi (Nanjing University), Wang Chongjun (Nanjing University)

Semi-SynRE: Enhancing Relation Extraction via Semi-Supervised Learning with Synthetic Data

Jianjian Zou (Nanjing University of Aeronautics and Astronautics), Yuhui Xiao (Nanjing University of Aeronautics and Astronautics), Qun Yang (Nanjing University of Aeronautics and Astronautics)

CS-DAViT: Cross-Scale Vision Transformer with Dual Attention for Efficient Emotion Recognition

Yuying Liu (Zhejiang Sci-Tech University), Haolan Zhang (Ningbotech University), Liuyexin Lu (Ningbotech University), Youpeng Yang (Zhejiang University, NingboTech University), Yunfa Fu (Kunming University of Science and Technology)

BRAFL: Byzantine-Robust Aggregation Scheme for Federated Learning under Data Heterogeneity

Mengxing Qiu (Hebei University), Zhiguo Liu (Shijiazhuang University), Ruizhong Du (Hebei University), Xiaoyan Liang (Hebei University)

A Novel Graph Representation of Spectrograms: A Comparative Study of GNN-based Respiratory Sound Classification Methods

Zhenyu Zhao (Beijing University of Posts and Telecommunications)

Temporal-Aware Domain Adaptation for Noise Reduction in IMU-based Facial Perception

Yanrong Li (Institute of Computing Technology, Chinese Academy of Sciences), Yingwei Zhang (Institute of Computing Technology, Chinese Academy of Sciences), Yiqiang Chen (Institute of Computing Technology, Chinese Academy of Sciences)

CoCF: Consistent Selection and Flexible Masking for Learning with Noisy Labels

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Zhen Wang (Hebei University of Technology), Shaoqian Tao (Hebei University of Technology), Wenxin Zhao (Hebei University of Technology), Yongfeng Dong (Hebei University of Technology)

Research on Student Classroom Behavior Recognition Method Based on RTDETR

Jingjing Zhang (Shenyang Aerospace University), Xiangbin Shi (Shenyang Aerospace University), Yuanqing Feng (Shenyang Aerospace University)

DRMoE: Discourse-Aware Rhetorical Structure for Meeting Summarization with Mixture of Experts

Keyan Jin (University of Granada)

Agent-SwinTF: An Agent-Based 3D Swin Transformer for Multi-Aircraft Trajectory Prediction in Game Scenarios

Fei Gong (Southeast University), Weiyi Ge (National Key Laboratory of Information Systems Engineering), Ke Xie (National Key Laboratory of Information Systems Engineering), Zhouwei Lou (Southeast University), Kanjian Zhang (Southeast University), Shuo Shan (Southeast University)

Deep Non-monotone Submodular Network: An Application to Conditional Video Summarization

Xiaowei Gu (South China University of Technology), Lu Lu (South China University of Technology)

Do Adversarial Perturbations Truly Mitigate Gradient Inversion in Federated Learning?

Hui Zhou (Hunan University), Zheng Qin (Hunan University), YiPeng Zou (Hunan University), Xin Deng (Hunan University), JiaXin Jiang (Hunan University), Ge Xiao (Hunan University), Hao Chen (Hunan University)

3D Molecule Generation within Topology-aware Latent Space

Xiang chen (School of Computer Science and Artificial Intelligence, Wenzhou University), Jianwei Zheng (College of Computer Science and Technology, Zhejiang University of Technology), Li Zhao (Department of Computer Science and Artificial Intelligence, Wenzhou University), Xiaoqin Zhang (College of Computer Science and Technology, Zhejiang University of Technology)

AMDRL: Simulation-Optimized UAV Network Routing in Knowledge-Defined Networking Using Graph Neural Network

Jie Li (Northeastern University), Hongjun Ma (Northeastern University), Yinrui Yu (Northeastern University), Yuhang Zhang (Northeastern University), Xingwei Wang (Northeastern University)

Building Efficient Segmentation Models from Large Open-Vocabulary Foundation Models Without Any Labels

Yang Li (CSIRO), Diqi Chen (Griffith University), Sen Wang (The University of Queensland), Brano Kusy (CSIRO), Jiajun Liu (CSIRO)

DSSAGCN: Dual Stream Superpixel Anchor Graph Convolutional Network for Hyperspectral Image Classification

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Jie Li (China University of Geosciences), Jichen Li (China University of Geosciences), Xinwei Jiang (China University of Geosciences), Yongshan Zhang (China University of Geosciences), Zhihua Cai (China University of Geosciences)

Unveiling Genuine Emotions: Integrating Micro-Expressions and Physiological Signals for Enhanced Emotion Recognition

Chuang Ma (Defense Innovation Institute, Academy of Military Sciences (AMS)), Shaokai Zhao (Defense Innovation Institute, Academy of Military Sciences (AMS)), Yu Pei (Defense Innovation Institute, Academy of Military Sciences (AMS)), Liang Xie (Defense Innovation Institute, Academy of Military Sciences (AMS)), Ye Yan (Defense Innovation Institute, Academy of Military Sciences (AMS)), Erwei Yin (Defense Innovation Institute, Academy of Military Sciences (AMS))

NPFGLU: Unlearning Links in Graph Neural Networks

Zhen Hu (Soochow University), Zhe Yang (Soochow University)

A Collaborative NDN Caching with Multi-Agent Deep Reinforcement Learning and Blockchain Incentives

Christian Cobblah (University of Electronic Science and Technology of China (UESTC)), Qi Xia (University of Electronic Science and Technology of China (UESTC)), Jianbin Gao (University of Electronic Science and Technology of China (UESTC))

Feature Selection Method for Intrusion Detection System Based on Enhanced Hybrid Genetic Algorithm

Wenhong Wei (Ni), Lu Chen (Dongguan University of Technology), Qingxia Li (Dongguan City University)

An Artificial Bee Colony Algorithm Based on Neighborhood Search for Portfolio Optimization

Wenhong Wei (Ni), Shihao Li (Dongguan University of Technology), Qianyun Chen (Dongguan University of Technology)

Research on the method of expanding the metallogenic data based on generative adversarial networks

Biyi Li (China University of Geosciences), Chunfang Kong (China University of Geosciences), Kai Xu (China University of Geosciences), Jie Zhao (China University of Geosciences)

Multi-Channel Learning Framework Based on Relation-Aware Transformer for Drug Synergy Prediction

Kaiyuan Zhang (Harbin Institute of Technology), Yifei Huang (National University of Singapore), Tianyi Zang (Harbin Institute of Technology)

A Method for Explainable Medical Abstracts Classification through Transformer Models

Luca Petrillo (IMT School for Advanced Studies Lucca, IIT-CNR), Anna Giacomello (University of Molise), Fabio Martinelli (ICAR-CNR), Antonella Santone (University of Molise), Mario Cesarelli (University of Sannio), Francesco Mercaldo (University of Molise, IIT-CNR)

Towards Robust Alcohol Intoxication Identification Using Deep Learning with Thermal Imaging and Advanced Image Processing

Ngo Luan (FPT University), Nguyen Van Thanh Thong (FPT University), Hoang Ngoc Dung (FPT University), Vo Thanh Bang (FPT University)

Medical Time-Series Multivariate Interactions Analysis based on Mutual Information

Zhiyuan Xu (Key Laboratory of Universal Wireless Communications, Ministry of Education, Beijing University of Posts and Telecommunications), Kai Niu (Key Laboratory of Universal Wireless Communications, Ministry of Education, Beijing University of Posts and Telecommunications), Xiao Xu (Department of Ultrasonography, Peking University First Hospital, Renal Division, Department of Medicine, Peking University First Hospital, Institute of Nephrology, Peking University), Jie Dong (Renal Division, Department of Medicine, Peking University First Hospital, Institute of Nephrology, Peking University), Zhiqiang He (Key Laboratory of Universal Wireless Communications, Ministry of Education, Beijing University of Posts and Telecommunications)

Deep Neural Networks with an Adaptive Runtime for Eye Tracking on Smart Glasses

Wolfgang Fuhl (University of Tuebingen)

A Hybrid Supervised Deep Learning Approach for Non-intrusive Load Monitoring

Yanru Ren (Tianjin University), Bo Liu (Tianjin University), Wenpeng Luan (Tianjin University), Bochao Zhao (Tianjin University), Wenqian Jiang (Tianjin University)

Eye See What You See: Query-Oriented Gaze Following

Zihao He (Hefei University of Technology), Jingyuan Xu (Hefei University of Technology), Ruijie Liu (Hefei University of Technology), Feiyang Liu (Hefei University of Technology), Feng Xue (Hefei University of Technology), Dan Guo (Hefei University of Technology)

Stance Detection on Macro Topics in Social Discussions Via Multi-Factor Aggregation Analysis

Haihua Xie (BIMSA), Miao He (BIMSA)

Detection of Driver Behavioral State Based on 1D CNN-BIGRU and Graph Signal Processing

Jin Tao Yu (School of Computer and Information Engineering, Harbin University of Commerce), He Liu (School of Computer and Information Engineering, Harbin University of Commerce), TingWei Liang (School of Astronautics, Harbin Institute of Technology), XiaoWen Wang (School of Computer and Information Engineering, Harbin University of Commerce), Ke Meng (School of Computer and Information Engineering, Harbin University of Commerce)

Beyond accuracy, VuLocator can further locate the vulnerable code lines for GNN-based detectors

Huozhu Wang (UCAS)

The Energy-Efficient Hierarchical Neural Network with Fast FPGA-Based Incremental Learning

Mohammad Saleh Vahdatpour (Georgia State University), Huaiyuan Chu (Georgia State University), Yanqing Zhang (Georgia State University)

Video presentations are available on the conference App

Transfer Learning for Temporal Link Prediction

Ayan Chatterjee (Northeastern University), Barbara Ikica (Google), Babak Ravandi (Alexion AstraZeneca Rare Disease), John Palowitch (Google DeepMind)

Ensemble Learning for Land Cover Classification: Advancing State-of-the-Art Performance on EuroSAT

Raymond Lee (Westview Highschool), Ethan Knapp (Westview Highschool)

Text-Guided Image-to-Image Translation for Tactile Map Generation

Alireza Choubineh (Carleton University), Abbas Akkasi (Carleton University), Adnan Khan (Carleton University), Majid Komeili (Carleton University)

Semantic-Aware Contrastive Fine-Tuning: Boosting Multimodal Malware Classification with Discriminative Embeddings

Ivan Montoya Sanchez (UTEP), Aritran Piplai (UTEP), Shaswata Mitra (Mississippi State University), Sudip Mittal (Mississippi State University)

A Heterogeneous Graph and Multi-Feature Fusion Based Framework for Smart Contract Vulnerability Detection

Bing Xue (Inner Mongolia University)

Ensembles of Multi-scale Kernel Smoothers for Data Imputation

Amit Schreiber (Tel-Aviv University), Dalia Fishelov (Afeka Tel-Aviv Academic College of Engineering), Neta Rabin (Tel-Aviv University)

A graph-based sparse filter feature selection method for multi-class and ordinal data

Mor Abrutzky (Tel-Aviv University), Shir Friedman (Tel-Aviv University), Gonen Singer (Bar-Ilan University), Neta Rabin (Tel-Aviv University)