NCATC National Coalition of Advanced Technology Centers
A Network of Advanced Technology Expertise

An affiliated council of AMERICAN ASSOCIATION OF COMMUNITY COLLEGES

From the Director ...

NCATC Friends and Colleagues,

As spring turns to summer, many of NCATC's Strategic Partners are working on new initiatives in emerging technologies and workforce and economic development. NCATC continues to be actively involved in all of these – *and many more* – for our members:

- The National Institute for Metalworking Skills (NIMS), in partnership with Festo Didactic and NC3, will establish industry-recognized skills standards and ultimately credentials for jobs related to Industry 4.0. In light of the significant trend in digitalization of manufacturing through technology advancements such as the Industrial Internet of Things (IoT), training in these skills is vitally needed now. With NIMS' emphasis on manufacturing skills training, credentialing, and standards, plus Festo's complete Industry 4.0 learning factories, courseware and eLearning integration, the organizations are well poised to provide training programs for Industry 4.0.
- Community colleges excel at providing students with access to higher education and over the past several years have significantly improved their student success efforts. But according to AACC CEO Walter Bumphus, one area that remains a challenge for all higher education, including two-year colleges, is equity. It's now a priority that AACC is tackling through its Unfinished Business initiative, which aims to identify why achievement gaps persist and how to address them; from cultural sensitivity in the classroom to ensuring there are jobs with family-sustaining wages waiting for students on the other end.
- Tooling U-SME Offers Additive Manufacturing Certification through NOCTI. The certification aligns to the Additive Manufacturing Body of Knowledge compiled by Tooling U-SME, America Makes, the Milwaukee School of Engineering (MSOE), the National Coalition of Advanced Technology Centers (NCATC), and Technician Education in Additive Manufacturing & Materials (TEAMM), with input from more than 500 additive manufacturing professionals. These credentials' competencies have also been cross-walked to the new DOL Additive Manufacturing Technician Apprenticeship framework led by RCBI.

The NCATC Board of Directors and staff hope to see you at the ***2019 NCATC Summer Workshop*** hosted by Oakland Community College (OCC) and FANUC America in Auburn Hills, MI, June 6-7, 2019.

Don't forget to save the date for the ***2019 NCATC Fall Conference*** hosted by the Minnesota State Advanced Manufacturing Center of Excellence (*MSAMCoE*), formerly 360, in the Twin Cities, MN, September 11-13, 2019.

As always, we encourage you to stay regularly connected via the all-new NCATC website, social media, and quarterly e-newsletters like this one.

J. Craig McAtee,
NCATC Executive Director ◆

Harper College's New B.E.S.T. Laboratory Preparing HVAC Students

Harper College has opened its new B.E.S.T. (Building Energy Systems Technology) Laboratory to serve as a state-of-the-art resource for students studying building automation systems.

The new lab features modern commercial building technologies and building control systems, whereas most other educational facilities focus on residential systems.

"Building Automation Systems are designed to improve occupancy, comfort and operation of building systems. Reduction of energy consumption and operating costs and improved life cycle of utilities are all good things whether we're in our home or office," said Provost Judy Marwick. "This is the latest in what we need to do to prepare our students for what industry needs," she added.

Air conditioning systems manufacturer Daikin donated more than $50,000 in heating, ventilating, and air conditioning equipment, including VAV boxes, air handlers, a unit ventilator, and its complete VRV system, to provide students hands-on learning opportunities with advanced HVAC technology.

At a recent dedication ceremony, Instructor Jose Vital said the facility will be a "living lab" for students to work on highly sophisticated systems and troubleshoot real problems.

"Systems are more sophisticated than ever before and the demand for these technologies is great, but the training is limited," Vital said. "Harper is changing that."

Harper worked closely with its HVAC and Refrigeration Advisory Committee to ensure the skills students gain align with the evolving needs of their future employers.

"Harper takes great pride in its community in building partnerships with the companies and employers who can and do employ graduates of the program ... what's happening here at Harper is quite dynamic," said Renee Tomlinson, Director of Strategic Partnerships for Esco Group in Mount Prospect and a member of the program's Advisory Committee.

Daikin and Harper College's commitment to providing more resources for the next generation guided the project to successful implementation. ◆

FLATE and FloridaMakes: Moving a Partnership into an Ecosystem

Marilyn Barger, Executive Director. Florida Advanced Technological Education Center (FLATE)

Florida's Manufacturing Ecosystem continues to mature. A well-developed ecosystem would have strong commitment and engagement of CTE educators, manufacturers, government entities, and other manufacturing stakeholders. The talent development aspects of the ecosystem itself should have elements that deal with general workforce acquisition (CareerSource Florida), technician and advanced operator education (FLATE), and platforms to develop manufacturing excellence (FloridaMakes).

FLATE is the National Science Foundation (NSF) funded Florida Advanced Technological Education Center of Excellence within the Advanced Technological Education (ATE) program. It is housed at Hillsborough Community College and is funded to support manufacturing technician education throughout the state. FLATE and its college partners in the Engineering Technology Forum with their extended partnerships with high schools and industry are teaming up with FloridaMakes to support Florida's emerging Manufacturing Ecosystem. FloridaMakes is the US Department of Commerce's Manufacturing Extension Partnership (MEP) representative in Florida and works directly with manufacturers and the Regional Manufacturing Associations across Florida to improve their productivity and business practices.

FLATE is focused on growing, supporting, and strengthening the educational career pathways for the manufacturing workforce in Florida. It is uniquely focused on the academic technician career pathways to ensure that Florida's manufacturing workforce can support manufacturers as global competitors, is committed to the industry, and is poised to promote lifelong learning. FLATE works closely with the Florida Department of Education (FLDOE) and its college and industry partners to provide solutions, tools, and strategies for all stakeholders to work toward this goal.

FloridaMakes' services are designed to strengthen Florida's high-wage manufacturing sector and possesses a core set of operational values that guide how it approaches its work. Its mission is to improve the productivity and technological performance of Florida's manufacturing sector. It has a team of experts and business advisors that focus on enterprise assessment, business growth, technology acceleration, international market development, supply chain optimization, specific manufacturer workforce training, process improvement, and sustainability. As the National Institute of Standards and Technology (NIST) MEP representative for Florida, FloridaMakes is also a member of and has easy resource access to the MEP National Network. FloridaMakes has built its capacity through the network of existing Regional Manufacturers Associations (RMA) in Florida that are serving most of Florida's 20,000 manufacturers.

The benefits of connecting FLATE's network of manufacturing-focused technician education professionals in Florida's state and community colleges with the manufacturers represented by the network of regional manufacturers coordinated by FloridaMakes seem obvious. Both organizations focus on advancing manufacturing in our state, and both have extensive expertise in their area of interest. FLATE's educational partners bring new talent, training resources, and a wealth of subject matter expertise to the Manufacturing Ecosystem. It also brings training labs, meeting spaces, and a local consortium of manufacturers already engaged with the local college programs. What is the best way to bring these resources into the assets of FloridaMakes and the emergent ecosystem?

The two partners, FLATE and FloridaMakes, started their partnership over three years ago, with an MOU focused on outreach to K-12 and manufacturing site visits for secondary students. Successful execution of this MOU over two years led to additional projects and integration of the two organizations. FLATE and FloridaMakes now meet quarterly to address statewide and regional workforce issues. A representative of FloridaMakes regularly attends the semi-annual Engineering Technology Forum with the state and community college manufacturing educators. FLATE is represented on the Advanced Manufacturing Workforce Leadership Council and helps educators participate in FloridaMakes' annual "Make More" Manufacturing Summit. Recently, FLATE and FloridaMakes embarked on a statewide "road trip," conducting structured brainstorming sessions with small (15-20) local groups representing manufacturers, the association representatives, and local educational partners. Although these meetings are short and small, and only three have been conducted to date, the conversations have been revealing. We hope this effort brings the regional manufacturing stakeholders closer together with better understanding of each entity's needs, assets, and barriers.

FLATE's ultimate goal is to integrate FLATE's manufacturing technician education expertise into FloridaMakes' world of manufacturing business improvement. Skills gap workforce issues are growing exponentially and impacting the business of manufacturing in multiple ways. Strong and strategic partnerships among educational institutions, Florida's Regional Manufacturing Associations, manufacturers, government agencies,and other stakeholders can support the reduction of both long- and short-term workforce issues and strengthen the manufacturing ecosystem in Florida.

For more information, contact the author at mbarger@hccfl.edu. ◆

Kevin Carr, CEO of FloridaMakes, and Marilyn Barger, Executive Director of FLATE, sign an agreement.

Commerce Grant to BridgeValley Supports New Training Center

Creating a new economic development roadmap in West Virginia

BridgeValley Community and Technical College is the recipient of a $749,000 grant from U.S. Department of Commerce, matching a previous grant from ARC Power and the U.S. Department of Commerce's Economic Development Administration (EDA), for a total of $1.5 million to develop a training center that will administer programs to meet the needs of a community impacted by the declining use of coal.

"The facility BridgeValley is developing and programs we plan on offering and expanding through these grants will advance economic development in the Upper Kanawha Valley," said BridgeValley President Dr. Eunice Bellinger. "We are happy to have this opportunity to better serve our community and future BridgeValley students."

According to Jeff Wyco, vice president of workforce and economic development and Advanced Technology Center operations at BridgeValley, the funding will be used to establish the Workforce Construction, Telecommunications and Energy (CCE) Training Center in Montgomery and, along with BridgeValley's Advanced Technology Center in South Charleston, will support BridgeValley's Horizontal Directional Drilling, expanded Utility Line Service, Heavy Equipment, Commercial Driver's License, Data and Fiber Cabling, expanded Gas Measurement and HVAC, Building Automation and Energy Management programs.

"BridgeValley Community and Technical College plays a critical role in helping students gain the skills that local businesses need to grow and thrive," said EDA Deputy Assistant Secretary for Regional Affairs Dennis Alvord. "The new BridgeValley Construction, Telecommunications and Energy Workforce Training Center will provide job-based skills training in numerous trades based on the documented needs of the industry in this region."

Funds are awarded through the EDA's Assistance to Coal Communities (ACC) program, which awards grants through a competitive process that assists communities impacted by the declining use of coal.

The new facility is expected to train and place more than 200 students within its first three years, and over 1,800 in its first nine years. The center, made possible through regional planning efforts, brings together public and private sectors to create an economic development roadmap that will strengthen the local West Virginia economy, support private capital investment, and create jobs.