



## From the Director ...

NCATC Friends and Colleagues,

It was so good to spend some quality time with so many of our members during our **2015 Fall Conference: “Accelerating the Pipeline: Putting Technology to Work”** this October hosted by **St. Louis Community College (MO)**. **STLCC** continues to raise the bar on industry, government, and education partnerships, collaborations, and best practice sharing. We are grateful for their leadership, expertise, and willingness to host this year’s successful NCATC Fall Conference.

NCATC continues to work on many key facets of ATC contributions to our technical workforce network in America. And, as an **Affiliated Council** for the **American Association of Community Colleges (AACCC)** and active member of their **Economic and Workforce Development Commission**, we again look forward to being a big part of the growing success of the **Workforce Development Institute (WDI)** in New Orleans, LA, January 20–23, 2016.

As the leader in advanced technology workforce and economic development, you will find NCATC’s resources a go-to source for timely information about workforce activities across the country as well as member benefits, resources, Board of Directors news, events, and value-added benefits from our Strategic Partners.

The NCATC Board of Directors and Staff look forward to seeing all of you at the **2016 NCATC Events**. Our **2016 Summer Workshop** will be hosted by Northeast State Community College in Kingsport, TN.

And, the **2016 Fall Conference** will be in Chicago in partnership with Harper College and the **Fabricators & Manufacturers Association, International (FMA)**. This is a new conference model for us through which we expect to have a strong showing from the manufacturing community as well. This is a great fit for NCATC because we have developed and nurtured a strong membership of 28 industry partners, our Strategic Partner Alliance (SPA), over the last two decades. We encourage you to stay connected, regularly, via the NCATC website, social media, and quarterly e-newsletters like this one.



J. Craig McAtee, NCATC Executive Director ♦

## The Regional Center for Next Generation Manufacturing’s Greater Hartford Mini Maker Faire

On October 3, 2015, the Connecticut Community Colleges and State Universities’ College of Technology’s (COT) Regional Center for Next Generation Manufacturing (RCNGM) held its first Greater Hartford Mini Maker Faire at Tunxis Community College in Farmington, CT. Over 1,500 people of all ages participated in 48 exhibits that included hands-on activities and demonstrations.

The COT offers engineering and technology programs, including manufacturing, at all twelve community colleges in Connecticut and oversees articulation agreements and curriculum development. In 2004, the COT received its first of three National Science Foundation (NSF) Advanced Technological Education program grants to establish the RCNGM, an NSF Center of Excellence. The RCNGM has several regional goals, which include student and educator outreach programs in manufacturing.



Called the “Greatest Show (and Tell) on Earth,” community-based Maker Faires are taking place all over the world. The movement uses invention and innovation to inspire creativity. The Greater Hartford Mini Maker Faire put a spotlight on the ingenuity and craftsmanship of Connecticut makers of all kinds, and the end result

ranged from robotics to laser scanning, chicken bone dinosaurs to prosthetics made from 3D printing. Visitors were fascinated by many of the exhibits including the interactive scans of participants’ heads from which rapid prototype models were built using a 3D printer. Another popular exhibit focused on making things using Arduino microcontrollers .



Attendees were able to do their own creating at several interactive and hands-on activities including rocket building, upcycling, building LEGO models, and more. In many instances, it was the younger exhibitors teaching the adults a thing or two. High school students were demonstrating and explaining

robotics, while college engineering students adapted mobile toys for kids with disabilities.

“Maker Faires are sparking a renewal of interest all over the world in the joy of making things both for fun and to meet needs. The goal of the Greater

See “Maker Faire,” page 3

## A New ATC with a State-of-the-Art PTU at BridgeValley Community and Technical College

BridgeValley Community and Technical College, located in South Charleston, West Virginia, is built on strong technical programs and industry partnerships. The Advanced Technology Center (ATC) opened in August 2014, and was named Toyota Hall, in recognition of Toyota's donation of \$1.2M. This gift supports programs in the ATC, including the Advanced Manufacturing Technology program that prepares multi-skilled maintenance technicians for the Toyota Motor Manufacturing West Virginia (TMMWV) engine and transmission plant and other local employers.

Other programs in the facility include Cisco Networking, Mechatronics and Tool and Die Apprenticeship programs with industry partner Gestamp; and the Applied Process Technology (Chemical Operator) program with industry partners that include The Dow Chemical Company, Chemours (formerly Dupont), AC&S and other local chemical plants. Many of these programs utilize the Learn and Earn model, where students are in class two full days a week, and spend the other days working at the manufacturer's site gaining on-the-job skills training relevant to that employer.

The vision of this center is to serve as a regional workforce training center for the southern half of West Virginia, with a focus on the Manufacturing, Chemical, Energy and Information Technology sectors. After several meetings with representatives from the Chemical and Energy industry, a significant training and workforce need was identified to fill a skills gap in both industries; instrumentation technician and training for instrumentation was needed in the region. After multiple meetings with industry representatives from many local employers, a decision was made to address the need for a relevant and practical training program.

Through a partnership with Endress+Hauser and Rockwell Automation, BridgeValley opened the new Process Training Unit (PTU) on October 15. This PTU includes all the different types of technologies used to measure flow, level, pressure, temperature and pH. Instruments, using industrial networks such as HART, Foundation Fieldbus, ProfiBus, EtherNet/IP and wireless technologies, are all integrated with a state-of-the-art Rockwell Automation control system to give students a real-world system to gain experience working with the same products used in the field.

The PTU will serve the companies in the Chemical, Oil and Gas, and Water/Waste Water industries by providing hands-on training in Instrumentation, Process Control and Chemical Operations. Training will take place in a variety of ways including one-day workshops, one to three full day classes, and customized training in topics such as safety, basic instrumentation, piping and instrumentation diagrams, instrument calibration, process loop troubleshooting, process start-up and shut down procedures.

The PTU will also be utilized in the new Process Instrumentation Technology AAS degree program. This new program will follow a competency-based model allowing open enrollment to provide flexible options to accommodate working adults. Students will be required to complete the ISA CST Associate Recognition exam during the final weeks of the program's capstone course, Process Control Loop Troubleshooting.

*To learn more, contact Jeff Wyco at [Jeff.Wyco@bridgevalley.edu](mailto:Jeff.Wyco@bridgevalley.edu). ♦*





Hartford Maker Faire was to introduce the community to these incredible makers, and inspire others to go home and start thinking like a maker,” says Dr. Karen Wosczyzna-Birch, executive director of the COT and the RCNGM.

“The Greater Hartford Maker Faire allowed the community to participate in something truly magical. It is adults, kids, businesses, schools—everyone coming together—to inspire and to create. It brings STEM and manufacturing to an entirely new level and that’s really cool to see,” said Andrea Comer, executive director of Connecticut Business and Industry Association (CBIA) Education Foundation.

These makers will tell you that it’s not just about creating the biggest and best invention. “I feel a maker is anyone that uses basic human curiosity to solve problems, create art and have fun with

technology,” said Cecil Rivers, who, with his son Grayson, recreates prehistoric skeletons using chicken bones.

“Making satisfies my curiousness. It challenges me to learn something new, it allows me to share and shape; I encounter difficulties and need to figure out how to solve problems—it is as much about the process of making as it is about what you make,” said Terry Rennert, who builds robots out of discarded metals.

This program was sponsored by the COT’s RCNGM through funding from the National Science Foundation and produced by CBIA and the RCNGM team. This year’s four corporate sponsors contributed to the event and included Legrand, Stanley Black & Decker, LEGO Systems, Inc., and TRUMPF.

To learn more, contact Karen Birch at [KWosczyzna-Birch@commnet.edu](mailto:KWosczyzna-Birch@commnet.edu). ♦

## Viewpoints Instant, Open, and Limitless

Stephen Dunnivant, Gulf Coast State College

According to the U.S. Census Bureau, Millennials, born between 1982 and 2000, now number 83.1 million and represent more than one quarter of the nation’s population. Their size exceeds that of the 75.4 million baby boomers in our nation. Fortune magazine recently published an article entitled, “3 Things Millennials Want in a Career (hint: it’s not more money). The author of the Fortune article, Adam Miller, sums up their primary work-related concerns this way: “Millennials view the workplace through the same lens of new technology as any other aspect of their lives: instant, open and limitless. The era they have grown up in has shown them that nothing is a guarantee. Instability and rapid change are the norm. To Millennials, time no longer equals money. It is a limited resource to be spent wisely and actively managed.”

So let’s stop and think about this in the context of our career and technical programs offered through Advanced Technology Centers.

**Instant:** How accessible are the training programs in our ATCs? An increasing number of our students are part of a growing culture where physical presence is optional. If they can buy a pizza with a text and rent a movie with a click and view it on almost any device, you can bet they want to learn the same way. And they are. What they want to learn is readily accessed via You Tube and Google.

**Open:** So maybe you’re arguing that the “scope” of our programs is our core value. After all, we know what’s best for “them.” Just remember, Millennials have learned that they should use their devices to get things done and learn more efficiently. To them, all learning is “open.” They learn what they have to on the fly and largely as needed. If we cannot make it relevant to their world, in a moment of need, it’s far less likely they will learn it at all.

**Limitless:** There’s something uniquely unappealing to Millennials

about boundaries. They have grown up in a reality that has fewer boundaries than any generation in human history. Yet, educational programs seldom allow, much less encourage, individuals to explore their interests freely. The more constrained a curriculum is, the less likely they are to engage and succeed.

To Millennials, it’s all about the value proposition. It goes something like this:

“Why should I join your program?” —Our Response: To get a good paying job.

“But I don’t care about pay. I want autonomy.” —Trust me. That’s not the real world.

“Maybe that wasn’t your world, but it’s mine.”

Above all, remember this—on a daily basis Millennials learn that they succeed by doing things their way. They are self-directed and demand a work-life balance, where work is defined not by hours or pay, but rather the degree of intrinsic satisfaction they gain from it. Millennials learn at their own pace, accessing smaller modules as needed. Their brains have been physiologically wired (through something neuroscientists call “plasticity”) for learning in smaller pieces. As you develop programs targeting this growing population, embrace their world. You don’t have to sacrifice quality and the core values of your program. As your program content “hybridizes” and moves to the Web and mobile devices, the relationships between faculty and students will actually become more important. It will be up to you to provide pathways that direct these learners to optimal experiences, relevant to their unique success. What Millennials want most of all is not advisors, but advocates. In the end, it is our advocacy of their success that will make or break our programs, and the very future of our learning institutions. ♦

## Conference Perspectives

NCATC Fall Conference • Hosted by St. Louis Community College • October 7-9, 2015

Mark Manuel, *Bluegrass Community and Technical College, Kentucky*

I'm always impressed by the connections that occur at our fall conference. Not just swapping business cards, but the depth of conversations, the sharing of common issues, and the real interactions taking place. Equally, I'm always impressed by the good work being done by the host college in their communities and with their business partners. St. Louis Community College was no different—it was apparent they have great relationships with business and industry, and are a driving force in their communities, one of which has been the center of the national media for its social unrest. It's no surprise that the community college stepped up and was seen as a "safe" haven and neutral ground. I think in many ways all of our colleges provide that to our communities. Perhaps not to the extent that STLCC has in the past year, but we do play that role in some manner.

Another thing always reinforced at the conferences is our relationship with our SPA partners. It's more than vendor booths with sales people. These companies truly are partners—sharing what they've learned, providing sessions during the conference, and supporting NCATC overall. I believe that is unique to NCATC. Many of us go to multiple conferences during the year, but I've never seen that relationship anywhere else. It goes back to the depth of conversation and the real interactions that occur at NCATC events.

Overall, I thought it was a great conference. One worthy of setting things aside at work to spend time sharing, learning, and networking. Special thanks to the hosting committee at St. Louis Community College. Oh, and I can confirm that Bissinger's Glaced Oranges Au Chocolat pair well with bourbon. ♦

## Workforce Solutions Group of St. Louis Community College Hosts NCATC Conference

Don Robison, *St. Louis Community College*

St. Louis Community College's Workforce Solutions Group hosted the National Coalition of Advanced Technology Centers (NCATC) 2015 Fall Conference October 7 through 9. Over 130 participants attended the conference.

The conference, whose theme was "Accelerating the Pipeline: Putting Technology to Work," was held at the Sheraton Clayton Plaza Hotel and STLCC's Florissant Valley campus. STLCC Chancellor Jeff Pittman welcomed the NCATC conference attendees on Wednesday. He spoke about some of the employer partnerships with the college's Workforce Solutions Group (WSG) and summarized the State of St. Louis Workforce Report released by WSG in August. Other speakers at the conference included Brendan Lind, President of LaunchCode; Dave Owens, VP of Taste for Bissinger's Chocolates; Carol Croft, HR Manager from the Henkel Company; and Dan Stroot, Regional Training Manager of the Boeing Company.

Session topics included drone technology, innovative education and manufacturing industry partnerships, and defining the workforce of tomorrow. Attendees participated in industry tours hosted by the CORTEX Innovation Community, Hydromat, Bissinger's Handcrafted Chocolatier, and the Anheuser-Busch Brewery. Participants also toured STLCC's Center for Workforce Innovation (CWI) and the Emerson Center for Engineering and Manufacturing.

*(Adapted from the website of the Workforce Solutions Group at St. Louis Community College, <http://workforcesolutions.stlcc.edu/2015/workforce-solutions-group-st-louis-community-college-hosts-ncatc-conference/>)* ♦



33607 Seneca Drive  
Cleveland, OH 44139  
440.318.1558  
[www.ncatc.org](http://www.ncatc.org)