Device Research Conference 2026

University of Michigan, Ann Arbor – June 21-24, 2026

Full Program — Talk Titles, Presenters & Affiliations

Talk durations (incl. Q&A): Plenary [PL] 60 min | Keynote [KN] 40 min | Invited [INV] 30 min | Contributed 20 min | [STU] = student presenter | [LN] = Late News | [SC] = Short Course

Sunday, June 21

YP/WiED Forum: the Future of Semiconductors in the AI Era

Chairs: Yuxuan Cosmi Lin (Texas A&M; University), Raisul Islam (Purdue University), Ying-Chen Daphne Chen (Arizona State University)
Michigan League - Vandenberg, 2nd floor

8:30 AM	**Welcome and Introduction**
	Session 1: Technical Presentations
8:40 AM	**Ying-Chen Daphne Chen** *Arizona State University*
9:05 AM	**Jiarui Gong** *Texas A&M; University*
9:30 AM	**Esmat Farzana** *Iowa State University*
9:55 AM	**Raisul Islam** *Purdue University*
10:15 AM	**Coffee Break**
	Session 2: Panel Discussion – Developing a successful career in the new era of microelectronics and artificial intelligence
10:45 AM – 11:45 AM	**Moderator:** Raisul Islam **Panelists:** Ying-Chen Daphne Chen (Arizona State University), Jiarui Gong (Texas A&M; University), Esmat Farzana (Iowa State University), Austin Hickman (Soctera), Iuliana Radu (TSMC)
11:45 AM	**Lunch Break**
10:00 AM	Registration Opens *Michigan League - Concourse*
	Short Course: "Best Practices for Reporting on Electronic Devices" | Organizers: Theresia Knobloch, Michiel van Setten | Michigan League - Vandenberg, 2nd floor
1:00 PM	**[SC] Aaron Franklin** *Duke University* Best Practices in Reporting and Benchmarking Performance of 2D Transistors: A Scaling and Contacts Story *Chair: Theresia Knobloch*
1:50 PM	**[SC] Tibor Grasser** *TU Wien* Reliability Issues in Devices Based on Emerging Materials
2:40 PM	**Coffee Break** *Michigan League - Michigan Room, 2nd floor*
3:00 PM	**[SC] Adrian Chasin** *IMEC* IGZO Thin-Film Transistor Reliability: the Last Roadblock for Memory Applications *Chair: Michiel van Setten*
3:50 PM	**[SC] Becky Peterson** *University of Michigan* TFT Performance
4:40 PM	**Coffee Break** *Michigan League - Michigan Room, 2nd floor*
5:30 PM	Registration Closes
6:00 PM	**DRC Welcome Reception** *Michigan League - Ballroom, 2nd floor*

Monday, June 22

8:00 AM Registration Opens
Michigan League - Concourse

Opening

9:00 AM **[Opening] Tania Roy** *DRC General Chair*
Introduction and Conference Welcome
Lydia Mendelssohn Theatre, Michigan League, 2nd floor

Plenary 1

9:20 AM **[PL] Chair: Eilam Yalon | Mark Lundstrom** *Purdue University*
Lessons from 45 Years of Research Exploring Carrier Transport in Semiconductor Devices
Lydia Mendelssohn Theatre, Michigan League, 2nd floor

10:20 AM **Coffee Break**
Michigan League – Michigan Room, 2nd floor

Plenary 2

10:40 AM **[PL] Chair: Eilam Yalon | Frank Koppens** *ICFO*
Optoelectronic devices with 2D moiré materials
Lydia Mendelssohn Theatre, Michigan League, 2nd floor

11:40 AM **Lunch Break**

Luncheon Talk

12:00 PM **[Talk] Chris Olsen** *Applied Materials*
The Innovation Multiplier: Collaboration at the Intersections of Device, Process, and Hardware
Michigan League – Vandenberg, 2nd floor (overflow in Concourse area)

12:45 PM **Break**

Award Session 1 *Michigan League - Hussey, 2nd floor*	Award Session 2 *Michigan League - Vandenberg, 2nd floor*	Award Session 3 *Michigan League - Koessler Room, 3rd floor*
1:00 PM **[STU] Yinxuan Zhu** *Ohio State* Design and Demonstration of Scaled Ultra-Wide Bandgap AlGaN Polarization-graded FETs with Current Gain Cutoff Frequency (fT) Above 85 GHz	**1:00 PM** **[STU] Jeongwoo Kim** *Cornell* 10 W/mm X-band AlN XHEMTs with 17-nm GaN channel	**1:00 PM** **[STU] Pietro Rinaudo** *imec & KU Leuven* Impact of IGZO composition on sub-gap defects and hydrogen resiliency during PBTI in back-gated TFT
1:20 PM **[STU] Ruixin Bai** *U Wisconsin-Madison* Demonstration of record (for Ultra-Wide Band Gap) output power of 2.7 W/mm at 20 GHz with Al0.65Ga0.35N channel RF HEMTs	**1:20 PM** **[STU] Sumi Lee** *Purdue* Activation-Energy-Dependent 1/f Noise in Scaled ALD IGZO TFTs via Temperature-Dependent Dutta-Horn Analysis	**1:20 PM** **[STU] Rivka-Galya Nir-Harwood** *Technion* Exploring Non-Destructive Sub-Threshold Readout of Selector-Only Memory Devices
1:40 PM **[STU] Seungheon Shin** *Ohio State* High Breakdown Field Multi-kV UWBG AlGaN Transistors for Power Switching and High-Voltage RF Applications	**1:40 PM** **[STU] Jiwon Ma** *Yonsei U* Vertically Stacked NMOS Inverter Based on Multi-layer WS2 Formed via Multiple Wet-Transfers of Monolayer WS2	**1:40 PM** **[STU] Shafin Bin Hamid** *UT Austin* Comparison of Ferrimagnetic and Antiferromagnetic Tunnel Junctions for High-Speed Random Bitstream Generation
2:00 PM **[STU] Hsin Wei (Sheena) Huang** *Cornell* Waveguide vs. Quantum Well Electroluminescence in High-Current-Density Deep-UV AlGaN Heterostructure Diodes on Bulk AlN	**2:00 PM** **[STU] Madhav Ramesh** *Cornell* Large barrier height ultrawide bandgap AlGaN Schottky barrier diodes	**2:00 PM** **[STU] Utkarsh Misra** *UT Austin* Calcium-Regulated Plasticity in Graphene Artificial Synapses for Biomimetic Neuromorphic Computing
2:20 PM **[STU] Seungyun Lee** *Seoul National U* Demonstration of UWBG beta-Ga2O3 FeFETs with Large Memory Window under Harsh Temperatures (-175 to 105 C) using Al2O3/HZO Gate Stack	**2:20 PM** **[STU] Khush Gohel** *U Wisconsin-Madison* 3 kV Al-Rich AlGaN HEMTs with >440 MW/cm2 BFOM on Cost-Effective Sapphire Substrates	**2:20 PM** **[STU] Ziyang Gong** *HKUST* Self-aligned InGaAs FinFETs on Insulator by Selective Lateral Epitaxy

2:40 PM **Coffee Break**
Michigan League – Michigan Room, 2nd floor

Wide Band Gap & Power Devices 1 *Michigan League - Hussey, 2nd floor*	Focus Topic: 2D Materials 1 *Michigan League - Vandenberg, 2nd floor*	Focus Topic: Integration, Scaled Interconnects & Topological Materials *Michigan League - Koessler Room, 3rd floor*	Neuromorphic Computing & Memory Tech 1 *Michigan League - Kalamazoo, 2nd floor*
3:00 PM **[KN] Grace Xing** *Cornell University* Introducing AlN XHEMT - a new kid on the block	**3:00 PM** **[KN] Aaron Franklin** *Duke University* Understanding Contacts to 2D Semiconductors Considering Fab-relevant Technology Targets	**3:00 PM** **[INV] Judy Cha** *Cornell University* 1D Topological Semimetals for Next-Generation Electronics	**3:00 PM** **[INV] Jean Anne Incorvia** *UT Austin* Wafer-Scale SOT-MRAM for Neural Network Computation
3:40 PM **Saurav Roy** *NC State* Multi-kV Vertical FinFETs with Edge Dielectrics and Split Gates	**3:40 PM** **Anil Adhikari** *Notre Dame* CVD WSe2 p-MOSFETs with Nb:WS2 Contacts Formed by Low-Damage Plasma-Enhanced Atomic Layer Deposition	**3:30 PM** **[INV] Chris Hinkle** *Notre Dame* Novel Materials for Scaled Interconnects	**3:30 PM** **[STU] RAVISH KUMAR RAJ** *University of Southern Denmark* Multistate weighted Vortex Nano Oscillator based Neuron Device for Neuromorphic Computing
4:00 PM **[INV] Samuel Graham** *University of Maryland* Thermal Design of Ultra Wide Bandgap Electronics	**4:00 PM** **[INV] Saptarshi Das** *Penn State University* Scaling 2D CMOS - from Transistor to 3D Integrated Systems	**4:00 PM** **[INV] Ritam Sarkar** *imec* From GAA Nanosheets to Beyond-Moore: Unlocking the Future of FET Scaling in the Angstrom Era	**3:50 PM** **[INV] Manuel Le Gallo** *IBM Research Zurich* Deep Neural Network Inference with Analog In-Memory Computing
4:30 PM **Yihao Zhuang** *NTU Singapore* High-Power AlN/GaN-on-Si HEMTs Enabled by Top-Graded AlGaN Back Barrier with Reduced Trapping and Parasitic Channels	**4:30 PM** **Krishnendu Mukhopadhyay** *Penn State* Integration of high-kappa gate dielectrics with 2D semiconductors via self-oxidizing vdW metal seed-layers		**4:20 PM** **Suman Gora** *IIT Roorkee, India* Impact of Ge Incorporation in SnO2 Mem-transistors on Their Characteristics for Optical Reservoir Computing and Synaptic Readout

4:50 PM	**Break**
5:30 PM	**Poster Session with Bar and Light Snacks** *Michigan League - Ballroom, 2nd floor*

Tuesday, June 23

7:30 AM Registration Opens
Michigan League - Concourse

Plenary 3

8:30 AM **[PL] Chair: Eilam Yalon | Iuliana Radu** *TSMC*
From materials to system: the path to performance
Lydia Mendelssohn Theatre, Michigan League, 2nd floor

9:30 AM **Coffee Break**
Michigan League – Michigan Room, 2nd floor

Wide Band Gap 2
Michigan League - Hussey, 2nd floor

9:50 AM
[KN] Tomas Palacios
MIT
Lessons from a 20-Year Journey Translating III-Nitride and 2D Technologies from Lab to Fab (and to the Market...)

10:30 AM
Shumeng Yan
Nagoya U
Regrowth-Free Ex-Situ Mg-Diffused GaN-Based HBTs with High Gain of ~200

10:50 AM
[INV] Maki Kushimoto
Nagoya University
Carrier Injection Challenges in High-Al-Composition Deep-UV Laser Diodes

11:20 AM
Hitoshi Takane
Toyota Central R&D;
Distinct interface states in AlSiO/AlN/p-type GaN MOSFETs with c- and m-plane channel extracted by analytical drain current models

2D Materials and Devices 2
Michigan League - Vandenberg, 2nd floor

9:50 AM
[INV] Gianluca Fiori
University of Pisa
2D materials for next-generation devices and conformable electronics applications

10:20 AM
[STU] Sudarsan Majumder
IIT Madras
Non-Invasive Probing of Piezoresistivity in Low-Dimensional Materials Using Vibrating Channel Transistors

10:40 AM
[INV] Ageeth Bol
University of Michigan
Towards low-resistance p-type contacts to 2D TMDs using plasma-enhanced ALD

11:10 AM
[STU] Quynh Phung
University of Stuttgart / University of Freiburg
Seed-Assisted Polarity Control of Flexible WSe2 Transistors and Demonstration of CMOS Inverters

Modeling and Simulations
Michigan League - Kalamazoo, 2nd floor

9:50 AM
[INV] Mathieu Luisier
ETH Zurich, Switzerland
Ab initio Modeling of 2D Materials and Devices: Role of the Surrounding Oxide Layers

10:20 AM
[STU] Sandeep Kumar
IIT Bhubaneswar, India
A Novel Unified Charge-Based Source-Referenced Model for Complementary FET Capturing the Quasi-Fermi-Driven Intersheet Coupling

10:40 AM
[INV] Rajib Rahman
UNSW Australia
Electrical control of single electron and hole spin qubits in silicon

11:10 AM
[LN] TBD
Late News

Focus Topic: Memory and Neuromorphic Lab2Fab
Michigan League - Koessler Room, 3rd floor

9:50 AM
[KN] Sayeef Salahuddin
UC Berkeley
Ferroelectricity in ultrathin binary oxides

10:30 AM
[STU] Nishant Saini
imec & KU Leuven
On the Relation Between TDDB Lifetimes & Time-Zero Defect Noise

10:50 AM
[INV] Duk-Hyun Choe
Samsung Advanced Institute of Technology (SAIT)
Designing Oxide-Channel Ferroelectric Transistors for DRAM and NAND

11:20 AM
Louisa Schneider
Microchip Technology
Optimized Weight Assignments for In-Memory Computing e-Flash Cells Achieving 128 Discrete Target States with Elementary Charge Precision

11:40 AM **Lunch Break**

Power Devices
Michigan League - Hussey, 2nd floor

1:00 PM
[INV] Kohei Sasaki
Novel Crystal Technology
Recent Progress in Gallium Oxide Power Devices

1:30 PM
[STU] Aditya Varma
MIT
First Demonstration of UWBG Al0.65Ga0.35N Monolithic Bidirectional Switch with RonSP = 13 mOhm cm2 and > 2.5 kV Breakdown Voltage

Focus Topic: 2D Materials and Devices 3
Michigan League - Vandenberg, 2nd floor

1:00 PM
[INV] Adrian Chasin
imec, Belgium
IGZO Thin-Film Transistor Reliability: the Last Roadblock for Memory Applications

1:30 PM
[INV] Huan Zhao
Oak Ridge National Laboratory
Nanoscale Magnetic Order and Skyrmions in 2D Materials Revealed by NV Magnetometry

Focus Topic: Photonics 1
Michigan League - Kalamazoo, 2nd floor

1:00 PM
[INV] S. J. Ben Yoo
UC Davis
3D Photonic-Electronic Integrated Devices and Circuits for Future Computing Systems

1:30 PM
[STU] Eitan Kaminski
Technion, Israel
Electro-Optically Tunable Arrayed Waveguide Grating on a Hybrid LN/SiN Platform

Ferroelectric Devices
Michigan League - Koessler Room, 3rd floor

1:00 PM
[INV] Kasidit Toprasertpong
University of Tokyo
Low-Voltage Ferroelectric Memory Enabled by Ultra-thin Hf1-xZrxO2: Scaling Benefits and Reliability Trade-Offs

1:30 PM
[INV] Halid Mulaosmanovic
GlobalFoundries
HfO2-based Ferroelectric Devices: from Lab to Fab

1:50 PM **[INV] Geok Ing Ng** *Nanyang Technological University* Lab-to-Fab of RF GaN in Singapore	**2:00 PM** **[LN] TBD** Late News	**1:50 PM** **[INV] Arka Majumdar** *University of Washington* Photonic Integrated Circuits for Sensing and Computing	**2:00 PM** **[INV] John Heron** *University of Michigan* Nanoscale Ferroelectric Transient Phenomena: From Models to Materials to Devices
2:20 PM **[INV] Jerry Comanescu** *NIST* Toward Consistent Measurement Procedures for the Output and Transfer Characteristics of GaN HEMTs	**2:20 PM** **[INV] Yang Chai** *Hong Kong Polytechnic University* Bioinspired in-sensor computing for artificial vision	**2:20 PM** **[STU] Shivali Agrawal** *Cornell University* Monolithic integration of different wavelength LEDs using both sides of GaN substrates	**2:30 PM** **Mor Mordechai Dahan** *Technion, Israel* Self-Referenced Ultrafast Non-Destructive FeRAM Readout with Enhanced Memory Window via Bipolar Integrated Charge

2:50 PM **Coffee Break**
Michigan League – Michigan Room, 2nd floor

Wide Band Gap 3 *Michigan League - Hussey, 2nd floor*	Focus Topic: BEOL FETs Lab2Fab *Michigan League - Vandenberg, 2nd floor*	Neuromorphic Devices 2 *Michigan League - Koessler Room, 3rd floor*
3:00 PM **[INV] Seth Bank** *UT Austin* Digital Alloy Avalanche Photodiodes for Quantum Photonics	**3:00 PM** **[KN] Peide D. Ye** *Purdue University* Transport in Atomically Thin Amorphous Oxide Semiconductors	**3:00 PM** **[INV] Susan Fullerton Shirey** *University of Pittsburgh* Engineering electric double layers on two-dimensional crystal transistors
3:30 PM **Mateusz Hajdel** *Institute of High Pressure Physics, Poland* InGaN Inverted Laser Diodes operating in the Cryogenic Mg Freeze-Out Regime	**3:40 PM** **[STU] Meera Nandakumaran** *University of Stuttgart, Germany* Ultraviolet Ozone Treated Indium Gallium Zinc Oxide for Flexible Memristor Applications	**3:30 PM** **[STU] Samriddha Ray** *Penn State University* In-material meta-learning for event vision harnessing photo dynamics in LiInP2Se6
3:50 PM **[INV] Darrell Schlom** *Cornell University* Dawn of a Semiconductor with a 7 eV Bandgap: From Si-doped (AlxGa1-x)2O3 Films to initial Devices	**4:00 PM** **[INV] Kenji Nomura** *UCSD* Heterogeneous integrated 3D-FET for BEOL technology	**3:50 PM** **[INV] Yiyang Li** *University of Michigan* Thermodynamics of Phase Separation Enable Resistive Memory at Extreme Temperatures
4:20 PM **[INV] Travis Anderson** *University of Florida* GaN, AlN, and Ga2O3 Wafer Metrology and High Voltage Device Processing	**4:30 PM** **[LN] TBD** Late News	**4:20 PM** **[INV] Veeresh Deshpande** *IIT Bombay* BEOL compatible devices for neuromorphic computing: Integration to Circuit Design

4:50 PM **Break**

5:00 PM **Industry Session**
Session Chairs: Sriram Krishnamoorthy, Greg Pittner | Panelists: Gaurav Thareja (Applied Materials), Iuliana Radu (TSMC), John Barth (Synopsys)
Rackham Amphitheatre, 4th floor

5:30 PM Registration Closes

6:30 PM **Conference Banquet**
Rogel Ballroom, Michigan Union

8:00 PM **Award Ceremony & Valedictory**
Rogel Ballroom, Michigan Union

8:30 PM **Rump Session - Everything Switches: Sorting Fact from Fiction in Future Devices**
Organizers: Alwin Daus, Henryk Turski | Panelists: Thomas Mikolajick, Steven Koester, Debdeep Jena, Tomas Palacios | Rogel Ballroom, Michigan Union
Rogel Ballroom, Michigan Union

Wednesday, June 24

7:00 AM Registration Opens
Michigan League - Concourse

Joint EMC-DRC Plenary Session

8:20 AM **[PL] Rama Vasudevan** *Oak Ridge National Laboratory*
Nanomaterials synthesis and characterization advances enabled by AI-based operations: theory integration, data challenges and agentic futures
Lydia Mendelssohn Theater, Michigan League, 2nd floor

9:20 AM **Coffee Break**
Michigan League – Michigan Room, 2nd floor

Focus Topic: Wide Band Gap 4
Michigan League – Koessler Room, 3rd floor

9:50 AM
[INV] Austin Hickman *Soctera*
11.7 W/mm Continuous Wave Output Power in X-Band AlN-Buffer HEMTs

10:20 AM
[STU] Ruixin Bai *University of Wisconsin-Madison*
Demonstration of high output power (3.4 W/mm) with 29% PAE in Ga-Polar AlGaN/GaN HEMTs on sapphire at 94 GHz

10:40 AM
Makoto Kasu *Saga University, Japan*
High frequency small signal characteristics of modulation-doped diamond FETs with the 157-nm T-shaped submicron-gate

11:00 AM
[STU] Aias Asteris *Cornell University*
AlScN/GaN Multiple-Channel Field Effect Transistors

11:20 AM
Junghun Koo *University of Minnesota*
ALD Dielectric Modulation Doping Enabled High-Performance Ultra-Wide Bandgap SrSnO3 MOSFETs

Focus Topic: Photonics 2
Michigan League – Room 4, 1st floor

9:50 AM
[INV] Ilya Goykhman *Hebrew University of Jerusalem*
Hybrid 2D photonic integration for light detection and manipulation on chip

10:20 AM
Huabin Yu *University of Michigan*
Low Threshold Electrically Pumped AlGaN-QW Edge-Emitting Laser Diodes Operating at 298.5 nm

10:40 AM
[INV] Stanley Cheung *NC State University*
Non-Volatility as a New Degree of Freedom in Hybrid III-V/Si Semiconductor Lasers

11:10 AM
[LN] TBD
Late News

11:40 AM **Lunch Break**

Wide Band Gap 5
Michigan League – Koessler Room, 3rd floor

1:00 PM
Hanqiao Zhang *Cornell University*
Silicon Nitride Passivated AlScN-Barrier High Electron Mobility Transistors Demonstrating Negligible Current Dispersion

1:20 PM
Md Azizul Hasan *NC State University*
First Demonstration of Vertical GaN MPS Diodes Obtained via Mg Implantation and Ultra-High Pressure Annealing

1:40 PM
[STU] Nabasindhu Das *Arizona State University*
Sub-Micron Gate beta-Ga2O3 FinFETs with Current Density > 700 mA/mm and ON/OFF Ratio > 10^8

2:00 PM
[LN] TBD
Late News

2D and Memory
Michigan League – Room 4, 1st floor

1:00 PM
[INV] Moshe Ben Shalom *Tel Aviv University*
Sliding Ferroelectric Resonant Tunneling (SFeRT) Junctions: A New Paradigm for Slidetronic Computing

1:30 PM
[INV] Kaustuv Banerjee *imec*
Bridging Lab Scale Understanding and 300 mm Integration for Emerging Device Platforms

2:00 PM
[INV] Peng Zhou *Fudan University*
2D Digital Circuits with Atomic-Layer-Scale Radiation-Tolerance

2:30 PM
[INV] Patrick Xiao *Sandia National Laboratories*
Designing, scaling, and benchmarking resistive and electrochemical memories for accurate analog AI inference

3:00 PM End of DRC 2026

Poster Session — Monday, June 22, 5:30 PM | Michigan League — Ballroom, 2nd floor

★ Posters #1–10 are nominees for the Best Student Poster Award

#	Presenter / Affiliation	Title
★ 1	**Kyung Min Lee** *Seoul National University, Republic of Korea*	Investigating Intermediate-State-Induced Write Error Rate Degradation in Magnetic Tunnel Junctions via Domain-Level Electrical Analysis
★ 2	**Shisong Luo** *Rice University, United States*	GaN p-Channel MOSFET with ALD Ga2O3 Gate Dielectric Featuring a High BFOM (0.43 MW/cm2) and over 200 V Blocking Capability
★ 3	**Ashutosh Krishna Amaram** *University of Illinois Chicago, United States*	Atomistic Insights into the Switching Mechanism and the Origin of Device-to-Device Variability in Ta-HfO2-Pt based Memristive Device
★ 4	**Xucheng Yang** *NC State University, United States*	Experimental Design Parameter Exploration of Ultra-Low Threshold III-V/Si Quantum Dot Microring Lasers
★ 5	**Jianming Huang** *Southern University of Science and Technology, China*	Confining mobile ions for 40x transient NDR in ITO/HfO2 FETs with incomplete top gate metal coverage
★ 6	**Shubham Babbar** *Ben-Gurion University of the Negev, Israel*	Multiple biomarkers detection under a single drop of physiological solution using a field-effect transistor
★ 7	**Sanjeev Khare** *Purdue University, United States*	Octupole Transfer Torque and Spin-Orbit Torque Driven Oscillations and Switching in Cubic Chiral All-AFM Devices
★ 8	**Debaditya Bhattacharya** *Cornell University, United States*	High-current ultrawide-bandgap AlGaN pin diodes with low on-resistance and UVC emission
★ 9	**Alexander Karl** *TU Wien, Austria*	Physics-Based Modeling of Reliability, Stability, and Leakage in 2D MOSFETs
★ 10	**Akshey Dhar** *Cornell University, United States*	Enhancement Mode Operation of AlN XHEMTs
11	**Kyota Mikami** *Kyoto University, Japan*	Mobility Improvement in SiC MOSFETS by Shallow Counter Doping
12	**Krishna Rudrapal** *University of Stuttgart, Germany*	Low-Voltage Forming-Free, Abrupt, and Gradual Resistive Switching in Surface-Modified IGZO Memristors
13	**Myungsoo Kim** *UNIST, Republic of Korea*	Low-Noise and Hysteresis-Free MoS2 Transistors Enabled by High-k Single-Crystalline Rare-Earth Oxychloride Dielectrics
14	**Alireza Moazzeni** *Wayne State University, United States*	Identification of Cycle-to-Cycle Switching Regimes in Filamentary TaOx RRAM using Time Series Analysis
15	**Soren Schafer** *University of Stuttgart, Germany*	Aging of Unencapsulated Te Transistors in Ambient Air and Comparison of Annealing Conditions
16	**Sara Ghazvini** *University of Texas at Dallas, United States*	High-Speed, Low-Voltage Ge/Si APDs Optimized with Bayesian Optimization and TCAD for CMOS Integration
17	**Haixin Zhao** *University of Delaware, United States*	Phase Reconfigurability-enhanced Metasurface Image Compression with an Integrated Photonic Encoder
18	**Showmik Singha** *University of Missouri-Columbia, United States*	Machine Learning Enabled Parameter Extraction of beta-Ga2O3 MOSFETs
19	**VENKATESWARLU GADDAM** *University of Florida, United States*	Hybrid Epitaxial/Textured AlN Seed Layer Impact on Ferroelectric Al0.7Sc0.3N Memory Devices
20	**Xin Su** *Penn State University, United States*	Noise and Drift Models for Electrochemical Memory (ECRAM)
21	**Md Rahatul Islam Udoy** *University of Tennessee Knoxville, United States*	High Temperature 1T1R Memory Using Ferroelectric Diode and GaN Transistor
22	**Dimitrios Spithouris** *Forschungszentrum Juelich, Germany*	Volatile amorphous SrTiO3-based memristive devices with tunable temporal dynamics for event-based sensing
23	**Md Sazzadur Rahman** *Duke University, United States*	Unconventional BTI in ITO FETs: Thickness-Tuned Temperature-Induced Polarity Reversal
24	**Asmita Thool** *IIT Madras, India*	Non-filamentary resistance switching in CVD-MoS2 memristive devices
25	**Katherina Loske** *University of Florida, United States*	13.5 kV NiO/beta-Ga2O3 Heterojunction Rectifiers on 4-Inch Wafers with Dielectric-Assisted Field-Plate Edge Termination
26	**Arka Chakraborty** *IIT Kanpur, India*	Cryogenic Compatible Temperature Responsive Model of Vertical InAs/InGaAs GAA Nanowire Ferroelectric FET for Neuromorphic Applications

#	Presenter / Affiliation	Title
27	**ARPAN GHOSH** *Penn State University, United States*	Light-induced giant random telegraph noise in CuScP2S6/MoS2 heterostructures and their use in noise resilience image inference
28	**Nihal Raut** *IIT Bombay, India*	Self-Adaptive Hybrid CMOS-FeCAP Image Sensor for Dynamic Range Enhancement
29	**Fevronia Andreou** *Texas A&M; University, United States*	Performance and Energy Efficiency Enhancement in HfO2-Based ReRAMs via Mo Doping
30	**Jianan Song** *Penn State University, United States*	Study of leakage current in GaN junction field-effect transistor under heavy ion radiation
31	**Jianming Huang** *Southern University of Science and Technology, China*	Mobile-ion-induced transient NDR in emerging FETs: Optimization insights and figures of merit via compact modeling
32	**Shicheng Su** *KAUST, Saudi Arabia*	In-sensor learning via microfluidic neuromorphic charge-trapping memory
33	**Shayan Parhizkar** *AMO GmbH / RWTH Aachen University, Germany*	Wafer-Scale Waveguide-Integrated Graphene-based Optoelectronic Mixers
34	**Sooyeol Bae** *KAIST, Republic of Korea*	A Physics-Based Analytical Threshold Voltage Model of Oxide Semiconductor Governed by Depletion Width
35	**Mayuri Sritharan** *University of Waterloo, Canada*	Emulating Neuron and Synaptic Functions through Antiferroelectric Tunnel Junctions: A Novel Dynamic Simulation Approach
36	**MD YASIR BASHIR** *IIT Kanpur, India*	Highly Scalable Multi-Bit Monolithic Stackable 3D Dynamic Random-Access Memory Cell
37	**Nolan Hendricks** *Air Force Research Laboratory, United States*	DC and RF Performance of GaN MISHEMTs with High-kappa AlTiO Nanolaminate Gate Dielectric
38	**Cesely Smith** *Carnegie Mellon University, United States*	Contact Engineering of Foundry n-Type CNFETs with Al Contacts
39	**Parthiban Santhanam** *UCLA, United States*	Chip-Scale Optoelectronic Voltage Boost Converters
40	**Sung-Kun Park** *SK hynix, Republic of Korea*	Evolution of single-poly embedded NVM for low-density code storage EEPROM
41	**Md Arifuzzaman Faisal** *University of Michigan, United States*	Exact field Solution of Contact Resistance in Anisotropic 2D Transistors with Experimental Benchmarking
42	**Atul Sachan** *IIT Bombay, India*	Field-Assisted Charge Trapping in ALPO-IGZTO TFTs Enabling High Endurance and Long-Term Retention Without Tunneling and Blocking Layer
43	**Jiahui Yang** *Duke University, United States*	Record Switching Speed of 100 ns in Interfacial Memristors with High Uniformity
44	**Ram Munde** *Purdue University, United States*	Nanoscale Thermal Resistance Mapping of Nanocrystalline Cu Thin Films Using Scanning Thermal Microscopy with Hertzian Contact Geometric Correction
45	**Dawei Wang** *Arizona State University, United States*	GaN Vertical Trench MOSFET Using Stepped Power Slanted RIE Polish
46	**Michiel van Setten** *imec, Belgium*	Atomistic modeling of fluorine doping in IGZO
47	**Jeelka Solanki** *University at Albany, United States*	In-Memory Image Processing Using 65nm CMOS-integrated 1T-1R RRAM Arrays
48	**Abdul Momin Syed** *KAUST, Saudi Arabia*	A Highly Stable Multimodal Perovskite Heterojunction Memristor Enabling In-Memory Perception
49	**Xiaojun Zheng** *Penn State University, United States*	High Temperature Switching in ALD-Grown Ferroelectric AlN Thin-Film Transistors with ZnO Channel
50	**Riya Rajpurohit** *University of Virginia, United States*	Atom to System Model for a Superconducting Non-volatile Memory Device
51	**Abhrajit Roy** *IIT Bombay, India*	Solution-Processed Ti-Pt/NiO/Ag Non-Volatile Devices as Synapses and Neurons in Analog Spiking Neural Network Hardware