Breakfast Roundtables  
Thursday, October 24  
7:45 – 8:45 a.m.  
Ambassador Ballroom

Table 1: ATE Mentoring Opportunities—The Mentor-Connect Project  
*Dennis Faber, Co-PI, Mentor-Connect, MD*

The Mentor-Connect ATE mentoring system facilitates “win-win” knowledge transfer among peers to expand the impact of the ATE program. Are you an experienced PI, Co-PI, Senior Personnel/Staff or Project Director? Want to “give back” to others in the ATE community? Learn about the various ways in which you can provide meaningful mentoring assistance to both new and experienced ATE community members as well as to community college educators who aspire to be first-time ATE grantees.

Table 2: Supply Chain Technology Education  
*Erika Bowles, PI, Tacoma Community College, WA*

The boom in automated distribution centers has created a need for technicians to maintain highly sophisticated and efficient sorting, picking, and routing equipment. Much of the training of existing industrial engineering, mechatronics, and other similar programs is relevant to this technology, but just lacks the supply chain component. This roundtable will discuss requirements and resources to add the courses necessary to create a supply chain technician pathway from existing automated equipment training programs.

Table 3. Blended Tech Learning  
*Denis F. H. Green, Department Chair, Mechatronics, Linn Benton Community College, OR*

Blended or hybrid online learning is all the rage, but how do technical programs with critical hands-on labs offer training to distance learners? Learn from our successes and mistakes in setting up instructor-generated, blended-tech courses that incorporate podcasts, written exercises, and intensive hands-on labs called technology weekends. Participants will receive sample courses on a flash drive.

Table 4: Status, Role, and Needs of Engineering Technology Education  
*Greg Pearson, Senior Program Officer, National Academy of Engineering, DC*

This roundtable will introduce a recently funded ATE project that aims to collect and synthesize data concerning the education and employment of those with two- and four-year engineering technology degrees. Because the study has just begun, the PI will have little progress to report. The session will provide an opportunity for interested individuals to learn more about the study and to suggest questions and issues the project should address.

Table 5: T.E.A.M.: Technician Education in Additive Manufacturing  
*Frank Z. Cox, Program Manager and PI, Edmonds Community College, WA*

From standards to competencies to instruction, Project T.E.A.M. Educators are accelerating the growth of Additive Manufacturing (AM) by assisting ASTM (F42) and ISO (TC261) with international standards development. Reshaping the newly developed standards into competencies provides a foundation for ATE programs and courses. AM is an enabling technology for a wide range of manufacturing. The steady improvement in materials, processes, and standards has staged this industry for sustained growth.
Table 6: Games and Education
Steven Weitz, Assistant Professor, Media Arts, Lehigh Carbon Community College, PA

This roundtable will consist of discussion between those teaching game development and those using games for educational purposes. Discussion questions will include: What is the best way to integrate games into education? What would be an effective curricular approach for teaching game development? Come and learn about games as educational resources.

Table 7: The Controversy Over Contextual Math: A Struggle for Our Students and for Educators
Lisa Seidman, Co-PI, Biotechnology Laboratory Technician Program, Bio-Link National Center for Biotechnology Education, Madison Area Technical College, WI

Math is often a barrier for our students and a source of failure. But, in fact, the majority of students can perform basic math calculations; their problem is that they cannot apply math in a contextual setting. This roundtable will begin by looking at a provocative report from the National Center on Education and the Economy that shows a profound disconnect between the math taught in high schools and the math required in the workplace. What does this mean for us?

Table 8: Performing a Curriculum Gap Analysis: How and Why?
Beverly Hilderbrand, PI and Director, CARCAM, Gadsden State Community College, AL

The Consortium for Alabama Regional Center for Automotive Manufacturing (CARCAM) curriculum gap analysis survey model ensures that the automotive manufacturing technology program content meets current industry standards by using industry representative subject matter experts to review and provide feedback on current course offerings. Information gathered in this process provides continuous improvement with curricula changes, additions, and further review of curriculum content. The process also aids in building stronger relationships with education and industry partners.

Table 9: Developing and Implementing Assessments that Serve Practical Project Evaluation Needs
Amy M. Gullickson, Senior Lecturer and Coordinator, Master of Evaluation Program, Centre for Program Evaluation, University of Melbourne, Australia

Are you getting good use from your evaluation dollars? Do your evaluation findings serve regular program and management decision making? This discussion will focus on tools that routinize data collection and facilitate reflection and changes based on results. We will consider such factors as using logic models to ensure you're gathering data on salient features, identifying key collection opportunities, and providing easy means to view and discuss results (e.g., dashboards).

Table 10: Proposals to the Targeted Research Strand
Connie Della Piana, Program Director, National Science Foundation, VA

The ATE program would like to receive more successful proposals to the Targeted Research Strand. Two-year institutions and technician education are increasingly being pointed out as opportunities to foster a population of STEM literate students and professionals and to expand the pool of skilled technicians in established and emerging strategic advanced technology fields. At this roundtable, we will discuss three topics (1) components of successful projects; (2) ideas of useful research projects; and (3) input to re-design the research strand in ways that (a) contribute to research and practice in meeting this critical national need and (b) grow a research community that is characterized by partnerships among technician education practitioners, industry representatives, and researchers.
Table 11: Creating a National Workforce Education Network for Emerging Technologies
Bob Ehrmann, Managing Director, NACK Network, Pennsylvania State University, PA

The intent of this breakfast roundtable is to discuss the various strategies to be considered to nationally disseminate curriculum, provide professional development for educators, as well as provide connections for students, alumni, educators, and industry. Leadership from the Nanotechnology Applications and Career Knowledge (NACK) Network will facilitate this roundtable.

Table 12: Engaging High School Students in Science through Biotechnology
Jennifer K. O’Connor, Adjunct Professor, Natural Science, State College of Florida, FL

Picture this—an aloof student telling her biology teacher that she can’t wait to come to class and a low performing student explaining how restriction enzymes work. Getting high school students excited about science isn’t always an easy task. What could possibly have transformed these students? Biotechnology! The Biotechnology Alliance for Suncoast Biotechnology Educators (BASBE) has brought biotechnology into local high schools. During this roundtable, participants will learn about the BASBE program and how to model it. Attendees will also receive an activity that is guaranteed to make anyone a master of restriction enzymes.

Table 13: Teaching Technical Subjects Online — Lessons Learned
Philip Craiger, Associate Professor, Engineering Technology, Daytona State College, FL
Mark Pollitt, Associate Professor, Engineering Technology, Daytona State College, FL

Students learn best by doing. As schools embrace online classes, instructors teaching subjects requiring ‘hands-on’ learning are confronted with the problem of providing students with ‘hands-on’ experiences in a virtual environment. In this roundtable, presenters will discuss lessons learned and best practices based on 20+ combined years in teaching complex computer-related subjects online. We will provide examples of how to engage students with targeted, just-in-time video lectures. Participants will be asked to share their own lessons learned and best practices.

Table 14: Using Geospatial Technologies for College Institutional Research
Vince DiNoto, PI, GeoTech Center, Jefferson Community and Technical College, KY

This discussion will explore the ways in which GIST (Geospatial Information Science and Technology) can be used to study student populations. These studies can include demographics of students, clustering analysis of students by subject of interest, student achievement based upon demographical characteristics, and campus planning. Many of the studies can be done by geospatial students. Examples of some of these studies will be available for those attending to review.

Table 15: Utilizing 21st Century Technology and Pedagogy in the IT Classroom: A Model Professional Development Experience for High School IT Teachers
Ben Franske, Instructor, Network Technology and Security, Inver Hills Community College, MN

This roundtable will explore how an urban community college leveraged business and educational partnerships to create and deploy a two-day experiential professional development event for high school IT teachers. The curriculum for the workshop centered on the following topics: diversity in the IT workplace, engaging underrepresented students, exploring the latest IT pedagogy, utilizing the newest high school IT curricula, travel to Cisco to experience TelePresence, modern IT workplace competencies, and action planning. Participants will engage in active dialogue with project PIs and have time for action planning with them.
Table 16: The National Academy of Science’s Study of Undergraduate STEM Education

Michael Feder, Senior Program Officer, Board on Science Education, The National Academies, DC

The National Academy of Sciences has formed an expert committee on “Attracting and Retaining Students to Complete 2- and 4-year Undergraduate Degrees in STEM” to conduct a comprehensive review of evidence on the barriers to completing a STEM degree at 2 and 4-year institutions and the potential strategies for overcoming these barriers. This roundtable will provide a chance for the ATE community to learn about the study goals and provide input on what issues related to ATE should be addressed.

Table 17-18: ATE, TAACCCT, SEED and Energy

Henry Kelly, Senior Advisor, U.S. Department of Energy, DC

The portfolio of both the ATE and TAACCCT programs contain projects and consortia that focus on energy. We are interested in how to establish and grow this energy community to facilitate community building and communication of efforts around developing curricula, programs, certificates, and industry-recognized skills and competencies. This roundtable will focus on how to effectively link the communities. Possible discussion topics include the effectiveness of a joint conference that would also include industry; resources and programs being developed and possible mechanisms to ensure lack of duplication across the energy sub-areas; and how to most effectively engage industry regionally and nationally.