

Program

Apr 1 - 2, 2026



2026 HBCU CHIPS Network Conference

2026 HBCU CHIPS Network Conference

Renaissance Atlanta Midtown Hotel, Centennial Ball Room
866 W Peachtree St NW, Atlanta, GA 30308

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Wed, April 1

8:00 AM

Registration

Break |

Location: Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308

9:00 AM

9:00 AM

Plenary Session: Welcome

Session |

Location: Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308 |

Convener: George White (Senior Director for Strategic Partnerships at Georgia Institute of Technology)

9:00 - 9:15 AM

Welcome and Provosts Remarks

Speakers

Charlene Gilbert (Provost and Senior Vice President for Academic Affairs, Clark Atlanta University), Raheem Beyah (Provost, Georgia Institute of Technology)

9:15 AM

9:15 AM

Plenary Session: Keynote

Session |

Location: Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308 |

Convener: Frances Williams (Vice President for Research and Sponsored Program at Clark Atlanta University)

9:15 - 9:35 AM

Keynote Address + Micron Leadership Panel

Speaker

Fran Dillard (Vice President Global Culture & Workforce at Micron Technology)

10:05 AM

10:05 AM

Coffee Break + Networking

Break | **Location:** Hallway

10:30 AM

10:30 AM

Plenary Session: Panel Discussion

Session |

Location: Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308 |

Convener: Patricia Mead (Department Chair at Norfolk State University)

10:30 - 10:50 AM

Microelectronics Industry Panel

Speakers

Armond Duncan (Sr. Program Manager at Micron Technology), Danielle Ferguson-Macklin (Talent Communities Program Manager at Teradyne), Robert Hoogland (Department Manager Embedded Software at ASML), Tara McCaughey (Strategic University Partnership Manager at GlobalFoundries)

11:20 AM

11:20 AM

Transition

Break | **Location:** Hallways

11:30 AM

11:30 AM

Plenary Session: Panel Discussion

Session |

Location: Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308 |

Convener: Shyam Aravamudhan (Professor of Nanoengineering at JSNN, North Carolina A&T State University)

11:30 - 11:50 AM

Government Funding Opportunities

Speakers

Debbie Black-Conn (Microelectronics Commons WFD Lead, DEVCOM Army Research Laboratory), James Moore III (Assistant Director, Directorate for STEM Education at National Science Foundation), LaShauna Evans (Program Manager National Science Portal at Air Force Office of Science and Research), Michelle Williams-Vaden (Executive

12:20 PM

Director at SEMI Foundation), Wayne Churaman (Technical Execution Area Lead, DEVCOM Army Research Laboratory)

12:20 PM

Lunch + Microelectronics Award

Session |

Location: Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308

1:10 PM

1:10 PM

Technical Session 1: Room A: Materials & Devices

Session | **Location:** 5th floor, Chastain A | **Convener:** Eric Mintz (Clark Atlanta University)

1:10 - 1:30 PM

Optics-Electronic Devices: Turn Light into Electricity Turn Electricity Into Light

Speaker

Qinglong Jiang (University of Arkansas at Pine Bluff)

1:30 - 1:50 PM

Assessment of optoelectronic properties of an ambipolar polymer - photochromic dye blend in the solid state for organic photoresponsive device applications.

Speaker

Ikem Uba (Hampton University)

1:50 - 2:10 PM

IR Photodetector based on the contactless-PdSe₂ integration with Few-Layered MoSe₂ Field-effect Transistor

Speaker

Roshan Padhan (Jackson State University)

2:10 - 2:30 PM

A Method for Calculating PIN Alpha-voltaic Cell Operational Life from Modelling and Simulation Data.

Speaker

Kishak Cinfwat (Morgan State University)

2:30 PM

1:10 PM

Technical Session 1: Room B: Quantum Technologies

Session | **Location:** 5th floor, Chastain B | **Convener:** Courtney Quarterman (Atlanta University Center)

1:10 - 1:30 PM

Building Quantum Information Science Capabilities at HBCUs: Insights and Recommendations

Speaker

Thomas Searles (University of Illinois at Chicago)

1:30 - 1:50 PM

Implementation of Finite state logic machines via the dynamics of atomic systems

Speaker

Dawit Hailu (Bowie State University)

1:50 - 2:10 PM

Optimization of Titanium Nitride as a Material for Superconducting Josephson Junctions in Quantum Computing Applications

Speakers

Ebenezer Vondee (North Carolina A&T State University), Kiran Nyaupane (North Carolina Agricultural and Technical State University)

2:30 PM

2:10 - 2:30 PM

Investigation of Surface Acoustic Wave Dynamics at Cryogenic Temperatures for Quantum Device Applications**Speaker**

Felix Kimeu (Norfolk State University)

1:10 PM

Technical Session 1: Room C: Materials & Devices (Undergraduate Session)**Session** | **Location:** 5th floor, Rialto A | **Convener:** Daniel Vrinceanu (Texas Southern University)

1:10 - 1:30 PM

Urea-based GQDs with PVA Integration**Speaker**

Aldine Willacey (University of Arkansas at Pine Bluff)

1:30 - 1:50 PM

Luminescence from Nanoscale Perovskite Semiconductor Materials**Speaker**

Thomas Murray (Fayetteville State University)

1:50 - 2:10 PM

Fabrication and Characterization of the Thin Film Solid State Li-Ion Batteries**Speaker**

Jamar Dozier (Alabama A&M University)

2:10 - 2:30 PM

Design, Fabrication, and Characterization of Thermoelectric Devices from Multilayer Thin Films**Speaker**

Cole Cooper (Alabama A&M University)

2:30 PM

2:30 PM

Break + Transition**Break** |**Location:** Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308

2:45 PM

2:45 PM

Technical Session 2: Room A: Materials & Devices**Session** | **Location:** 5th floor, Chastain A | **Convener:** Durga R. Gajula (Georgia Institute of Technology)

2:45 - 3:05 PM

Using Q-Switched Lasers for Multi-Beam Multi-Target Pulsed Laser Deposition of Photonic High-Entropy Alloy Films**Speaker**

David Rossmannith (Dillard University)

3:05 - 3:25 PM

Van der Waals Integration of Semi-Metallic PdSe₂ Contacts for High-Performance n-type WS₂ Field Effect Transistors**Speaker**

Saurabh Dixit (Jackson State University)

3:25 - 3:45 PM

Dielectric Properties of Conducting Boron-Doped Diamond**Speaker**

Daniel Harrison (Morgan State University)

3:45 – 4:05 PM

Growth of Cubic Boron Nitride by Electron Cyclotron Resonance Chemical Vapor Deposition on Boron Doped Diamond Substrates**Speaker**

Sheikh Mahtab (Graduate research assistant)

4:05 PM

2:45 PM

Technical Session 2: Room B: AI in Semiconductors**Session** | **Location:** 5th floor, Chastain B | **Convener:** Asif I. Khan (Georgia Institute of Technology)

2:45 – 3:05 PM

A Lab-to-Go Approach for AI and Semiconductor Education**Speaker**

Xuemin Chen (Texas Southern University)

3:05 – 3:25 PM

Diamond Quantum Vector Magnetometer Optimization with Machine Learning Models**Speaker**

Hamdin Ozden (Morgan State University)

3:25 – 3:45 PM

Adaptive Self-Healing Neuromorphic-Inspired VLSI Architecture for UltraLow Power Edge AI**Speaker**

Graham Thomas (Texas Southern University)

3:45 – 4:05 PM

Maximizing HBCU University Websites to Highlight Contributions to AI-Enabled Semiconductors: Research, Workforce Development, Academic Programs, and Institutional Initiatives**Speaker**

Myah Webb (University of Arkansas at Pine Bluff)

4:05 PM

2:45 PM

Technical Session 2: Room C: Education and Workforce Development**Session** | **Location:** 5th floor, Rialto A | **Convener:** Shyam Aravamudhan (North Carolina A&T State University)

2:45 – 3:05 PM

Bridging the Talent Gap: A New Approach to Accelerating Workforce Solutions for Semiconductors**Speaker**

Michelle Williams-Vaden (SEMI Foundation)

3:05 – 3:25 PM

Collaborative Research: Advancing Semiconductor Education through Expansion and Diversification (ASEED)**Speaker**

Suxia Cui (Prairie View A&M University)

3:25 – 3:45 PM

Development of a Multiuser Collaborative Virtual Training Environment for Photolithography Cleanroom Processes**Speaker**

Emmanuel Osei-Kwame (Norfolk State University)

3:45 – 4:05 PM

On the Feasibility of Solving the Time Independent Schrödinger Equation using Neural Network and Block Form with Rayleigh Quotient Loss Function

Speaker

T.L. Wallace (Meharry Medical College)

4:05 PM

4:05 PM

Poster Session: Poster Session

Poster Session | Location: Hallway

Side-channel Analysis for Hardware Trojan Detection

Speaker

Iain White (Prairie View A&M University)

Scalable Growth of 2D VS₂: Impact of Process Conditions on Crystallinity and Layer Quality

Speaker

Amari Gayle (Clark Atlanta University (student))

A General and Modular Approach to Solid-State Integration of Zero-Dimensional Quantum Systems

Speaker

Ferdous Ara (Winston-Salem State University)

A Novel Method for Rapid Fabrication of Boron-Doped Luminescent Porous Silicon

Speaker

Elijah Wesley (North Carolina A&T State University)

BipBip: A Lightweight Crypto Algorithm for Open Source Processors and AI Accelerators

Speaker

Alexander Stoyanov-Roberts (Morgan State University CAP Center)

Computer Organization Teaching Materials Development

Speaker

Shavaughn Dunson (Prairie View A&M University)

Design, Simulation, and Measurement of CMOS-Based Ring Oscillator and Operational Amplifier Integrated Circuits

Speaker

Baraka Chimba (Alabama A&M University)

Deterministic Integration of MoS₂-Graphene Heterostructures for Future Chip-Scale 2D Electronics

Speaker

Mustafa Ali (Prairie View A&M University)

Development of TaC substrates for AlGaN power electronics

Speaker

Astrid Dzutcha Kengne (Center for Research and Education in Microelectronics, Department of Electrical and Computer Engineering, Morgan State University, Baltimore, MD 21251, United States)

Emergent ferromagnetic correlations and spin textures in the chiral magnet BaFeGaO₄

Speaker

Orrin Delgado (Norfolk State University)

Enhanced electrocatalytic and supercapacitance performances of transition metal oxynitride thin films**Speaker**

Warren GloverII (student)

Fabrication and Characterization of Lanthanide-Doped Oxide Materials for Sensing Applications**Speaker**

Tiffany Lukusa (Fayetteville State University)

Fabrication and Characterization of Surface Acoustic Wave (SAW) Devices**Speaker**

Quinten Jones (Norfolk State University)

Finite Element Analysis of 3D-Printed Polymer Lattice Thermal Interface Materials: Effects of Lattice Configuration and Open/Closed-Cell Topology**Speaker**

Davian Cartwright (Central State University)

From GaN to Sapphire: How Substrate Influences MoSe₂/MoS₂ Heterostructure Properties**Speaker**

M. K. Indika Senevirathna (Clark Atlanta University)

Green Synthesis of Pectin-Stabilized ZnO Nanocomposites for Photocatalysis**Speaker**

Godwill Tewan (Coppin State University)

In-Depth Analysis of How Various Parameters of Immersive VR-Based Training Influence Performance**Speaker**

Sandra Eddie (Norfolk State University)

Intrinsic Ferroelectric Switching in 2D CuInP₂S₆**Speaker**

Dion Brumfield (Jackson State University)

Jumpshot**Speaker**

Shavaughn Dunson (Prairie View A&M University)

Microfluidic device for label-free cell deformation analysis**Speaker**

Ayodeji aderin (Norfolk State University)

Microscopic Origin of Polarization Switching in Zr-Doped HfO₂: Real-Space Charge Redistribution and Berry-Phase Branch Analysis**Speaker**

Malachi Moody (Delaware State State University)

Optical Characterization of Defects in 4H-SiC for Room Temperature Quantum Sensing

Speaker

Sheikh Mahtab (Morgan State University)

Raman characterization of MBE grown mixed As-Sb alloy nanowires

Speaker

Joshua White (North Carolina A&T State University)

Strengthening Education to Workforce Pipelines at HBCUs: Impacts on Career Readiness and Workforce Equity

Speaker

Abel Phiri (Student)

Structural and Optical Characterization of 2D Semiconductors Toward Defect-Based Quantum Sensing with Plasmonic Enhancement

Speaker

Tanmay Talukder (Morgan State University)

Structural, magnetic, and thermodynamic properties of Nd₂MoO₆

Speaker

Foster Kwabena Ontumi (Norfolk State University)

Structural, Optical, and Electrical Analysis of Sputtered Titanium Nitride Thin Films

Speaker

Brianna Barbee (North Carolina A&T State University)

Experimental Investigation of 3D-Printed Polymer Lattice Composite Thermal Interface Materials for Semiconductor Packages

Speaker

Camron Nesbitt (Central State University)

5:00 PM

5:00 PM

7:00 PM

Reception

Session |

Location: Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308

Thu, April 2

8:30 AM	Registration + Breakfast Break Location: Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308
9:00 AM	Plenary Session: State of the HBCU CHIPS Network Session Location: Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308 Convener: George White (Georgia Institute of Technology)
	<p>9:00 – 9:10 AM Conference Technical Committee Co-chairs</p> <p>Speakers Daniel Vrinceanu (Texas Southern University), Mohammadreza Hadizadeh (Central State University)</p>
	<p>9:10 – 9:25 AM HBCU CHIPS Network Initiating Committee</p>
9:30 AM	Plenary Session: Fireside Chat Session Location: Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308 Convener: Erin Lynch (President of Quality Education for Minorities (QEM) Network)
	<p>9:30 – 9:50 AM Fireside Chat with CEO</p> <p>Speaker Greg Smith (CEO of Teradyne)</p>
10:20 AM	Coffee Break Break Location: Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308
10:35 AM	Plenary Session: Panel Discussion Session Location: Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308 Convener: Kevin Kornegay (Eugene Deloatch Endowed Professor at Morgan State University)
	<p>10:35 – 11:25 AM Role of AI in Semiconductors and Microelectronics Panel</p> <p>Speakers Dinadayalane Tandabany (Professor of Chemistry at Clark Atlanta University), Jeremy Muldavin (Director Development A&D, Cadence), Konstantin Cvetanov (Global AI Factory Tech Lead at Nvidia), Li Song (Memory CAD Engineering & AI/ML at Micron Technology), Ron Duncan (Head of Corporate Innovation Programs at Synopsys), Tazrien Kamal (Sr. Director Design Enablement at GlobalFoundries)</p>
11:25 AM	
11:30 AM	Lunch Day 2 Session Location: Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308
12:20 PM	

12:25 PM

Technical Session 3: Room A: Materials & Devices

Session | **Location:** 5th floor, Chastain A | **Convener:** Mohammadreza Hadizadeh (Central State University)

Description

Technical Session 3

12:25 - 12:45 PM

Interface-Engineered van der Waals Heterostructures for Next-Generation Microelectronic Contacts

Speaker

Mohamed Noufal (Hampton University)

12:45 - 1:05 PM

Growth of Scandium Diboride Semimetallic Single Crystals by Laser Floating Zone Method

Speaker

Ahamed Raihan (Morgan State University)

1:05 - 1:25 PM

Abstract: Broadband Surface Acoustic Wave Generation via Chirped IDTs for Programmable Spin Control

Speaker

Andre Saffore II (Norfolk State University)

1:25 - 1:45 PM

Engineering Semiconductor Thin Films with ALD and Integrated Metrology

Speaker

Swapnil Nalawade (North Carolina A & T State University)

1:45 PM

12:25 PM

Technical Session 3: Room B: Power Electronics

Session | **Location:** 5th floor, Chastain B | **Convener:** Daniel Vrinceanu (Texas Southern University)

Description

Technical Session 3

12:25 - 12:45 PM

Titanium Oxynitride Thin Film and Nanowires for Ultrahigh Capacitance Supercapacitors

Speaker

Sheilah Cheronu (North Carolina Agricultural and Technical State University,)

12:45 - 1:05 PM

Modeling the Effects of Surface Potential on Gallium Nitride Betavoltaic Cell Collection Efficiency

Speaker

Monté Hendrix (Morgan State University)

1:05 - 1:25 PM

Multi-layered Porous PVDF 2D Heterostructure Nanofillers as High-Density Capacitive Energy Storage

Speaker

William Gladney (Jackson State University)

1:45 PM	<p>1:25 - 1:45 PM</p> <p>SLA-Printed Architected Polymer Thermal Interface Materials with BN/Microfiber Fillers for High-Power Semiconductor Cooling</p> <p>Speaker Tahseen Al-wattar (Central State University)</p>
12:25 PM	<p>Technical Session 3: Room C: Advanced Packaging</p> <p>Session Location: 5th floor, Rialto A Convener: Dinadayalane Tandabany (Professor of Chemistry, Clark Atlanta University)</p> <p>Description Technical Session 3</p>
	<p>12:25 - 12:45 PM</p> <p>Materials development and biophotonic sensor fabrication employing lead-free halide perovskites</p> <p>Speaker Demetris Geddis (Hampton University)</p>
	<p>12:45 - 1:05 PM</p> <p>Lite VLA: Efficient Vision-Language-Action Control on CPU-Bound Edge Robots</p> <p>Speaker Justin Williams (Clark Atlanta University)</p>
	<p>1:05 - 1:25 PM</p> <p>Experimental Evaluation of BNNT-based Thin Films for Mitigating Single Event Effects in SRAM via Proton Beams</p> <p>Speaker Alexander Roque (Norfolk State University)</p>
1:45 PM	
1:45 PM	<p>Break + Transition</p> <p>Break</p>
2:10 PM	
2:10 PM	<p>Plenary Session: Technical Session Sprints</p> <p>Session Location: Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308</p>
3:00 PM	<p>2:10 - 3:00 PM Recap and Highlights from Technical Sessions</p>
3:00 PM	<p>Plenary Session: Special Announcement: HBCU CHIPS Network Initiation Committee</p> <p>Session Location: Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308</p>
3:20 PM	
3:20 PM	<p>Closing Remarks</p> <p>Session Location: Renaissance Atlanta Midtown Hotel, Centennial Ball Room, 866 W Peachtree St NW, Atlanta, GA 30308</p> <p>Description Closing remarks</p>
3:30 PM	