Breakfast Roundtables  
Friday, October 25  
7:45 – 8:45 a.m.  
Ambassador Ballroom

Table 1: What Have We Learned in the Past 20 Years? Recruiting Students for Advanced Technological Education Programs  
Tressa Gardner, Program Manager and Co-PI, Florence-Darlington Technical College, SC

ATE projects and centers share the challenge of recruiting students for ATE programs but don't always share the solutions. What have we learned in the past 20 years? Join in a discussion about strategies that work and tools that you can use; find out how to share what you know about what works and what doesn't; and evaluate two fresh ideas for maximizing your ability to raise career awareness, increase student interest, and boost enrollments.

Table 2: The National Educators Workshop – What is New?  
Mel Cossette, Executive Director and PI, National Resource Center for Materials Technology Education, WA

The subject of this breakfast roundtable is STEM teaching and learning in the context of materials technology. Interaction and hands-on experience with the world introduced us to materials and is a natural way to continue to explore this enabling technology. The National Educators Workshop (NEW) provides a venue for experiential learning and time to network in meaningful pursuit of new knowledge as an advocate of STEM Education.

Table 3: Facing the Challenges of Student Research and Teaching Bioinformatics  
E. Bruce Nash, Assistant Director, Science, Cold Spring Harbor Laboratory, NY

Beginning with a discussion by Cold Spring Harbor Laboratory staff based on experiences with Genomic Approaches in Biotechnology, this roundtable will explore the challenges of student-focused research, teaching bioinformatics, and assessing the effects of curricula on students.

Table 4: Defining the Role of Virtual and Simulated Laboratory Games in Construction, Engineering, and Technology Education Programs  
Jesse D. Kamm, Professor and Program Manager, Seminole State College, FL

With growing budgetary concerns throughout higher education, the high overhead costs associated with establishing world class training labs have led some institutions to the creation of virtual labs and simulation games. This roundtable discussion will seek responses on participants’ prior experiences, investigate funding requirements required, and identify instructional methods and student assessment tactics associated with virtual labs and simulation games.
Table 5: Strategies to Address Institutional Barriers for Massive Open Online Course (MOOC) Adoption
Peter D. Kazarinoff, Faculty, Math/Science, North Seattle Community College, WA

While there are many technical, legal, and pedagogical hurdles to overcome when designing a MOOC, one hurdle faced by all ATE participants will be institutional adoption. This breakfast roundtable discussion will focus on barriers to MOOC adoption from an administration and institution standpoint, and highlight ways different ATE projects and centers have overcome these barriers.

Table 6: Collaborating Across Community Colleges for Regional Impact
Neal Grandgenett, External Evaluator for MCIT, University of Nebraska at Omaha, NE

How can community colleges collaborate effectively for regional impact? This roundtable will facilitate a discussion on effective collaboration strategies being identified within the ATE program. The roundtable will be facilitated by the Midwest Center for Information Technology, which involves ten community colleges across four states. Discussion questions will center on components that appear to be related to effective collaboration, such as ongoing communication, well-defined tasks, faculty professional development, and a shared vision for reform.

Table 7: Student and Teacher Reactions to Problem-Based Learning in STEM Education
Nicholas Massa, Professor, Laser Electro-Optics Technology, Springfield Technical Community College, MA

In this breakfast roundtable, we present the results of research conducted to examine the impact of problem-based learning (PBL) on the knowledge, skills, and attitudes of pre-service and in-service STEM teachers from a four-year university, and on associate degree level photonics technician students from two community colleges. Results of quantitative and qualitative analyses showed positive gains in students’ content knowledge, critical thinking, and metacognitive self-regulation skills, motivation, and self-efficacy. Ongoing and future research in PBL will be discussed.

Table 8: Research and Assessment: Adding Rigor to the Evaluation of Learning Outcomes
Melissa I. Zelaya, Program Manager, Center for Workforce Development, Clemson University, SC

This discussion will focus on the importance of small and large scale technology education research studies for ATE projects and centers. The rigor of research to evaluate learning outcomes can provide faculty and staff a means of advancing innovation and sustaining success of technology programs. Discussions will also explore the ATE grantees’ obstacles that prevent the development and execution of sound technology education research studies and submissions to peer reviewed conferences and journals.

Table 9: Understanding Consumer Buying and the Growth of E-Commerce and Its Influence on Technology
George Walters, Principal Investigator, Norco College, CA

The way we buy consumer goods today is changing the level of automation in distribution centers worldwide. Working directly with many large retailers, the National Center for Supply Chain Technology Education has identified the key reasons our nation’s largest companies are incorporating technology at an alarming rate. Having highly skilled technicians is no longer a luxury. If you are interested in hearing more please join our discussion.
Table 10: Program Development and Sustainability: Emerging Stem Cell Technologies  
*Thomas Tubon, Instructor, Grant Project Director, Madison Area Technical College, WI*

The field of Stem Cell science is rapidly growing, paving the way to develop technical programming aligned to the needs for a highly-skilled workforce. We will provide information that increases accessibility of Stem Cell programming in higher education. To this end, we will discuss efficiencies in operational costs that have a broad impact on the ability to successfully integrate educational materials into existing bioscience programs. We will use an open forum to discuss issues in adopting Stem Cell programming, and provide direction and resolve for many of the obstacles we have encountered as part of our program project grant.

Table 11: Curriculum Development: Beyond DACUM  
*Michele Norgren, PI, VESTA, Missouri State University, MO*

Building industry relevant curriculum is a balance between the worlds of industry and education. This roundtable will share the success that VESTA has experienced in developing an industry validated and nationally recognized educational program. Through the use of an annual working symposium, VESTA utilizes a process that maximizes the expertise and synergy of industry representatives, instructional faculty, and center management team members. Roundtable participants will experience the curricular development process, and walk away with a wealth of templates and examples that will provide each participant with the resources to launch their own curricular symposium and program review process.

Table 12: Assessments and Credentialing, Natural Synergy with STEM Programs  
*Steve Kane, Managing Director, SpaceTEC Partners, Inc., FL*

This roundtable is an opportunity to consider added value for STEM programs including: (1) assessment – tools to show level of preparation; (2) implementation – targeted approaches in contract to broad brush instruction; (3) achievement – credentialing rewards achievement builds momentum; and (4) success – credentialing as a “means-to-an-end” approach, creating pathways to jobs and fulfillment of career and academic goals.

Table 13: The Bioscience Industry Fellowship Project (BIFP)  
*Russ Read, Executive Director, National Center for the Biotechnology Workforce, Forsyth Technical Community College, NC*

The Bioscience Industry Fellowship Project (BIFP) is a professional development initiative to improve the quality and relevance of a community college bioscience education. People who attend this roundtable will hear about a novel project which gives community college instructors with an interest in the biosciences opportunity to engage with the project’s growing biosciences community for a period of 30 days and report back their findings both to the NSF and to the greater community college community.

Table 14: Meeting the Job Readiness Needs of Students  
*Catherine Basl, Recruitment and Employment Specialist, North Seattle Community College, WA*

How can ATE projects and centers meet the job readiness needs of their students? In this breakfast roundtable, we will discuss creative strategies for identifying and meeting student career needs. The facilitator will provide examples of successful career interventions including workshops, evaluation tools, and activities.
Table 15: International Interactions in the ATE Program  
Thomas L. Deits, Project Director, Innovation 5, MI

At this roundtable we will facilitate a general discussion about international interactions, past present and future: What international interactions have you had through ATE? What did you learn from these interactions? Are you considering an international interaction – and is ATE the place where you are going to support this effort, or are there better resources? Is there more that ATE could or should do to promote international interactions at the technician and instructor level? Join us for a wide-ranging discussion and find colleagues who share your interests in this area.

Table 16: ATE Student Breakfast Networking Roundtable  
Gail Schwartz, Senior Vice President for Innovative Learning and Student Success, American Association of Community Colleges, DC

This student-only roundtable session will provide an informal setting for ATE students to network with one another. Student participants are welcome to come and share their educational and professional experiences and hear from other students about how they balance school, work, and life.

Table 17-18: ATE, TAACCCT, and Manufacturing  
Bruce Kramer, Program Director, National Science Foundation, VA

The portfolio of both the ATE and TAACCCT programs contain projects and consortia that focus on manufacturing. We are interested in how to establish and grow this manufacturing 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 manufacturing sub-areas; and how to most effectively engage industry regionally and nationally.