



National Coalition of
Advanced Technology
Centers

An affiliated council of



2015 NCATC Fall Conference

Accelerating the Pipeline: Putting Technology to Work

St. Louis, Missouri • October 7–9, 2015

CONFERENCE PROGRAM



Hosted by



St. Louis
Community
College

Welcome to St. Louis!

On behalf of all of us at St. Louis Community College, I am pleased to welcome the National Coalition of Advanced Technology Centers to Missouri.



Established in 1962, St. Louis Community College has grown into the largest community college and the second largest institution of higher education in the state of Missouri. STLCC's economic impact on St. Louis is over \$2 billion. We annually serve over 20,000 credit-seeking students and another 60,000 career and technical education and continuing education students. More than 1.2 million students have passed through STLCC's doors in pursuit of a brighter future for themselves and their families. We, as one college, strive to continue to offer opportunities for our students and our community to thrive. With several college-transfer options and 90-plus career programs, STLCC annually ranks among the top associate degree-producing institutions in the United States. Nearly 3500 full- and part-time employees, including approximately 435 full-time faculty, support and deliver these programs at STLCC's four campuses, education centers, training facilities, and satellite locations throughout St. Louis City and County and online.

St. Louis offers a diverse industry profile, including Fortune 1000 companies in advancing manufacturing, biosciences, energy solutions, financial services, and information technology. STLCC is committed to supporting the industries that make St. Louis a great place to live with the skilled workforce that they need. We are pleased to offer you an opportunity to visit with several of our industry partners as well as tour our Center for Workforce Innovation and our Emerson Center for Engineering and Manufacturing during this conference.

I look forward to meeting you.

Jeff Pittman, Ph.D.
Chancellor, St. Louis Community College



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Conference Schedule at a Glance

Tuesday, October 6

1:00–5:30 P.M. Registration

Wednesday, October 7

7:00 A.M.–4:30 P.M. Registration
 8:00–9:00 A.M. Breakfast/Keynote
 9:00 A.M.–6:00 P.M. Exhibits Open
 9:00–10:45 A.M. Dedicated Exhibit Time
 11:00 A.M.–Noon Concurrent Sessions
 12:15–1:15 P.M. Lunch/Keynote
 1:30–2:30 P.M. Concurrent Sessions
 1:30–2:30 P.M. SPA Leadership Meeting
(by invitation)
 2:45–5:00 P.M. Industry Tour: Cortex
 5:00–6:30 P.M. Reception/Cash Bar

Thursday, October 8

7:45 A.M.–Noon Registration
 8:00 A.M.–6:00 P.M. Exhibits Open
 8:00–9:15 A.M. Breakfast and NCATC Business Meeting
 9:15–9:45 A.M. Dedicated Exhibit Time
 9:45–10:45 A.M. Concurrent Sessions

11:00 A.M.–Noon Concurrent Sessions
 12:15–1:15 P.M. Lunch/Keynote
 1:30 P.M. Depart Sheraton for Industry Tours
 1:45–4:30 P.M. Industry Tours: Hydromat, Anheuser-Busch, Bissinger's
 5:00–6:00 P.M. Exhibits Open/Cash Bar
 6:00–7:30 P.M. Dinner/Keynote

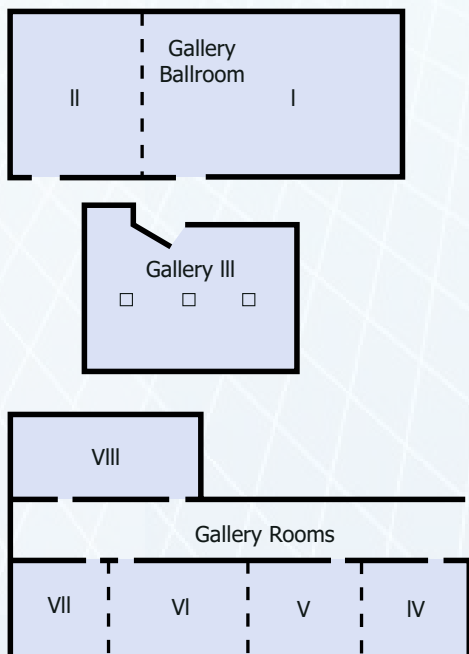
Friday, October 9

8:00–8:30 A.M. Load Buses/Travel to ATCs
 8:30–9:30 A.M. Breakfast/Keynote
 9:30 A.M.–Noon Tours of STLCC ATCs
 12:30–1:00 P.M. Depart STLCC for Hotel, Boxed Lunches Provided

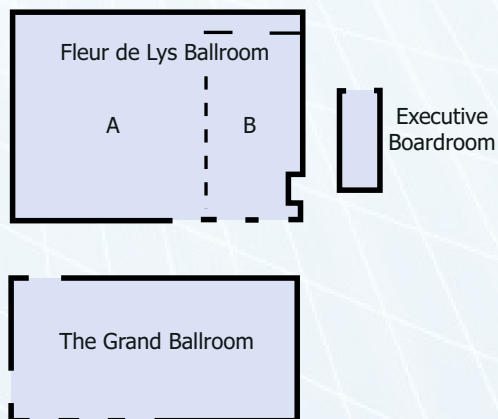
Exhibits
 Gallery Ballroom
All general sessions
 Grand Ballroom

Meeting Rooms

Second Floor



Third Floor



Wednesday, October 7

8:00–9:00 A.M.

Gallery Ballroom

Breakfast and Keynote



Welcome to St. Louis Community College

Dr. Jeff Pittman, Chancellor, St. Louis Community College

9:00 A.M.–6:00 P.M.

Exhibits Open, Gallery Ballroom (Dedicated time: 9:00–10:45)

11:00 A.M.–Noon

Concurrent Sessions

Gallery IV-V

Keys to Creating and Selling Lean Six Sigma Training and Certification Programs!

Today's students can't afford days and weeks of class time to learn and become certified in career essential subjects like Lean Six Sigma and Project Management. Discover a better way to teach and an improved way to learn while getting tips from your peers on how to increase your value to your customers.

Presenters: Carol Dierdorff, Rob Stewart, The Quality Group; Dennis Wessel, Madison College; Greg Surtman, Contract Training Edge

Gallery VI-VII

It's Never Too Early for Advanced Manufacturing

Advanced manufacturing, more specifically additive manufacturing, is growing in the postsecondary and industry sectors of America and has the potential to develop thinkers, designers, and innovators who can return the country to global leadership in the industry. However, by the age at which most people have become active in the field, it is too late to learn new approaches to problem solving. So the question is: How early can students begin learning the required problem solving skills? How about middle school?

Presenter: Jeffrey Rosen, Georgia Tech/CEISMC

Gallery III

RCAM—Building the 21st-Century Workforce

This presentation will focus on the work of the Regional Center for Advanced Manufacturing (RCAM) located in Kingsport, Tennessee. Through the work of the Advanced Manufacturing Partnership (AMP), partnerships, career pathways, and strategic outreach have allowed the Northeast Tennessee region to build a pipeline of skilled labor to service industry needs.

Presenter: Jeff Frazier, Northeast State Community College

Gallery VIII

Creating Synergistic Change in Manufacturing Technician Education

This panel will discuss many aspects of how DOL TAACCCT funds have been leveraged by several colleges to maximize benefits for students and the colleges. These benefits include improved employer relationships, acquisition of cutting-edge equipment to support instruction, development of innovative means for instruction, new curriculum and labs, improved retention and completion, career coaching, and tutoring.

Presenters: Ann Beheler, Collin College; Karen Wosczyzna-Birch, Connecticut College of Technology—Regional Center for Next Generation Manufacturing; Marilyn Barger, FLATE

11:00–Noon sessions continued on page 5.

Wednesday, October 7

Fleur De Lys B

Collaborating on Pathways to High-Tech Manufacturing

Explore how the technical college system in Wisconsin collaborated on pathways and curriculum development to increase the flow of employees into the manufacturing industry. The common curriculum development process, repository, and credit for prior learning tool provided the structure for success.

Presenters: *Karen Barr, Worldwide Instructional Design Systems; Todd Mattison, Northeast Wisconsin Technical College*

12:15–1:15 P.M.

Grand Ballroom

Lunch and Keynote



Paving New Pathways to Economic Opportunity and Upward Mobility through Apprenticeships and Job Placement in Technology

Brendan Lind, LaunchCode

1:30–2:30 P.M.

Concurrent Sessions

Gallery IV-V

What's the Difference Between Business Leadership and Advice?

Learn how a Business and Industry Leadership Team (BILT) maximizes benefit for students. The BILT helps ensure graduates are workforce ready, and it also helps with employment and other business support of your program. Evidence will be provided.

Presenter: *Ann Beheler, Collin College*

Gallery VI-VII

Drone Tech

Unmanned aerial vehicles (UAS) are becoming more widely accepted as useful tools in many commercial sectors. Often referred to as “drones,” this amazing new technology is expanding the capability of many business sectors requiring an occupational skill set that has not existed before. This session will focus on one college’s fascinating journey into the world of the unmanned.

Presenters: *James Retka, Jon Beck, Northland Community and Technical College*

Gallery III

Columbus State's Next Generation in Modern Manufacturing

Columbus State Community College is collaborating with Miami University of Ohio, local area high schools, Honda North American Services LLC, and several manufacturing companies to educate the next generation of electro-mechanical support technicians. The project goal is to provide qualified technicians with the knowledge and skills necessary to meet the growing demand across a seven-county Central Ohio region.

Presenters: *Dick Bickerstaff, Anna Patterson, Columbus State Community College*

1:30–2:30 sessions continued on page 6.



Wednesday, October 7

Gallery VIII

Advancing the Manufacturing Workforce

For the United States to remain a global competitor, talented employees with high-level technical skills are needed to revitalize, sustain, and improve U.S. manufacturing. Learn about the recommendations of the White House's Advanced Manufacturing Partnership (AMP) 2.0 Steering Committee for securing a robust supply of talented individuals for advanced manufacturing companies from three working team members. These recommendations include Career Pathway models and dual-credit opportunities across education; apprenticeship models with established competency standards that can be replicated by manufacturers and educational institutions with national portability, industry recognized support, preferential consideration, and job search mobility; and matching veterans' skills to the skills needed in manufacturing.

Presenters: *Maria Coons, Harper College; Marsha Danielson, South Central College; Hope Cotner, Center for Occupational Research and Development*

Fleur De Lys B

Kaizen Thinking: The Relentless Pursuit of Waste

For many employees, to be continuously focused on ways to improve work processes through the elimination of waste is simply not part of the way they operate in the workplace. Yet it is this habit, Kaizen thinking, that can be a major force driving process improvements that will increase an organization's productivity and profitability. Bringing about this shift in the way employees think is one of the primary goals of Lean manufacturing and the major force behind the power of Lean.

Presenter: *George Friesen, St. Louis Community College*

1:30–2:30 P.M.

NCATC Strategic Partner Alliance (SPA) Leadership Meeting *(Invitation only)*

Executive Board Room, led by Tom Crampton, NCATC/Mott Community College

2:45–5:00 P.M.

Industry Tour



Cortex Innovation Community and Technology Incubator is the Midwest's premier innovation hub of bioscience and technology research, development and commercialization, serving as the anchor of St. Louis' growing ecosystem for innovative startups and established companies. Cortex is home to a vibrant 200-acre innovation hub and technology district.

5:00–6:30 P.M.

Reception, Gallery Ballroom



Thursday, October 8

8:00 A.M.–6:00 A.M. **Exhibits Open, Gallery Ballroom** (*Dedicated time: 9:15–9:45 and 5:00–6:00*)

8:00–8:30 A.M. **Breakfast, Grand Ballroom**

8:30–9:15 A.M. **NCATC Business Meeting and Elections, Grand Ballroom**

9:45–10:45 A.M. **Concurrent Sessions**

Gallery IV-V

Manufacturing, Advanced Beyond Your Imagination

The Regional Center for Next Generation Manufacturing, a National Science Foundation (NSF) Regional Center, and the Regional Advanced Machining Partnership, an NSF project, are recruiting nontraditional students and updating manufacturing curriculum to meet the needs of modern manufacturing.

Presenters: *Diane Dostie, Central Maine Community College; Karen Wosczyzna-Birch, COT-RCNGM*

Gallery VI-VII

Business, Education, and Skills: Combining Education and Application for Student Development

The workforce of tomorrow—the people who will build the technologies we all will depend on to continue to enjoy the conveniences of modern life—is already here. They are in our classrooms and labs. This presentation will discuss the integration of the classroom lessons with real-world skills and how business and education can build partnerships that lead to better outcomes for students, employers, and educators.

Presenters: *Mike Merchand, Jay Stephens, Sandvik Coromant Company*

Gallery III

A Multi-State Partnership Between Indian Hills Community College and the Columbia Area Career Center

Indian Hills Community College in Ottumwa, Iowa, and the Columbia Area Career Center in Columbia, Missouri, have created a unique partnership that allows students to explore career and educational opportunities in the field of photonics. IHCC hosts CACC students annually for an overnight college immersion experience in which CACC students work with IHCC students on laboratory activities, tour the IHCC campus, learn about opportunities within the Laser Club, and share meals with college students majoring in Lasers and Optics. Participants will learn how this activity benefits both institutions as well as the employers that need laser technicians.

Presenter: *Greg Kepner, Indian Hills Community College*

Gallery VIII

What's New at ToolingU-SME?

Join the Tooling U-SME team to hear about new content, features, and programs available from their vast catalog of manufacturing learning resources.

Presenter: *Toni Neary, Tooling U-SME*

Fleur De Lys B

Using the “I” in Team to Orchestrate Team Cohesion

In this session, Jason Van Archer will present on how Improv theater skills can draw in, draw out and draw together your high performers to achieve new heights in innovation and maximum results for your company's/organization's performance. This presentation will include inspirational and entertaining stories on team success, the history and development of modern improv, and the tools used to bring individuals together as one unit. There might even be some Improv games.

Presenter: *Jason VanArcher, Missouri Department of Economic Development*

Thursday, October 8

11:00 A.M.–Noon

Concurrent Sessions

Gallery IV-V

360 Innovation and the 360 eTECH Pathway

This presentation will review the pathway activities at the 360 Center of Excellence (led by Bemidji State University). The discussion will focus on the 360 eTECH program, and the pathways students enter. The discussion will also center around an innovative course-access solution that will have a broader impact for anyone using D2L Brightspace.

Presenter: *Jeremy Leffelman, Bemidji State University - 360*

Gallery VI-VII

Siemens Is Closing Skill Gaps at Over 300 Schools: New Targeted, Industry-Relevant Certifications for Students!

This session will focus on educational support for closing technical skill gaps and building a pipeline of talent from secondary education through workforce training.

Presenter: *Amanda Beaton, Siemens*

Gallery III

Leveraging Fab Labs in the ATC Community

This panel session will focus on the planning, best practices, technology, and sustainability of fab labs in the ATC community. Panelists will also share highlights from the recent Global MIT Fab Lab Symposium (Fab11) held at MIT. The event drew nearly 1000 participants from 78 countries representing over 500 fab labs, including 50 from the USA.

Presenters: *Jim Janisse, Fox Valley Technical College; Steve Dunnivant, Gulf Coast Technical College; Tom Crampton, Mott Community College; Robin Hoke, Gateway Technical College*

Gallery VIII

Maker Faires: How to Make a Maker Faire

Maker Faires have received international recognition for their engagement of wide audiences in the art and technology of making. The presentation will highlight the process of creating a mini-maker faire including the challenges and successes of four mini-maker faires that have been sponsored by the NSF Center for Next Generation Manufacturing in New England.

Presenter: *Karen Wosczyzna-Birch, Center for Next Generation Manufacturing c/o Tunxis Community College*

Fleur De Lys B

MoWINS TAACCCT Innovations

This session focuses on Missouri's three USDOL TAACCCT grants in support of two-year public colleges. Missouri's Workforce Innovation Networks (MoWINS) grants focused on innovative strategies in expanding access in educational pathways aligned with career pathways in three high demand industries: MoHealthWINS, MoManufacturingWINS, and MoSTEMWINS. Come learn how a consortium of thirteen colleges collaborate, accelerate and innovate common strategies and programs of study to serve some 5000 Trade Act Assistance, Unemployed, Underemployed, Low Skilled and Veteran students.

Presenter: *Dawn Busick, Missouri Community College Association*

Thursday, October 8

12:15–1:15 P.M.

Grand Ballroom

Lunch and Keynote



The Chef Behind the Chocolate

Dave Owens, *Bissinger's Chocolatiers*

Bissinger's has been crafting fine confections since the time of Louis XIV, when he declared the company "Confiseur Imperial," or Confectioner to the Royal Empire, in 17th Century France. No other chocolate company, let alone any company known to Bissinger's, has such a long-standing legacy. Commitment to crafting premium, indulgent, and beautiful confections is always the task at hand. This tradition has been the same for three and a half centuries. Dave Owens, VP of Taste and Chief Chocolatier at Bissinger's, brings an extraordinary range of talent and depth to the company, including executive chef and partner at award-winning restaurants. He has a deep respect for the integrity and proper sourcing of ingredients, an exceptional culinary sense, and a praiseworthy passion for natural foods and sustainability. Confectionery innovations have won Bissinger's four SOFIs (Specialty Outstanding Food Innovations) from the Specialty Food Association. Hear Dave's story, insights, and challenges about this "different" manufacturing industry.

1:30–4:30 P.M.

Industry Tours



For over 30 years, **Hydromat** has built the world's finest precision transfer machines at our manufacturing facility in St. Louis. Teams of highly skilled craftsmen merge Swiss-precision machine elements with locally sourced components. Hydromat offers unique and innovative manufacturing solutions that provide high-quality and cost-effective machining capabilities.



Anheuser-Busch InBev brews and owns brands that are both nationally and internationally prominent. Tour the St. Louis plant where it all started. See the brewing process including the brew kettles and beechwood aging cellars, and the world-famous Budweiser Clydesdales at stables built in 1885.



See first-hand the art and craft of creating award-winning fine confections. We will highlight **Bissinger's** 350-year history and artisan techniques, and discuss the chocolate-making process and the social and environmental elements related to cocoa farming.

5:00–6:00 P.M.

Exhibits Open/Cash Bar, Gallery Ballroom

6:00–7:30 P.M.

Grand Ballroom

Dinner/Keynote, Grand Ballroom

Challenges of Business in a Global Economy

Carol Croft, Henkel Company



Carol has over 29 years of experience in the manufacturing environment, five years with McDonnell Douglas (now Boeing) and over 24 years with the Henkel Company (formerly Dial Corporation). Carol provides her perspectives and experiences within the manufacturing sector and the challenges for businesses in a global economy.

Friday, October 10

8:00–8:30 A.M.

Load Buses and Transport to ATC Tours

8:30–9:30 A.M.

Breakfast at Emerson Center



Keynote: Training Partnership with Boeing and St. Louis Community College

Dan C. Stroot, Boeing

Dan has been with the Boeing Company for 31 years. He has been a sheet metal assembler and riveter, machinist, bonding mechanic, technical training instructor, technical training team leader, and technical training manager. Dan's current responsibilities include managing the BDS Manufacturing and Quality Central Region and Boeing South Carolina (BSC). The Central Region supports 21 BDS sites in 15 states and international programs. The scope includes designing, developing and delivering BDS product-specific skill and certification training and expert product consultation.

9:30 A.M.–Noon

Tours of Advanced Technology Centers



The **Emerson Center for Engineering and Manufacturing** is committed to developing a skilled workforce for the St. Louis region and providing technical support to the region's manufacturing industry. Opened in 2004, this 31,000-sq-ft facility features state-of-the-art tooling and equipment. The Emerson Center provides degree and certificate programs and customized training focused on improving the skills of the manufacturing and engineering workforce, reducing the risks of adopting new business techniques and technologies, and demonstrating possibilities for a thriving manufacturing and engineering sector of the future.



The **Center for Workforce Innovation (CWI)** is located in a 32,000-sq-ft building adjacent to the Florissant Valley campus. Serving more than 500 students annually, CWI houses six aerospace labs, a large equipment lab, three technical training labs (Programmable Logic Controllers, Industrial Maintenance Training, and Green Technologies and Sustainable Construction), classrooms, a computer lab, a conference room, and a student lounge.

12:30–1:00 P.M.

Depart for Hotel

Box lunches provided.



Thank You, Conference Sponsors!

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