



From the Director ...

NCATC Friends and Colleagues,

The NCATC Board of Directors' leadership continues to increase and enhance our mission to be "*your network of technical expertise*" in workforce development and emerging technologies that positively impact our futures. Over the past five years, we have formally and informally partnered with many of the National Networks of Manufacturing Innovation (NNMI) now called **ManufacturingUSA**. We continue to be actively involved with the workforce efforts of America Makes (3D/AM), LIFT (lightweight metals), DMDII (digital manufacturing and design), NextFlex (flex-electronics), IACMI (composites), AIM (photonics), AFFOA (functional fabrics), newly formed and awarded RIME-MII (robotics), and REMADE (clean energy).

NCATC also represents all community and technical colleges on the MForesight workforce and education commission led by renowned manufacturing workforce expert Emily Stover DeRocco. MForesight was established to inform and promote regular and sustained communication and research coordination across the public and private sectors for ideas about how to facilitate the creation of quality manufacturing jobs. To that end NCATC is responsible for collecting, sharing, promoting, and increasing the promising practices that our community and technical college members are involved with for advanced manufacturing workforce education and development with industry. The very best promising practices, or the *next big thing*, are known as "**Gamechangers**" and are being shared with federal decision makers to identify actionable solutions to boost innovation, enhance workforce training, and strengthen U.S. manufacturing competitiveness. NCATC will once again be reaching out to our members to share their "**Gamechanger**" success stories in 2017. *Please look for the invite in Q2-17.*

And, the **Maker Movement** – *Democratizing Manufacturing* focused on inventors, programmers, designers, and tinkerers around the country – has already impacted how new products are designed and built, and how regions approach economic development with **STeAM** – adding the Arts to STEM. We will continue to encourage, promote, and share success stories of **STeAM** initiatives from Strategic Partners like **US FabLab Network**, **NIST/MEP**, and **MForesight** in 2017.

As many of you may know, NCATC has been an **Affiliated Council of the American Association of Community Colleges (AACC)** and an active member of their **Economic and Workforce Development Commission** for nearly three decades. We hope you visit us and attend our session at AACC 2017 in NOLA – April 22–25, 2017.

Finally, the NCATC Board of Directors and Staff look forward to seeing all of you at the **2017 NCATC National Events**. Building on our partnership with the **Fabricators & Manufacturers Association (FMA)** we have re-designed our **Summer Workshop** and will be targeting more faculty / instructors as well as workforce administrators as we are hosted by **Madison Area Technical College (WI) – June 5–7, 2017**. And, we return to a full 2-day, NCATC-focused Fall Conference this year – hosted by **Portland Community College (OR) – October 19–20, 2017**. Mark your calendars now!



We encourage you to stay regularly connected via the NCATC website, social media, and quarterly e-newsletters like this one.

J. Craig McAtee, NCATC Executive Director

St. Louis Issues State of the Workforce Report

Don Robison, St. Louis Community College
(drobison@stlcc.edu)

We all recognize and support the critical role that technical and community colleges play in preparing the skilled workforce needed for our country to move forward in a complex and changing economic environment. Since 2009, St. Louis Community College has tracked the recovery and growth of our region's workforce, as well as its continuing challenges, through research and production of the "State of St. Louis Workforce Report." It provides timely and critical workforce intelligence that has helped St. Louis Community College respond to the needs of our students and employer partners. We also believe it has provided valuable information on the region's many public, private, and community-based organizations that are struggling to prepare or acquire the skilled workforce necessary to drive our economy forward. While this report focuses on St. Louis, it may be applicable in your part of the country as well.

We recently unveiled the findings of our eighth annual "State of St. Louis Workforce Report." This latest report focused on three key industry sectors important to sustaining and growing the region's employment base: manufacturing, healthcare, and transportation and logistics. Key findings from a survey of 478 employers from these industries align with previous survey findings including a continued steady increase in hiring with more than four in ten employers anticipating hiring increases and less than 2% anticipating decreases. Approximately one-half of the employers from these industries indicate that the shortage of workers with knowledge or skill is the most significant barrier to expanding their business. Healthcare and transportation employers also cited government policies or regulations as significant barriers.

45% of employers in this year's survey report experiencing a skill shortage. Of those experiencing a shortage, over eight in ten responded that they were forced to hire less experienced workers and train them as a way to address the shortage. Nearly nine in ten manufacturing employers responded in this way. Over one-half of the employers reporting shortages also responded to offering increased wages due to the shortage of experienced workers, a significant increase from past years' responses. About two-thirds of the employers surveyed responded that they

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BridgeValley Hosts Introduce a Girl to Engineering Day

Jeff Wyco, BridgeValley Community and Technical College (Jeff.Wyco@bridgevalley.edu)

Last month, BridgeValley Community and Technical College hosted 200 young women from around the area to discover a variety of career possibilities in the engineering field. The WV *Introduce a Girl to Engineering Day* event increases awareness of STEM professions and celebrates past and present engineering achievements of women. The aim is to let young women know about their vast options in STEM careers and to provide them the knowledge to begin laying the foundation for reaching those goals now.

“At BridgeValley we see more young women entering STEM fields every year, and they are some of our most accomplished students,” said Melissa Thompson, Outreach Director of BridgeValley Community and Technical College. “I really believe events like Girl Day are having a positive impact on attracting young women to technical careers, which is great for West Virginia’s future.”

BridgeValley welcomed Leah Curry, President of Toyota Motor Manufacturing West Virginia, as keynote speaker on February 23. Curry has been recognized by *Automotive News* as one of the Top 100 Women in the Automotive Industry and by the Manufacturing Institute as one of 122 women honored with the Manufacturing STEP (Science, Technology, Engineering and Production) award for excellence and leadership in manufacturing.

On Friday, February 24, students from George Washington High School’s Introduction to STEM Class led middle schoolers in a NASA classroom project. This activity challenges students to learn about basic aircraft design and explore the effects of weight and balance on the flight characteristics of a model glider. Students used science process skills to construct and fly a glider made from a foam food tray.

This year’s activities expanded to two days to accommodate the growing demand for STEM-related education. Last year, BridgeValley began a partnership with Pierpont Community and Technical College to offer an Introduce a Girl event at I-79 Technology Park in



the northern part of West Virginia. The colleges will continue their collaboration by holding the second *Introduce a Girl to Engineering Day* in Fairmont on March 29.

BridgeValley produced this event with support from TransCanada Corporation; DOW; Toyota Motor Manufacturing, West Virginia, Inc.; Potesta & Associates, Inc.; Terracon; ZMM Architects & Engineers; HDR, Inc.; Bayer CropScience; West Virginia Society of Professional Engineers; and Chick-Fil-A Southridge.

Introduce a Girl to Engineering Day is a nationally recognized event held annually on the Thursday of National Engineers Week. The National Engineers Week Foundation, a formal coalition of more than 100 professional societies, major corporations, and government agencies, is dedicated to ensuring a diverse and well-educated future engineering workforce by increasing understanding of and interest in engineering and technology careers among young students and by promoting pre-college literacy in math and science. For more information, visit www.eweek.org. ♦

Strategic Partner Spotlight

Haas Commitment to Education

Toni Neary, Director of Education, Haas Tower – Morris Group, Inc.

When people think of **Haas Automation**, they think of world-class CNC machines. Our commitment to education is so much more than words. We know that the future workforce needs to be excited, engaged, and well-trained. Haas Automation donated over \$10 million in scholarships and grants to educators last year. Through our HTEC Network we offer and support in-depth teacher training. This hands-on program is provided at four colleges and offers a great way for your instructors to work with Haas’ amazing team to build new and innovative skills for teaching CNC. Teacher training is one week and the Gene Haas Foundation provides scholarships for your instructors to attend. Teacher training locations include:

- [Central Maine Community College \(ME\)](#)
- [Danville Community College \(VA\)](#)
- [DeAnza College \(CA\)](#)
- [Vincennes University \(IN\)](#)

Founded by Gene Haas in 1983, **Haas Automation** is the largest machine tool builder in the western world, manufacturing a com-



plete line of CNC vertical machining centers, horizontal machining centers, CNC lathes, and rotary products. The company also builds a variety of specialty machines, including 5-axis machining centers, mold making machining centers, toolroom machines, and gantry routers. Haas machine tools and rotary products are built to the exacting specifications of Gene Haas to deliver higher accuracy, repeatability, and durability than any other machine tools on the market. All of our products are manufactured at our facility in Oxnard, CA, and we pride ourselves on being Made in America.

The **Haas Technical Education Center (HTEC) Network** is a community that enables manufacturing educators to share technical information and best practices. HTEC Members can contact, collaborate, share, and network with over 1800 schools, colleges, and universities. Join us for our 11th Annual CNC Educators Training Conference at [Lincoln Tech in Grand Prairie, Texas, July 10-13](#).

To learn more about Haas equipment, the HTEC Network, or teacher training, contact Toni Neary at tneary@HaasTower.com. ♦

Lt. Governor Tours Bluegrass Community and Technical College's Advanced Manufacturing Center

Following a successful grand opening in January, the new Bluegrass Community and Technical College's Advanced Manufacturing Center (BCTC-AMC) in Georgetown played host to Kentucky's Lt. Governor Jenean Hampton on February 16. The AMC provides a work-and-learn environment that mirrors what a real manufacturing floor would be like for students who are studying to work in the manufacturing industry.

As part of her tour, Hampton met with current students of the BCTC Advanced Manufacturing Technician (AMT) program as they described their coursework and demonstrated complex machinery. Hampton was able to try her hand at using a simulated welding machine and watched as AMT students used robots to perform different tasks.

This work/study program allows AMT students to work three days a week in a manufacturing environment with their industry sponsor and spend two days a week in a classroom environment, combining components of apprenticeship with hands-on paid work experience.

The AMT program was created from the ground up with help from Toyota, as they need qualified workers to replace an aging workforce ready for retirement. As a result, Toyota and 16 other manufacturers in the region are benefitting from a skilled labor force with the AMT program. Currently, there are 68 AMT students enrolled in the Georgetown program. ♦



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were recognizing shortcomings in applicants including poor work ethic, lack of communications or interpersonal skills, and lack of critical thinking and problem solving. Over six in ten manufacturing employers also cited technical skills specific to the job as a shortcoming while the same proportion of transportation employers cited the lack of general business or industry knowledge.

Employers were also asked if they had "bridges to opportunities" in their businesses, defined as jobs available with only short-term training and jobs on established advancement pathways. About seven in ten employers from these industries responded that they had positions in their establishments requiring only short-term training. 85% of employers responded that they had jobs that were on established advancement pathways, but as with short-term training, employers reported a somewhat smaller percentage of jobs on these pathways. For the first time, in 2016, we asked employers about their primary considerations for advancing their employees. The most frequent response was "job experience," cited by more than one-third of the employers surveyed.

Today we continue this ongoing discussion about the challenges of growing our workforce and creating opportunities for the citizens of the St. Louis Region. I would appreciate your help in continuing this conversation in your communities. Please share the report with your personal and professional networks, or take part in the ongoing discussion about workforce training online at our blog and news site <http://workforcesolutions.stlcc.edu/>.

Download the report at <http://www.stlcc.edu/Workforce-Solutions/St-Louis-Workforce/>. ♦

2017 NCATC National Events

Summer Workshop

June 5–7, 2017
Madison, Wisconsin

Hosted by



In partnership with



Fall Conference

October 19–20, 2017
Portland, Oregon

Hosted by



**Call for presentations
now open at
ncatc.org**