	Wednesday 26 June (Conference Center, The Strip, High Tech Campus 1, Eindhoven)		
9.00-10.00	Auditorium		
	Opening and welcome from Silvia Lenaerts, Rector Magnificus of the Eindhoven University of Technology ***Keynote*** : Implantable and Ingestible Sensing Enabled by Circuit and System Innovations (Chris van Hoof) *Chair: Massimo Mischi*		
10:00-11:00	Exhibition-Catering area		
	Coffee and poster session		
11:00 - 12.30	Auditorium	Ernst	Curie
	RS2: Sensors and devices for motosensory measurements *Chairs: M. Lancini, P. Daponte*	**SS15: Next generation wearables: from sensor design to signal processing** *Chairs. N. Uzunbajakava, P. van Neer, E. P. Scilingo*	**SS14: Physics- and physiology-inspired signal processing and clinical applications** *Chairs: J. Xu, A. Pumir, Q. Luo*
	Classification of pinching action in children using a tomographic tactile sensor (Ryunosuke Asahi)	*INVITED:* Next generation wearable patches: closing the gap between fundamental research and translation to clinically-relevant applications (Jos Gelissen)	Predicting the Success of Oxytocin-Induced Labor Using TOCO Signals with Machine Learning Modeling (Yan Feng)
	IoT-based system for monitoring the well-being of industrial operators through wearable devices (Enrico Picariello)	An exploration into the structuring of soft piezoelectric transducers for wearable applications (Laurens Peters)	Exploring Fetal R-Peak Detection through 1D-Unetr in Maternal Abdominal ECG (Jinshan Xu)
	Marker-less Vision System based on RGB Camera for Wheelchair Tennis Contact Detection (Enrico Ferlinghetti)	Sustainable optofluidic patch concept for continuous monitoring of health (Lauri Rannaste)	Quantification of the Individual Effect of an Exercise Bout on Insulin Sensitivity: In-silico Modeling and Linear Regression Combined to Reduce Sampling Protocol Requirements (Libera Del Giudice)
	Estimation of movement in physical exercise programs using depth cameras: Validation against a gold standard (Melisa Pilla Barroso)	REMONI: An Autonomous System Integrating Wearables and Multimodal Large Language Models for Enhanced Remote Health Monitoring (Thanh-Cong Ho)	Model-Based Approaches for Breath-to-breath Estimation of Patient Effort during Mechanical Ventilation (Simona Turco)
	A Hybrid Approach to Estimate Vertical Oscillation Using a Chest-Worn Accelerometer Device (Mohanasankar Sivaprakasam)	Autoencoder based Nonlinear feature extraction from EDA signals for Emotion Recognition (Hugo Posada-Quintero)	Design and experimental validation of a cardiac simulator for prosthetic heart valve evaluation (Lorenzo Scalise)
	Disembodiment of Itch Sensation by Implementing Sensory Stimuli and the Rubber Hand Illusion (Reo Togashi)	Inferring causality in emotions: a preliminary study on arousal perception and autonomic modulation (Laura Lavezzo)	Simulated clinical triage of Modified Tardieu Test for Lower Limb Spasticity (Avinash Singh)
12.30-13.30	Lunch		
13.30-14.30	Auditorium	Ernst	Curie
	Tutorial : Real world data monitoring and eHealth: towards making informed decisions (Monique Tabak, Arlene John) *Chair: L. Scalise*	***Tutorial*** : Flexible and large-area electronics for biomedical applications (Eugenio Cantatore) - *Chair: C. Dinis Fernandes*	***Company pitch*** : Aikon health ***Company pitch*** : NEMO healthcare ***Company pitch*** : Angiogenesis Analytics ***Company pitch:*** Orcasonics *Chairs: N. Bax, E. Heijman*
	Auditorium	Ernst	Curie
	SS5: Advances in pregnancy and neonatal monitoring *Chairs: D. Pani, R. Vullings, C. van Pul, X. Long*	**SS1: Recent advances in sensor systems and algorithms for ambulatory healthy monitoring** *Chairs: L. Xu*	**SS2: Challenges with novel wearable sensor technologies** *Chairs: B. Vanrumste*
	Improved non-invasive detection of congenital heart disease with sparse domain Kalman Filtering for fetal electrocardiogram denoising (Ivar de Vries)	Continuous estimation of blood pressure during physical and mental activity using ECG and PPG (Emma Villeneuve)	Evaluation Metrics For Food Intake Activity Recognition Using Segment-wise IoU (Chunzhuo Wang)

14.30-16.00	Improved mECG Removal and fECG Extraction by Integrated Periodic Components Analysis and Singular Value Decomposition (Alessandra Galli)	Validation of a novel wearable device to estimate heart rate variability and cardiorespiratory indexes (John Morales)	Automatic Handwriting Recognition with a Minimal EMG Electrodes Setup: A Preliminary Investigation (Andrea Tigrini)
	An end-to-end RoI-based encoder-decoder for fetal ECG recovery and QRS complex detection (Julia Remus)	Noise reduction in capacitive ECG measurements by dedicated modelling and Kalman filtering (Anyi Cheng	Leveraging Inertial Information From a Single IMU for Human Daily Activity Recognition (Mara Scattolini)
	Investigating autonomic modulation during shared reading in term and preterm infants: a pilot study (Laura Lavezzo)	Controllable Quality Improvement of Mobile Ultrasound (Haoming Chen)	Electrodermal Activity on the Torso: Identification of Locations for Wearable Belt Monitors (Hugo Posada-Quintero)
	Explainable Machine Learning for Central Apnea Detection in Premature Infants (Gabriele Varisco)	Benchmarking Machine Learning Algorithms for Epilepsy Detection on Multi-age datasets (Mengzhu Liu)	Validation of low cost wearables sensors in motor telerehabilitation exercises (Federico Caramia)
	Movement quantification in preterm infants: comparing motion extraction from ECG signals and from pressure sensitive fiber optics mat (Giulia Palladino)	a-STEP: Oscillometry-Augmented Auscultation Method for Improved Blood Pressure Measurement (Nabeel PM; Jayaraj Joseph)	Non-contact monitoring of D-glucose concentration in saline solution using a passive transmission-line based RF resonator (Hana Boukharouba)
16.00-16.30	Coffe break		
16.30-18.00	Auditorium	Ernst	Curie
	RS5: Artificial Intelligence for biomedical measurements and applications *Chairs: R. van Sloun, A. El Saddik*	**SS4: MOVEMENT ANALYSIS - Gait Analysis Measurements for Sports and Rehabilitation** *Chair: F. Simini*	**RS3: Environmental Medicine & Home automation for disability, disease and active aging living** *Chairs: S. Rajan, A. Lanzolla*
	A Spatiotemporal Deep-Learning Model for Force Estimation from Surface Electromyography (Pierre-Emmanuel Simon)	Instrumentation for 3D Analysis of Human Movement (Franco Simini)	V-Spy Scotoma: A game designed to map and detect scotoma (Ahmet Kurt)
	Unsupervised Enhancement of Classical Remote PPG Algorithms using 1D-CNN and Contrastive Loss for Accurate Heart Rate Estimation (Aravind Anil)	Online Action Representation using Change Detection and Symbolic Programming (Gunjan Singh)	Evaluation of Spread-Spectrum Sequences in Ultrasonic Sonar for Indoor People Localization (Alejandro García Requejo)
	Subject-specific feature identification of arousal and valence based on EEG (Giulio Steyde)	Metrological Characterization of a Wearable Device for the Assessment of Gait Parameters (Gloria Cosoli)	Sensor Assessment of Time in Bed on Caregiver Burden for Person Living with Cognitive Impairment (Bruce Wallace)
	An Explainable Multimodal Data Fusion Approach for Heart Failure Detection (Jad Botros)	Fiber optic-based wearable sensing device for foot curvature monitoring in classic ballet dancing (Leonardo Maggioni)	A Convolutional Transformer for Enhanced NILM in Human Activity Recognition (Simone Mari)
	AI-based Multi-Wavelength PPG Device for Blood Pressure Monitoring (Chiara Botrugno)	Measurement of strain on 3D-printed foot prosthesis using Fiber Bragg Grating sensors (Sara Del Chicca)	Zero-shot Multi-task Cough Sound Analysis with Speech Foundation Model Embeddings (Brady Laska)
	A Low-Cost Flexible Inkjet-Printed Echo State Network for Impact Localization (Syed Islam)	Stride length and foot clearance measurements in Parkinson patients through IMU wearable sensors (Francesco Castelli Gattinara Di Zubiena)	Measure the cognitive decline of people with dementia using games for cognitive training (Ilaria Ciuffreda)
18.30-21.00	Welcome Reception (HTC Conference Center) - Shuttle busses to city center available at the end of the reception		

	Thursday 27 June (Conference Center, The Strip, High Tech Campus 1, Eindhoven)		
9:00-10.00	Auditorium		
	Keynote : 50 Years Real-Time Electronic Sector Scanning (Jan Somer) *Chair: Chris de Korte*		
10:00-11:00	Exhibition-Catering area		
	Coffe and poster session		
11:00 - 12.30	Auditorium	Ernst	Curie
	SS3: MOVEMENT ANALYSIS - Sensors and data-processing for ambulatory assessment of human biomechanics *Chairs: F. Wouda and J. Reenalda*	**SS13: Arterial disease from population screening to fundamental research: critical requirements for instruments** *Chairs: K. Reesink, D. Thijssen*	**RS4: Bioengineering and biorobotics** *Chairs: P. Arpaia, S. Ranaldi*
	Optimizing Cut-Off Frequencies and Filter Orders for Dynamic Local Reference Frames for Human Gait Analysis in Straight-line and Turning Tasks (Junhao Zhang)	Pressure-less local pulse wave speed estimation in the carotid artery using ultrasound-based velocity waveform indices (Irene Suriani)	Assessment of bone vibrational transmissibility in tibia with external fixator (Lorenzo Scalise)
	Ambulatory monitoring of injury risk in runners: The effect of sampling frequency on peak tibial acceleration and impulse (Anne Haitjema)	Comparison of features in laser Doppler vibrometry spectra that best relate to the degree of stenosis (Afrah Malik)	Effective somatosensory and cross-modal evaluation in children with hemiparesis and neurotypically developing children using MSI Caterpillar* (Maria Casado-Palacios)
	Mapping Lower Limb EMG Activity to Ground Reaction Force in Free Walking Condition (Alessandro Mengarelli)	Measurements and System Identification for the Characterization of Smooth Muscle Cell Dynamics (Dilan Öztürk)	Virtual muscular fiber force sensing of a musculoskeletal upper limb MultiBody model (Rocco Adduci)
	Neuromechanical-Driven Ankle Angular Position Control During Gait Using Minimal Setup and LSTM Model (Rami Mobarak)	Measurement of Inter and Intra-cycle Variations in Local Pulse Wave Velocity from Forward Travelling Pulse Waves (Rahul Manoj)	Comparing Pre-Trained Object Detection Models for Autonomous Grasp on Affordable Prosthetic Hands (Vinicius Prado da Fonseca)
	Estimating 3D GRF Using a Minimal Sensor Setup: Exploiting the Concept of VPP (Alessandro Castellaz)	Acoustic Plethysmography for Aortic Pulse Wave Velocity Measurement: In-Vitro and In-Vivo Feasibility Study (Rahul Manoj)	MSICLIMB: A new multisensory device for climbing and sports activities in children neurodevelopmental disabilities (Monica Gori)
	Using adaptive surface EMG envelope extraction for onset detection: a preliminary study on upper limb amputees (Simone Ranaldi)	Bilateral Carotid Pulse Wave Velocity: A Proof of Concept (Nabeel PM)	Motion Planning and Long-term Robot Monitoring Perspective: A Cadaver Study on Robot-Assisted Pedicle Screw Fixation (Manojkumar Lakshmanan)
12.30-13.30	Lunch + IEEE MeMeA Steering Committee Meeting (room Zernike)		
13.30-14.30	Auditorium	Ernst	Curie
	Tutorial : (Generative) AI for medical image acquisition and perception (Ruud van Sloun) - *Chairs: C. Dinis Fernandes*	***Tutorial*** : Basic and straightforward approach to optimize a measurement set-up: guidelines and suggestions (Gloria Cosoli) - *Chairs: L. Scalise*	***Workshop*** : Fortifying innovation in AI and MedTech (Martin Pekar and Matthijs Roelofs, V.O. Patents & Trademarks) ***Company pitch*** : Onera Health ***Company pitch*** : TNO *Chairs: N. Bax, E. Heijman*
	Auditorium	Ernst	Curie
	SS16: Innovations in Critical Care Monitoring Technologies: A Comprehensive Approach *Chairs: A. Bouwman, S. Turco*	**SS12: Medical image analysis: interpretation and applications for diagnosis and therapy guidance** *Chairs: W. Brink, N. Vanello*	**SS9: Electrochemical and mechanical sensors for biomedical measurements** *Chairs: L. Iannucci, F. De Tommasi*
	External validation of the Advanced Alert Monitor (AAM) in a Dutch Hospital (Tom Bakkes)	Comparative Analysis of Cross-Validation Methods on PPMI dataset (Camilla Calomino)	Integrating Impedance Spectroscopy and Perceptron-Based Classification for Tooth Treatment Monitoring (Isabella Sannino)

14.30-16.00	Feasibility of Measuring Thermodilution Curve Recirculation with a Novel High-Resolution Integrated Photonic Sensor-System (Noëlle Gerards)	Feasibility of 3D ultrasound strain analysis in the non-pregnant uterus (Anyi Cheng)	Electrodes for BioImpedance and Body-Coupled Communication (Juris Ormanis)
	Predicting Hypotension After Spinal Anesthesia Using Carotid Ultrasound and Clinical Variables (Esmée de Boer)	Bayesian XAI methods towards a robustness-centric approach to Deep Learning: an ABIDE I study (Lisa De Santi)	Development of flexible PVDF/GNPs-based strain sensor for finger movements monitoring (Samira Mansouri)
	Validation of Three Late-onset Sepsis Prediction Models in Hospitalized Infants (Zheng Peng)	Heart Segmentation on PA Chest X-ray Images by Model-Based Deep Learning Approach (Ádám Tumay)	Assessment of a Bioimpedance Analog Front-End for Blood Pulse Wave Detection (Martina Imbriglia)
	Estimating Left Ventricular Contractility through Carotid Artery Distension: A Portable Device Utilizing A-Mode Ultrasound and Surrogate Marker Analysis (Ganapathy Jaganathan)	Automated Passive Tracking for MR-guided Endovascular Interventions (Martin Reinok)	Multi-Sensing System Based on Fiber Bragg Grating Technology in Variable Stiffness Catheter for Temperature and Force Measurements (Francesca De Tommasi)
	Simultaneous arterial and venous oximetry with a novel flexi-frequency cuff actuator (Idoia Badiola)	Online Instance Segmentation and Reconstruction of Ultrasound Vascular Videos (Jiuan Chen)	Optimization of Measurement Setup in Bioimpedance-based Insulin Absorption Assessment (Francesca Mancino)
16.00-16.30	Coffe break		
16.30-18.00	Auditorium	Ernst	Curie
	SS11: Medical ultrasound: from novel measurement techniques to clinical application *Chairs: R. Lopata*	**SS7: Advanced monitoring and analyses of sleep** *Chairs: M.M. van Gilst, S. Kainulainen*	**SS6: Advanced signal processing for medical intelligent diagnosis systems** *Chairs: M. Neagu, D. Tarâlungâ*
	INVITED: Towards In Vivo Photoacoustic Imaging of Carotid Plaques (Min Wu)	Estimating Respiratory Effort through Diaphragmatic Electromyography on Simulated Airway Obstructions (Gabriela Grońska)	*INVITED:* From Noise to Knowledge: Enhancing Diagnosis through Biomedical Signal Denoising (Mihaela Neagu, Dragos Taralunga)
	INVITED: Challenges and optimizations for ultrasound localization microscopy (Georg Schimz)	A Hierarchical Neural Network on Riemannian Manifold and Convolutional Neural Network for Sleep Stage Classification (Hongtao Zhang; Xueling Zhou)	Enhancing Personalization and Mitigating Inter-Patient Variability in Continuous Blood Glucose Prediction Using Multi-Task Deep LSTMs (Syed Islam)
	INVITED: Sparse array ultrasound imaging: probe and imaging sequence design (Hervé Liebgott)	Machine Learning in Sleep Signal Analysis: Towards Automated Sleep Stage Classification (Anas Salem)	Improved Detection of Abnormality in Grayscale Breast Thermal Images using Binary Encoding (Sreeraman Rajan)
	Unsupervised learning of speckle removal from real ultrasound acquisitions without clean data (Miriam Basile)	Measurement of cardio-respiratory dynamics during sleep arousals with a suprasternal pressure sensor (Luca Cerina)	CTGAN in Augmentation of Radiomics Features Classification from Narrow Band Imaging for Laryngeal Cancer (Haiyang Wang)
	3D Freehand Ultrasound using Visual Inertial and Deep Inertial Odometry for Measuring Patellar Tracking (Shihfan Tu)	Advancing Sleep Diagnostics: Contactless Multi-Vital Signs Continuous Monitoring with a Multimodal Camera System in Clinical Environment (Wang Liao)	CoBrS: Cough Breath Segmentation for the reduction of class-confounding characteristics in dataset curation (Alice Ashby)
	FETR: A Weakly Self-Supervised Approach for Fetal Ultrasound Anatomical Detection (Ufaq Khan)	Design of a Power-Efficient Digital Classifier for Neural Network-Based Sleep Apnea Detection System (Syed Islam)	Pairwise Functional Connectivity Estimation in Spinocerebellar Ataxia Type 3 Using Sparse Gaussian Markov Network: Integrating Group and Individual Analyses of rs-fMRI (Faezeh Moradi)
18.00-19.00	Transfer to city center (shuttle busses available)		
19.30-22.30	Gala Dinner and Awards (Restaurant Kazerne, Paradijslaan 8, Eindhoven)		

	Friday 28 June (Conference Center, The Strip, High Tech Campus 1, Eindhoven)		
9:00-10.00	Auditorium		
	Keynote : Ubiquitous Diagnostics for Biophysical and Biochemical Biomarkers for Healthcare (Ali Zulfiqur) *Chair: Zaccaria del Prete*		
10:00-11:00	Exhibition-Catering area		
	Coffe and poster session		
11:00 - 12.30	Auditorium	Ernst	Curie
	SS10: Neuroengineering *Chairs: A. Vanhoestenberghe, A. Nonclercq, S. Zinger, R. Mestrom*	**RS1: Sensor and devices for vascular and blood measurements** *Chairs: L. Scalise, L. Lombardo*	**SS8: AI Methods for Cardiovascular Signal and Image Processing** *Chairs: M.G. Signorini, G. Magenes*
	Development and Validation of a ?m-scale Gastric Contractions Motion Tracking System Using Infrared Cameras (Romain Raffoul)	A Measurement System for the Dynamic Assessment of Blood Clot Permeability (Tunahan Vatansever)	CATE (Coronary Artery Tortuosity Evaluator): a semi-automatic tool for quantitative assessment of coronary artery tortuosity from CT angiography (Michela Ferrari)
	Proof-of-Concept of Respiration-Triggered Vagus Nerve Stimulation to Treat Epilepsy (Javier Chávez Cerda)	Measurement System for Blood Sedimentation Rate Through Impedenzimetric Sampling (Lorenzo Parri)	Echocardiographic image segmentation with Vision Transformers: a comparative analysis of different loss functions (Edoardo Bosco)
	Transfer-free Fabrication and Characterisation of Transparent Multilayer CVD graphene MEAs for in vitro Optogenetic Applications (Gonzalo León González)	Optimization of an algorithm for hemoglobin interference compensation on a simple photometer for bilirubin measurement (Lorenzo Zucchini)	A semi-supervised Deep Learning approach to automate the identification of fetal behavioral states in Fetal Heart Rate tracings (Giulio Steyde)
	Electric Field Distributions in Brain Stimulation Experimental Setups (Rob Mestrom)	Wearable Accelerometer System for Jugular Venous Pulse Quantification: A Pilot Study (Nabeel PM)	Reproducing and improving one-dimensional convolutional neural networks for arterial blood pressure-based cardiac output estimation (Roy van Mierlo)
	Dynamic Causal Modelling applied to Functional MRI of Depression: an Objective Diagnosis (Sjir Schielen)	Nailfold Video Capillaroscopy based on Sidestream Dark Field and Stacking Algorithm (Maria Giovanna Bianco)	Enhanced Phonocardiogram Classification Performance through Outlier Detection (Sreeraman Rajan)
	Unveiling Muscular Engagement: Evidence of Activity in Mental Imagery and Action Observation (Andrea Tigrini)	Extraction of Complex Permittivity and Complex Permeability of Liquids by Using a Grounded Coplanar Waveguide with Upper Shielding (Giovanni Gugliandolo)	Generative AI-Assisted Novel View Synthesis of Coronary Arteries for Angiography (Jay Kshirsagar)
12.30-12.45	**Closing session (Auditorium)**		
12.45 -13.30	Lunch (Exhibition-Catering area)		
13.30-14.30	Transfer to Eindhoven University of Technology (own transport)		
MeMeA@TU/e - Satellite symposium (Building Alpha, Room 0.98, Eindhoven University of Technology)			
14.30-15.00	IEEE EMBS Benelux Chapter meeting		
	MedTech research at TU/e: Diversity and Inclusion in Engineering		
15.00-15.20	Advancing medical ultrasound with novel acquisition and reconstruction techniques (Hans-Martin Schawb)		
15.20-15.40	Biomedical signal analysis for early diagnostics (Simona Turco)		
15.40-16.00	Coffee break		
16.00-16.20	Sweat sensing for health monitoring (Sevda Malek Kani)		
16.20-16.40	Non-invasive neurostimulation @ TU/e (Rob Mestrom)		
16.40-17.00	Innovative Electronic Solutions for Biopotential Sensing (Eugenio Cantatore)		
17.00-18.00	Drinks (Zwarte Doos, Eindhoven University of Technology)		