CONFERENCE SCHEDULE

WEDNESDAY, OCTOBER 25

PRECONFERENCE ACTIVITIES

7:00 a.m. – 7:30 p.m. Conference Registration West Conference Foyer

AM WORKSHOPS

9:00 a.m. – 12:30 p.m. Workshop A: Getting Started for New Grantees Advance Registration & Ticket Required Empire

This workshop is recommended for all principal investigators, co-principal investigators, and other team members involved in newly awarded projects and centers in FY23. Others who may find the workshop useful include new awardees in FY22 and other project personnel from prior years who have recently become involved in ATE projects and centers. The goal of this workshop is to make new grantees aware of the reporting and financial requirements of their ATE grant and to connect them with other ATE projects and centers that can help them successfully manage, evaluate, and report on their projects. Participants will have the opportunity to hear from individuals representing Mentor-Connect, ATE Central, EvaluATE, and the National Science Foundation and to learn about the various resources they provide through this workshop. Participants will be provided access to a resource packet and are encouraged to bring questions about the management of their projects for discussion. In addition, a meet and greet and box lunch opportunity with NSF ATE program directors will be offered from 11:30 a.m. – 12:30 p.m. for workshop participants.

Ed Almasy, Co-PI, ATE Central, University of Wisconsin–Madison, WI; **V. Celeste Carter**, Lead ATE Program Director, National Science Foundation VA; **Elaine Craft**, PI, Mentor-Connect, Florence-Darlington Technical College, SC; **Angela Turner**, Grant Specialist, National Science Foundation, VA; **Erika Sturgis**, Research Data Analyst, The Evaluation Center, Western Michigan University, MI

9:00 a.m. - Noon

Workshop B: Practical Accessibility – Making Your Website and Materials Usable for All Learners Advance Registration & Ticket Required Hampton

Deepen your accessibility skills and learn how to make your ATE project and center website and materials more usable for all learners. Led by experts from CAST, this interactive workshop will begin with a brief overview of Universal Design for Learning (UDL), a framework to improve and optimize teaching and learning for all people based on scientific insights into how humans learn. Workshop participants will then be introduced to four key accessibility principles – Perceivable, Operable, Understandable, & Robust (POUR) and learn how these principles can be applied at a practical level to help ensure accessibility. The workshop will be anchored around case studies conducted with members of the ATE community that showcase how ATE PIs made their materials and activities more accessible. Participants will come away with a clearer understanding of tools that can support their efforts, resources and organizations that can help them, and

practices that can support the creation of accessible websites and resources, including videos, graphics, and presentations. Please bring a laptop or tablet to this workshop.

Rachael Bower, PI, ATE Central, University of Wisconsin-Madison, WI; **Luis F. Pérez,** Disability & Digital Inclusion Lead, CAST, MA; **Sam Catherine Johnston**, Chief Postsecondary & Workforce Development Officer, CAST, MA

9:00 a.m. - Noon

Workshop C: Micromessaging to Facilitate Equitable Learning Environments Advance Registration and Ticket Required Diplomat

The Micromessaging to Facilitate Equitable Learning Environments professional development program is one of the National Alliance for Partnerships in Equity's (NAPE's) flagship comprehensive educational equity programs. NAPE uses a humanizing approach to its equity work with educators by bringing them into a reflective learning community for ongoing professional development. Participants in this workshop will deepen their understanding of how equity and inequity operate in educational settings. In addition, participants will develop their individual and institutional knowledge, skills, and commitment to identify and eliminate inequities, and actively create equitable learning environments to improve student access, experiences, and outcomes.

Silvia C. Ramos, Vice President of Programs & Research, National Alliance for Partnerships in Equity (NAPE), TN; **Lisa Williams**, NAPE Equity Instructor, National Alliance for Partnerships in Equity (NAPE), MD

9:00 a.m. - Noon Workshop D: How to Elevate Your ATE Program Using Effective Communications Strategies Advance Registration and Ticket Required Ambassador

Interested in learning how to raise awareness of your ATE program? Want to strengthen your program messaging to key audiences? Need more insight into developing an integrated communications strategy? In this three-hour workshop, you will learn from strategists at Fenton Communications, a social change agency, which solely works with purpose-driven organizations like nonprofits, foundations and corporate social good companies focused on important issues such as climate change, global health, DEI/racial justice, and education. Join us and learn how to use communications and marketing strategies to inform and strengthen how you communicate about your ATE program to improve student recruitment, outreach, and project dissemination.

Jessica Borbee, Senior Account Executive, Washington, DC; Daria Hall, Executive Vice President, Fenton Communications, Washington, DC; Sierra Salser, Senior Account Executive, Washington, DC

9:00 a.m. – Noon Workshop E: Interpreting Evaluation Data – Unlocking Insights for Project Improvement Advance Registration and Ticket Required Palladian This interactive workshop is for ATE evaluators, PIs, and project staff who are looking to make the most out of their project evaluations. Session leaders will focus on the vital skill of interpreting evaluation data to inform meaningful project improvement and assess overall effectiveness. Interpreting evaluation data is a crucial step in extracting valuable insights and making informed decisions. Interpretation allows for sense-making and evaluative conclusions. Throughout the workshop, participants will explore various data interpretation strategies, including comparative analysis against historical or baseline data, benchmarking against national datasets, and participatory sense-making sessions. Using practical examples, hands-on activities, and engaging discussions, participants will be able to apply these interpretation techniques to their own ATE evaluations.

Lyssa Becho, PI, EvaluATE, Western Michigan University, MI; **Megan López**, Senior Research Associate, EvaluATE, Western Michigan University, MI

12:00 – 4:30 p.m. Universal Access Lab Committee

Come join experts from within and beyond ATE to learn how to make your curriculum, website, videos, and other materials accessible to a more diverse group of users, including those with disabilities. The Universal Access Lab will showcase and provide live demonstrations of assistive technology, as well as tip sheets and other practical resources and materials. With opportunities to get feedback and support from experts on your own challenges, talk with others in the community and share ideas, and get a chance to explore new and exciting technology, the Universal Access Lab has something for everyone.

1:00 – 2:50 p.m. HIGH IMPACT WORKSHOPS

Fostering Adaptive Expertise: Project-Based Learning & Capstone Project Design Workshop: Track 1 Ambassador

In this highly interactive session, the development of adaptive expertise will be used to frame project-based learning and capstone projects in technical education disciplines. Discussions will focus on defining adaptive expertise and its importance and application in industry, defining and applying project-based learning strategies, and developing capstone projects. Based on best practices and frameworks provided, participants will design their own project-based learning activity or capstone project appropriate to their industry, college resources, and local conditions. Participants will share their strategies and project designs with the group.

Peter Crabtree, Visiting Project Scientist, University of California-Berkeley, CA; **Robert Nirenberg**, Faculty, Metropolitan Community College, NE; **Ted Wilinski**, Lead Instructor, Milwaukee Area Technical College, WI

Enhancing Technology Skills Via Remote Labs, Industry, & Education Partnerships Workshop: Track 1 Palladian

The creation of enhanced and flexible learning opportunities in electronic/EV automotive technology and engineering—using portable electronics, lab equipment, and simulations—uniquely prepares students for advanced academic study and careers in these fields. A strategy to provide these opportunities is through industry engagement using a Business & Industry Leadership Team (BILT) model. Industry engagement promotes innovation, growth, and development within technical academic programs. In addition, it provides student internships and portable labs to enhance student skills as well as high school educator training to equip educators with the skills, knowledge, and tools to create engaging and impactful learning experiences, thereby expanding the pipeline of technical students.

Wesley Francillon, Academic Chair of Engineering, Technology, and Cybersecurity, Suffolk County Community College, NY; Laura Galletta, Director of Corporate Training, Suffolk County Community College, NY; Pete Maritato, Faculty, Suffolk County Community College, NY; Gordon Snyder, Engineering Deptartment Chair, Holyoke Community College, MA

BioSCOPE: Project-Based, Work-Based Learning in Biomanufacturing

Workshop: Track 1 Governors

Bioscience Supply Chain Operations Projects for Education (BioSCOPE) helps build the biomanufacturing workforce by providing students with project-based, work-based learning experience where students manufacture products (e.g., components for biotech lab kits) under quality and cGMP compliance to distribute to customers like high schools and college labs. This workshop introduces BioSCOPE and demonstrates the significance of quality/GMP in biomanufacturing, and the digital BioSCOPE 101 handbook with supply chain (SC) projects, SOPs, and Batch Records. Workshop leaders will demonstrate how to access and use BioSCOPE 101.

Ying-Tsu Loh, Executive Director, BABEC, CA; **Emily Quach**, Faculty, Laney College, CA; **Terri Quenzer**, Executive Director, Bioscience Workforce Development Hub, MiraCosta College, CA

Education Across Diverse Student Populations in STEM including Veterans

Workshop: Track 2 Hampton

This workshop will explore experiences, case studies, strategies, and methods related to teaching and learning in technical disciplines. These practices have been implemented and are continually evolving to meet the diverse needs of a wide range of student learners including the veterans' population. Attendees will learn about newer methods that are adapted to ensure efficient student-learning and how to effectively prepare students for industry jobs and higher education. The workshop will include open-ended discussions, presentations, Q&A on topics including education in the STEM fields with a focus on nanotechnology and microelectronics, remote and in-person learning, and curriculum materials.

Zachary Gray, Assistant Research Professor, Pennsylvania State University, PA; **Thomas Johnson**, Instructor, Normandale Community College, MN; **Nancy Louwagie**, Instructor Vacuum Technology, Normandale Community College, MN; **Vishal Saravade**, Assistant Teaching Professor, Pennsylvania State University, PA

Global Partnership in Supporting Advanced Manufacturing Technical Education Workshop: Track 3 Diplomat

"What can we learn from each other?" After a successful pilot with international colleges NOVA, Technicum, and Berufsbildende Schulen (BBS) Soltau, together with U.S. partners Oakton, Pasadena City, and La Guardia community colleges have collaborated in the Erasmus project "1 for All, Global 3D Printing." The objective of this project is to create a shared—through live and online international exchanges—curriculum nd 3D printing industry experiences for technical education students. The project aims to enhance students' digital 3D design and print, intercultural communication, and collaboration skills. Pilot outcomes and future initiatives will be shared in this high impact workshop.

Jared Ashcroft, PI, Micro Nano Technology Education Center (MNT-EC), Pasadena City College, CA; Philip Prale, Professor, Education Technology, Oakton College, IL; Marcel Toussiant, Managing Director, One For All, Netherlands

From Education to Industry: Building the Ag Technician Workforce through Industry Connections Workshop: Track 3 Congressional

This workshop focuses on how to develop an agricultural technician curriculum for secondary schools, which includes skills and knowledge directly relevant and transferable to postsecondary education and the agricultural technician workforce. Join this workshop to discuss how and what kind of partnerships to cultivate, and how to engage partners in moving from program development into supporting curriculum implementation in high schools nationwide—and why that support is critical to success. Partnerships include AgCentric, secondary and postsecondary curriculum experts, industry experts, and representatives from supporting associations.

Carl Aakre, CASE Director, National Council for Agriculture Education, MN; **Judy Barka**, Assistant Director, AgCentric, Central lakes College, MN

Using AI to Broaden Participation in ATE + How to Conduct Applied Research

Workshop: Track 4 Empire

Two distinct foci applicable across STEM disciplines are addressed in this hands-on workshop: (1) how to employ big data sets and Artificial Intelligence, and (2) how to design and conduct applied research. Through the lens of an applied research project that uses big data with localized data to understand grant ecosystems, participants will learn how to use these skill sets in their specific ATE work for the purpose of increasing

participation (e.g., STEM enrollment, completion, diversity metrics, funding, usage of a technology) in their respective fields.

Christopher Baechle, Co-Principal Investigator, Impact Allies, FL; **Rassoul Dastmozd**, Co-Principal Investigator, Project Vision, MN; **Ben Reid**, Director and Principal Investigator, Impact Allies, FL; **Will Tyson**, Co-PI, University of South Florida, FL

Building Institutional ATE Grant Capacity through CCPI-STEM Curriculum (By Invite Only) Affinity: Track 1 Cabinet

The Community College Presidents' Initiative in STEM (CCPI-STEM) ATE project focuses on achieving excellence in STEM education. This invite-only sessions aims to educate community college presidents and industry representatives about the CCPI-designed ATE grant curriculum, which focuses on the ins and outs of pre-award NSF grant funding. Participants will gain: (1) insights into the ATE grant process and supportive community; (2) strategies for addressing institutional barriers and challenges at their community colleges; and (3) opportunities to build relationships with other presidents and industry representatives from across the national CCPI-STEM network, which is divided into several regions.

Charlene M. Dukes, President Emerita, Prince George's Community College, MD; **Elizabeth K. Hawthorne**, Co-PI, CPPI-STEM, Prince George's Community College, MD; **Shane Kirby**, Director, Columbus State Community College, OH

3:00 – 4:30 p.m. AFFINITY GROUP MEETINGS

The Convergence of Extended Reality (XR) and AI

Affinity: Track 1 Diplomat

Explore the transformative fusion of Extended Reality (XR) and Artificial Intelligence (AI), reshaping education and immersive encounters. Understand AI's current role and potential in education. Discover diverse AI applications within XR, revolutionizing how interactive experiences are crafted. Witness how AI-generated content and adaptive simulations unlock personalized learning journeys. Embark on an inspiring journey into the future, where XR & AI converge to create an enriched and engaging landscape of possibilities.

David Anderson, Biology Faculty, St. Cloud Technical & Community College, MN; **Dan Dennison**, 3D Modeler, Eastern Iowa Community College, IA; **Josh Webb**, AVR Manager, Eastern Iowa Community College, IA

Training Online Faculty – Ensuring High Quality, Accessible Online Courses

Affinity: Track 1 Congressional

This meeting focuses on best practices for training new faculty to teach online by cataloging key elements for high quality, engaging, and accessible online courses. Participants can expect an interactive and engaging dialogue addressing online course design and pedagogy, fostering an inclusive and engaging virtual environment, leveraging technology for active learning, and assessing student progress in the online mode. The facilitator will use their process as a springboard for sharing ideas and fostering expansion within the group. A checklist will be shared that ensures online programs offer outstanding, inclusive, and student-centered courses that connect with learners from diverse backgrounds.

Linda Bryant, Director, National Technical Institute for the Deaf Online Initiatives, Rochester Institute of Technology, NY

Using Data to Determine Viable Geospatial Instructional Module Development

Affinity: Track 1 Governors

It is difficult for geospatial faculty to know what combination of topics is best for preparing students for the geospatial workforce. In this Affinity meeting, participants will discuss how the development of learning outcomes, tailored by virtue of DACUMs and competency modeling, supports the development of geospatial teaching modules. Session leaders will share and discuss how numerous mutually supporting research activities enable the creation and orientation of learning outcomes to prepare students for their chosen field.

Nicole L. Ernst, Associate Director, Co-PI, National GeoTech Center, KY; Rodney Jackson, Associate Director, Co-PI, National GeoTech Center, KY

The Intersection of Manufacturing, Biotechnology, and Cybersecurity

Affinity: Track 3 Palladian

The great challenge in technician preparation is not so much what to teach, but what NOT to teach. Each industry identifies the minimal skillsets required for entry-level technicians, and the list keeps growing. The fields of manufacturing, biotechnology, and cybersecurity coalesce in several instances. It will be meaningful to discuss these commonalities and incorporate them into training programs. Afterall, what NOT to teach is the more important question.

Philip Gibson, Strategic Advisor, Workforce Development, Center for Global Health Innovation, GA;
Sue Griffith Smith, Vice President, Ivy Tech Community College of Indiana, IN; Shamsi Moussavi, Professor of Computer Science, MassBay Community College, MA

Advanced Tech Education Role in Quantum Workforce Development of the 21st Century

Affinity: Track 3 Hampton

Quantum technologies are paving the way to be among the most transformational technologies of the 21st century. As with any other disruptive technology, our society should be prepared to respond proactively to the challenges of the Quantum 2.0 revolution. Educational institutions are expected to play a major role in creating a robust quantum workforce that will support the developing quantum industry. In this Affinity Group Meeting, session leaders will explore current trends and lessons learned from their collaborative work in the emerging quantum ecosystem, with a special focus on preparing two-year institutions of higher education to face the challenges of Quantum 2.0.

Mo Hasanovic, Associate Professor/Department Chair, Electronics Engineering Technology, Indian River State College, FL; **Celia Merzbacher**, Executive Director, Quantum Economic Development Consortium, VA; **Anca Sala**, Professor, Kettering University, MI

Developing and Assessing Success Metrics for Work-Based Learning

Affinity: Track 4 Ambassador

Work-based learning (WBL) is a highly effective method to engage students while they build critical workplace skills; and it is being added to many technician training programs. However, a crucial question arises: how can we measure the quality of WBL experiences to ensure maximum student benefit? In this session, representatives from EvaluATE and an established WBL program will draw on their experience to facilitate a discussion on WBL assessment. Participants will have the opportunity to explore diverse success metrics and methods for their assessment.

Lyssa Becho, PI, EvaluATE, Western Michigan University, MI; **Karen Leung**, Faculty, City College of San Francisco, CA; **James Lewis**, Project Director, Work-Based Learning Programs, City College of San Francisco, CA

Sustaining Best Practices as a Foundation for Further Innovation Affinity: Track 5

Empire

This Affinity Group Meeting allows participants to share and learn more about how to sustain and build upon best practices that have been created in previous ATE-funded work. Additionally, the session will focus on examples of how to collect data for various initiatives to determine their effectiveness and candidacy for being sustained as well as how to find and adapt existing best practices. One focus will leverage examples from the partnership between the National Convergence Technology Center and Columbus State Community College's newly funded National Information Technology Innovation Center. Presenters will also share frameworks that have been adapted by the National Center for Next Generation Manufacturing.

Ann Beheler, PI, National Convergence Technology Center, TX; Shane Kirby, Director, Columbus State

Community College, OH; Karen Wosczyna-Birch, Executive Director and PI, National Center for Next Generation Manufacturing, CT

PI 101 – Cohort 1 Meeting (By invitation Only) Affinity: Track 5 Forum

Mentor-Connect is working with the first cohort of PI 101 participants. This invite-only session provides inperson meeting time for these participants to share experiences, ask questions, and build community. PI 101 responds to a recognized need for comprehensive support for new ATE PIs. PI 101 begins when the grant award is received and includes just-in-time support, one-on-one help, one-to-many sessions, and accompanying resources developed by experienced PIs, mentors, and advisors. PI 101 guides new PIs from the time an award is received through the first year of grant management to reduce PI anxiety, support strong project outcomes, and stimulate interest in submitting subsequent grant proposals.

Emery DeWitt, Co-PI, Mentor-Connect, Florence Darlington Technical College, SC; **Pamela Silvers**, Co-PI, Mentor-Connect, Florence Darlington Technical College, SC

3:00 – 4:00 p.m. **ATE Student Meet & Greet** *Open to ATE Students Only* Executive

AACC is coordinating an informal meet-and-greet opportunity for ATE students attending the conference. Join us for some light refreshment, introductions, and an opportunity to meet your fellow students. Following the session, students can set up for their poster session in the BluePre/Blue Room.

CONFERENCE OPENING

5:00 – 7:15 p.m. **Opening Plenary Session & Dinner** Regency

The opening plenary session and keynote speaker address will take place from 5:00 - 6:15 p.m., which will be immediately followed by dinner and networking from 6:15 - 7:15 p.m.

 V. Celeste Carter, Lead ATE Program Director, National Science Foundation, VA
Walter G. Bumphus, President and CEO, American Association of Community Colleges, DC
James L. Moore III, Assistant Director for the Directorate for Education and Human Resources (EHR), National Science Foundation, VA

Al, Adaptability, and the Future of Work Keynote Speaker: Kian Gohar, Founder/CEO, Geolab, CA It seems suddenly, everywhere we look, AI is being talked about as a new transformative technology that will make our working lives easier and more creative. But the truth is more nuanced. New forms of AI, like Generative AI, have the potential to make our lives better; but how do we deploy them in ways that magnify abundance and opportunity, rather than reinforce biases and inequity? Through vivid storytelling and real-world examples, this plenary address will provide an introduction to new technologies that are converging to disrupt the future of work, including Generative AI, and will explore key questions for educators to consider for the near future: What jobs and tasks might be negatively disrupted? What new skills do students need to learn? And, how should we as humans adapt to a future that will forever be increasingly bionic—in tandem between human judgement and machine intelligence?

7:15 – 8:45 p.m.

Student Poster Session & Dessert Reception

Blue Pre/Blue Room

ATE students and recent alumni will highlight their program of study and/or career path at a student poster session and dessert reception. Please take the time to visit the student posters and show your support for their efforts.