

From the Director ...

Dear NCATC Friends and Colleagues:



It's hard to believe it, but the Coalition's 25th Anniversary is now upon us. How time has flown as we've been preparing for this milestone event in our organization's history. Whether you've been a part of NCATC since its inception or are new to Coalition membership, you can take pride in an organization that has contributed greatly to

the workforce and economic development of our nation since 1988. On the occasion of NCATC's 10th anniversary, visionary leaders representing the Coalition's founding members reflected on the impact of NCATC to the communities it serves and our nation as a whole. NCATC's founding chair Mike Taggart said, "It was energizing to meet colleagues from other community colleges that were taking on the challenge of building their technology application capabilities. As we discussed our respective initiatives, we saw clearly how many issues and needs we had in common. It was an amazing process. How quickly this diverse group of individuals from a variety of communities identified their shared interests. How collaboratively they developed a workable structure that would fuel the growth of a national alliance for learning. How effectively their mutual support and joint advocacy led to America's community colleges becoming an economic development resource for the nation."

I'd like to personally thank Mike and all of NCATC's subsequent board chairs who unselfishly gave of their time and expertise to nurture and grow NCATC into the dynamic organization it is today. Next month's 25th anniversary conference in Panama City Beach, FL, offers an idyllic setting to learn from one another and celebrate NCATC, as well as to renew our personal and collective commitment to NCATC's mission of service to our nation as a network of advanced technology expertise. For the first time ever at an NCATC conference, we'll celebrate the grand opening of an ATC, the nation's newest, at Gulf Coast State College. We'll hear from leaders in our field including Dr. Walter Bumphus, President and CEO of the American Association of Community Colleges, of which NCATC has proudly served as an Affiliated Council for the past 25 years. We'll immerse ourselves in industry trends and emerging technologies, all the while forming new partnerships and rekindling old friendships.

As we reflect on and celebrate the past, let us never lose our drive, our energy, and our passion for living on the "bleeding edge" of technology, forging new paths that will lead our communities, our Coalition, and, indeed, our nation forward.

See you at the Beach in just a few short weeks!

Craig

J. Craig McAtee, NCATC Executive Director ◆

Haywood NSF Grant Blazing New Trails for Women and Rural Manufacturers

Haywood Community College, an NCATC founding member located in Clyde, North Carolina, recently launched a National Science Foundation Advanced Technological Education (ATE) project aimed at strengthening the pipeline from area high schools to the college's engineering technology programs. The Rural Technician Development project will focus on recruiting rural high school students into community college technician degree programs



linked to manufacturing jobs in the region. Planned project activities include developing a new Electronics Engineering Technology dual-enrollment program; creating awareness among high school and college counselors, teachers and faculty, parents and students about the career potential for Electronics Engineering Technology and Computer-Integrated Machining technicians; providing activities such as summer camps to increase recruitment of high

school students into dual enrollment technology programs; and providing teachers and counselors the opportunity to work with manufacturing partners to learn about the technician work environment and required skills through externships and return to industry programs.

The project is improving student learning in engineering technician programs by building on a pilot dual enrollment technician program established in computer-integrated machining. It is adapting materials, methods, and marketing materials from ATE Centers in Florida, Connecticut, and South Carolina. To increase opportunities for students to work in high paying jobs in manufacturing, the project is focusing on groups that are currently underrepresented in the field, particularly females. In many rural counties, women who choose not to pursue higher education at the baccalaureate level often have only non-technical career options, limited to business and medical assisting. Strong institutional support and partnerships with Haywood County Schools, the Southwestern Commission of Government, the Haywood County Economic Development Commission, and local companies Baldor and Evergreen will help to ensure project goals and objectives are met.

Principal Investigator Dr. Deborah Porto says the project will likely become a case study for the creation of multiple dual enrollment technician programs between a community college and high schools in rural communities. To meet the skills gap

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High Schoolers Learn Hands-on Skills and Manufacturing Basics at Thomas Nelson Summer Camps

Member institution Thomas Nelson Community College in Hampton, Virginia, held two manufacturing camps for high school students this summer. "Peninsula K-Next!" was held July 9-13 for rising 9th and 10th graders. The camp is designed to inspire the next generation of inventors, engineers, manufacturers and entrepreneurs, providing participants a hands-on introduction to 21st century manufacturing technology and basic entrepreneurial skills. "Participants use technology to create a product from start to finish, providing them practical experience to build their confidence and set a foundation if they choose a career in manufacturing," said John Calver, Director of Advanced Manufacturing at Thomas Nelson. "There is an ever-increasing demand for highly skilled professionals who can design, program and operate technology, and this camp allows students to learn about these opportunities."



During the week-long camp, participants explore computer numerical control programming and manufacturing, plan and perfect a family of marketable products, visit automated manufacturing

companies, compete in a "friendly" manufacturing competition, discover the world of the entrepreneur and more, while emphasizing product creation, problem solving, critical thinking and team building. Visits to area manufacturers provide an up-close look at products being made as well as career advice and inspiration from entrepreneurs.

An advanced camp, "Imagineering & Creative Technology," was held August 7-10 for students who had previously attended a Peninsula K-Next. Both camps were sponsored by Nuts, Bolts & Thingamajigs®, the foundation of the Fabricators & Manufacturers Association International; Newport News Shipbuilding; Hampton, Newport News and York County Public Schools; Continental, NASA Langley and other local companies. Imagineering provides students a greater opportunity to explore the world of entrepreneurship from product concept to prototyping using more in-depth CAD programs and 3D printing machines.

On the final day of the Imagineering camp, student "companies" are required to present their products to an "Angel Investors" team of judges in an effort to obtain funding for their product. Thanks to generous sponsors, camp fees are only \$59 for Peninsula K-Next and \$75 for Imagineering. The fees include all materials, breakfast and lunch daily, and transportation to company visits.

To learn more about Thomas Nelson's camps, contact John Calver, calverj@tncc.edu, or attend John's concurrent session at NCATC's 25th Anniversary Conference, October 9-11. Information about Nuts, Bolts & Thingamajigs® is available at www.NutsAndBoltsFoundation.org. ♦

FOCUS ON FALL CONFERENCE

Concurrent Session Highlights

The 25th anniversary conference will be chockfull of informative sessions from ATC leaders around the country as well as our strategic partners. Here's just a sampling of the breakouts you can attend.

Scott Murakami, Director Workforce Development, University of Hawaii Community Colleges

U.S. Department of Energy Smart Grid Curriculum Development Project

The Hawaii community college system received an ARRA grant to develop curriculum to support associate degree and noncredit workforce training programs for individuals working with Smart Grid technologies. The curriculum provides a fundamental and theoretical foundation in electricity and electronics, coupled with a working knowledge of power generation, transmission, and distribution. The program also covers areas of specialization that include networking communications, advanced metering infrastructure, and control systems. The emerging field of intelligent grid management systems, often referred to as Smart Grid, is a blending of traditional grid technology with instrumentation, control and communications. The new programs have been designed to address the convergence of these diverse technical specialties and prepare program completers for employment in a variety of positions in the rapidly changing field of energy management.

Panel Presentation Featuring Fox Valley Technical College, Gateway Technical College, Gulf Coast State College, and Mott Community College

FABLAB's — Bridging the ATC Landscape

NCATC member colleges find themselves supporting a broad economic and workforce development agenda. Programming includes everything from employability skills and boot camp programs to certification/credentialing and advanced technology applications. More and more, NCATC colleges have the opportunity to impact the economic well-being of their regions. This presentation will focus on how four member colleges are using digital fabrication labs (FABLABs) to address issues and opportunities related to entrepreneurship, innovation, STEM, career pathways, and commercialization. The presentation will highlight how the colleges have leveraged FABLABs to support their communities. Topics will include career pathways/STEM activities, using the FABLAB to grow your ATC operations, bridging the tech transfer/commercialization issue, and supporting entrepreneurship and economic development.

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NCATC Anniversary Flashback

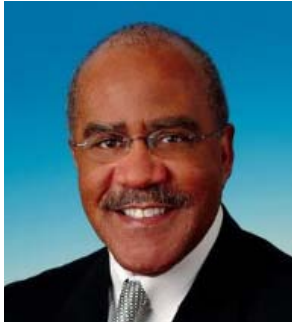


These members are participating in NCATC's first Internet training workshop as part of the NIST-TRP project. What year was the workshop held? Guess the correct answer and you could win a prize at the 25th anniversary conference.

Spotlight on 25th Anniversary Conference Keynote Speakers

Four major keynote speakers will be featured during the 25th anniversary conference.

Dr. Walter G. Bumphus
President and CEO, American Association of Community Colleges (AACC)



Thursday, 6:30–7:00 P.M.
 Dr. Bumphus has led AACC since January, 2011. Prior to that, he served as a professor in the Community College Leadership Program and as chair of the Department of Educational Administration at the University of Texas at Austin. Other previous appointments include serving as president of the Louisiana Community and Technical College System and as chancellor of Baton Rouge Community College, as well as president of the Higher Education Division of Voyager Expanded Learning and president of Brookhaven College in Dallas.

Jane Oates
Vice President for External Affairs, Apollo Group, Inc.



Wednesday, 12:30–1:00 P.M.
 Jane Oates is the former assistant secretary for the U.S. Department of Labor's Employment and Training Administration. She recently joined the Apollo Group, parent company of the University of Phoenix, as vice president for external affairs. In this role, Oates is continuing her focus on helping connect employers with workforce training programs to

ensure job seekers "have the skills that employers want." Prior to her service as assistant labor secretary, Oates served as Executive Director of the New Jersey Commission on Higher Education and Senior Adviser to former New Jersey Governor Jon S. Corzine. In that position, Oates worked to strengthen connections among high school education, postsecondary education, and the workforce. She also served for nearly a decade as Senior Policy Adviser for former U.S. Senator Edward M. Kennedy of Massachusetts.

Dr. Al Koller
Executive Director, SpaceTEC Partners, Inc.



Thursday, 12:30–1:00 P.M.
 Al Koller began his aerospace career in 1959 as a technician working summers for the Army Ballistic Missile Agency (ABMA) at its Missile Firing Lab on Cape Canaveral. He was transferred to NASA in 1960 as part of the Von Braun ABMA rocket team. He remained at NASA for 32 years, earning a Master's Degree in Systems Management and a

Doctorate in Management and Quantitative Methods from Florida State University. Dr. Koller retired early from NASA in 1992, joining Brevard Community College to pursue a lifelong commitment to education. In 2000 he assumed the leadership of a national consortium of colleges, founding SpaceTEC, the National Science Foundation National Center of Excellence for Aerospace Technical Education, where he continues to serve as Executive Director of SpaceTEC Partners, Inc., and Principal Investigator for what is now the NSF National Resource Center for Aerospace.

Mark C. Perna
Founder and CEO, Tools for Schools



Wednesday, 7:30–9:00 A.M.
 Mark Perna has worked with schools, districts, and statewide organizations of all sizes nationwide to help them experience significant gains in enrollment, retention, and community awareness. Mark has over 24 years of experience in marketing for Fortune 500 companies and has devoted the last twelve years to the field of education. He is a proud member of

ACTE and is also part of the Future Horizons Committee, which is responsible for identifying emerging trends in workforce development. Mark has published numerous articles on enrollment and retention marketing in national publications and is one of five founding Master Consultants in ACTE's Consulting Services Division, established to deliver critical support, best practices, and strategic excellence to schools nationwide. ♦

SCHEDULE UPDATE Please note expanded program for Wednesday morning, October 9.

7:00 A.M.–4:30 P.M. – Registration

7:30–9:00 A.M., Opening Session: Full Breakfast/Keynote Speaker – Mark Perna, CEO, Tools for Schools

9:00–1:00 A.M., Dedicated Exhibit Time

11:15 A.M.–12:15 P.M., Concurrent Sessions

12:30–1:30 P.M., Lunch/Keynote Speaker – Jane Oates, VP External Affairs, Apollo Group, Inc.

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faced by regional manufacturers, the project is developing and strengthening a pipeline of skilled employees for area companies that is not dependent on incumbent worker retraining. The establishment of the partnership that includes manufacturers, the college, and area high schools demonstrates the community's commitment to ensuring the long-term profitability of manufacturing in the region. The expansion of dual enrollment programs is affording students new career options not previously understood and doubling the pipeline by focusing on both females and males. Long term, the project will enable the development of additional technician dual enrollment programs and a model Career Academy for high school students that can be adapted by other rural communities.

To learn more about the project, contact Deborah Porto, dporto@haywood.edu. ♦

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Jason Scales, Lincoln Electric

Igniting Welding Education with STEM

In recent years, manufacturing in the U.S. has experienced a period of renaissance. Yet, a skills gap has been exposed in many areas of the industry. Lincoln Electric's awards programs can help incentivize both instructors and students to raise the bar, reducing the skills gap and increasing the abilities and skills of welding program students. This presentation will explore issues facing manufacturing, current trends in manufacturing, and the tools that Lincoln has to help address these trends. STEM is not new to education, but when applied to welding education, transformational change can occur that will have a meaningful impact on welding program graduates.

Terry Cambron, Stratasys, Inc.

Additive Manufacturing in the Education World

Additive Manufacturing (AM) encompasses many technologies including 3D Printing, Rapid Prototyping (RP), Direct Digital Manufacturing (DDM), layered manufacturing, and additive fabrication. This session will demonstrate how AM in educational environments plays a key role in student learning, helping students transform a CAD file into an actual formed part for a specific industry or market. We'll explore how AM helps students better understand the accurate representations required for form, fit, and function and how these areas are keystones to ensuring a part will work in the world of architecture, consumer goods, medical equipment, automotive, aerospace and defense, or any of a hundred markets today. Case studies from member colleges will be presented and attendees will have the chance to touch and feel parts produced by Stratasys prototyping systems. ♦

Conference Hotel

NCATC will celebrate its 25th anniversary at the **Bay Point Wyndham Resort** on St. Andrews Bay in Panama City Beach. The property features championship golf, five pools, stunning bay views, and many other amenities. Reservation deadline is **September 22**. Call 866-269-9165 or visit the NCATC website (www.ncatc.org) for a direct link to Bay Point's online reservations.

Panama City Beach Attractions



Pier Park Panama City Beach is a 900,000+ square foot shopping center and entertainment hub located in the heart of the city. Serving as the premiere Northwest Florida shopping destination, this mecca offers dining, specialty shops, attractions, events and more. Take a free shuttle from the Bay Point Wyndham to Pier Park on Wednesday evening.



Sunset Sail – Enjoy a 2.5 hour excursion on a U.S. Coast Guard Certified Catamaran on Wednesday evening. Visit the NCATC website for reservation details.



The best beach this side of paradise, Panama City Beach Florida offers 27 miles of stunning white sand, emerald green waters and surefire enjoyment in, on, or under the water.

