

SEPT 19-21, 2018
CLEVELAND, OH



NCATC 30

Celebrating 30 Years of Advanced Technology Expertise

National Coalition of Advanced Technology Centers

30th ANNIVERSARY FALL CONFERENCE

AT THE NEXUS OF WORKFORCE DEVELOPMENT & TECHNOLOGY

Host
Colleges



*Lorain County
Community College*



**Cuyahoga
Community
College**



*Hilton Cleveland
Downtown*

**CONFERENCE
PROGRAM**

From the Presidents of Cuyahoga Community College and Lorain County Community College

On behalf of Cuyahoga Community College and Lorain County Community College, we are honored to welcome the National Coalition of Advanced Technology Centers to Northeast Ohio.

Our colleges are integral to the communities we serve. For those communities to grow and prosper, businesses must have access to a skilled workforce, and residents must have the education to participate in the region's economic, civic, and social life. Both colleges have robust institutional level collaborative partnerships as well as regional, state, and national partnerships. As founding members, we remain active in NCATC and have worked with multiple employer partners in the manufacturing, engineering, and information technologies sectors, representing large companies as well as small and medium sized companies.

To ensure the region's future economic vitality, our colleges have increased capacity to provide high-quality training, products, and services focused on high-demand, rapidly changing industry sectors such as advanced manufacturing, health care, information technology, professional services, public safety, and more. These sectors represent growth in the region and align closely with economic development efforts.

Prioritizing student academic and career success as well as leading talent development for business and job growth is key for both institutions. We focus on being industry-tailored, providing hands-on and affordable training for in-demand areas, featuring new programming and integrated pathways between academic and workforce programs that give students more options for learning and future careers. This sector-based approach to workforce development ensures the strategic alignment of training to jobs and focuses on reducing the skills gap. Our experiential and work-based learning opportunities have proven themselves to be solid on-ramps into good-paying careers while addressing the immediate workforce needs of our industry partners.

The **30th Anniversary NCATC Fall Conference** will afford you opportunities to learn, network, connect with colleagues, and spend time with sponsors and exhibitors. Tours of the area's top facilities, including facilities at our colleges, offer the chance to experience exciting innovations that are taking place in Northeast Ohio. Enjoy the conference, and please take time to explore our great region.

Alex Johnson, Ph.D.
President, Cuyahoga
Community College



Marcia Ballinger, Ph.D.
President, Lorain County
Community College



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NCATC Executive Director: J. Craig McAtee

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Conference Schedule at a Glance

Tuesday, Sept 18

1:00–5:30 P.M. Registration (Lakeside Foyer)

Wednesday, Sept 19

7:00 A.M.–2:30 P.M. Registration (Lakeside Foyer)

8:00 A.M.–2:30 P.M. Exhibits Open (Hope D)

8:00–8:30 A.M. Breakfast Sandwiches & Dedicated Exhibitor Time

8:30–9:25 A.M. Welcome: Alex Johnson (Tri-C) and Marcia Ballinger (LCCC); Keynote: Mark Perna (Hope E)

9:30–10:15 A.M. Concurrent Sessions

10:30–11:15 A.M. Concurrent Sessions

11:30 A.M.–12:15 P.M. Concurrent Sessions

12:30–1:45 P.M. Lunch, Industry 4.0 Report
Keynote: Rob Gorham
MfgUSA Panel (Hope E)

1:50–2:30 P.M. Exhibitors and Strategic Partners Roundtable (Hope E)

2:45–4:45 P.M. Tri-C ATC Tours

5:30–9:00 P.M. Dinner Reception & Tours at Rock & Roll Hall of Fame & Museum

Thursday, Sept 20

7:30 A.M.–1:30 P.M. Registration (Lakeside Foyer)

7:30 A.M.–7:30 P.M. Exhibits Open (Hope D)
Dedicated Times:
7:30–8:00 / 10:45–11:15

8:00–8:45 A.M.

Breakfast and Keynote:
Peter Zierhut, Haas Automation
(Hope E)

9:00–9:45 A.M.

Concurrent Sessions

10:00–10:45 A.M.

Concurrent Sessions

10:45–11:15 A.M.

Break w/ Exhibitors (Hope D)

11:30 A.M.–12:15 P.M.

Concurrent Sessions

12:30–1:45 P.M.

Lunch, Awards, Plenary Panel

1:45–4:15 P.M.

LCCC ATC Tours

4:45–5:30 P.M.

NCATC Strategic Partner
Leadership (SPL) Meeting (by
invitation)

5:30–7:30 P.M.

Reception, Cash Bar, Awards and
Announcements (Hope D)

Friday, Sept 21

7:30–8:30 A.M.

Breakfast, Innovation Award,
Keynote: Chris Mapes, Lincoln
Electric (Hope E)

8:30–9:00 A.M.

Plenary Session (Hope E)

9:00–9:30 A.M.

NCATC Business Mtg (Hope E)

9:20–9:50 A.M.

Optional Tour: Global Center
for Health Innovation

10:00 A.M.–1:00 P.M.

Innovation Tours

1:00 P.M.

Conference Ends

Registration will be open 1:00–5:00 P.M. in Lakeside Foyer on Tuesday, September 18.

Wednesday, September 19

8:00 A.M.–2:30 P.M. Exhibits Open, Hope D

8:00–8:30 A.M. Breakfast and Exhibitor Dedicated Time, Hope D

8:30–9:00 A.M. Kickoff: Presidents Welcome, Hope E

Alex Johnson, President, Tri-C; Marcia Ballinger, President, LCCC

9:00–9:25 A.M. Opening Keynote: Mark Perna, International Speaker & Author,
*Answering Why: Unleashing Passion, Purpose, and Performance in
Younger Generations*



9:30–10:15 A.M.

CONCURRENT SESSIONS

Center Street B

Working with Your Manufacturing Extension Partnership**Marilyn Barger**, Florida Advanced Technological Education Center (FLATE)**Mary Ann Pacelli**, NIST/ MEP

FLATE, the NSF ATE Center of Excellence for Advanced Manufacturing in Florida, signed an MOU with the new Florida Manufacturing Extension Partnership, FloridaMakes. The partnership has focused on the technician workforce needs of manufacturers including pipeline development, Manufacturing Day/Month activities, and defining the skill sets needed of Florida's technician graduates. The presentation will share examples of how Florida's two-year manufacturing programs are working with FloridaMakes through FLATE and provide examples of how NIST MEP centers nationally are collaborating with community colleges.

Center Street C

TRUE Competency-Based Structure OJT**Toni Neary**, Haas Tower - Morris Group, Inc.**Montez King**, NIMS

What does it mean to be truly competency-based? It means self-paced, modular OJT that is separated from production or productivity requirements. Join Montez King, Executive Director of NIMS, as he breaks down the quality components of a structured OJT program designed to meet the ever-changing needs of our 21st-century workforce.

Center Street D

MA Advanced Manufacturing Credentialing Pathway: From Non-credit to Credit**Leslie Parady**, MA Manufacturing Extension Partnership**Kathy Rentsch, Lee Duerden**, Quinsigamond Community College

In this presentation, the team who led the design and implementation of this non-credit to credit pathway in advanced manufacturing will discuss the vision, the process, and the practicalities.

10:30–11:15 A.M.

CONCURRENT SESSIONS

Center Street B

A Skilled Workforce through Career Pathways and Bridges**Annette Parker, Marsha Danielson, Anne Willaert**, South Central College

Community and technical colleges continue to meet the challenge of low enrollments and the ability to reach higher retention levels. South Central College will demonstrate our career and guided pathways, and a number of entry points, partnerships, and tools, created to increase our enrollment numbers and meet the rapidly changing demographics of the students we serve.

Center Street C

NC3: Working with Industry to Develop Certifications**Randal Reusser, Matt Janisin**, Gateway Technical College**Tim Koop**, Greenlee

Attendees will learn how Greenlee got interested in NC3, how they worked together with Gateway Technical College and NC3 to develop the Copper training, the value of technical certifications, and why working with industry matters.

Center Street D

What Employers Really Want: Embedding Professional Behaviors in Technical Instruction**Gerald Sexton**, Greater Louisville KY FAME**Debbie Anderson**, Jefferson Community and Technical College

In addition to classroom training and job experience, KY FAME empowers students with professional-behavior skills including attendance, diligence, written and verbal communications, interpersonal relations, and teamwork. These skills put our KY FAME graduates head and shoulders above their peers in the job market.

10:30–11:15 A.M. Concurrent Sessions (cont.)

Hope E

New Learners with Old Friends

Lulu Copeland, Chattanooga State Community College

This presentation is about a long-term training relationship with Whirlpool. Training for Whirlpool maintenance and tool and die apprentices started Fall 2010. The third cohort group is enrolled in its third semester of a four-year training program.

11:30 A.M.–12:15 P.M.

CONCURRENT SESSIONS

Center Street B

Integrated Education and Training Programs: Connecting People to Pathways

Amanda Sizemore, Rich Waligurski, Scott Kearns, St. Charles Community College

This presentation is designed to provide examples of how St. Charles Community College incorporated aspects of adult learning styles, industry recognized credentials, and credit for prior learning into successful career pathway programs.

Center Street C

Siemens and Festo Didactic Certifications and Industry Partnership to Address Skills Gap

Gail Norris, Amanda Beaton, Siemens

Tony Oran, Festo Didactic, Inc.

Manufacturing, packaging, and other systems are becoming more complex and pervasive, and more knowledge is required to design, operate, and maintain them than ever before. These innovative jobs require critical thinking and the ability to adapt to rapidly changing industries like Industry 4.0, changing the way people, data, and machines interact, and creating a workforce prepared with high-tech design and engineering training skills. Through the SMSCP, SCE, and FICP programs, Siemens and Festo Didactic are providing access to expert trainers, sophisticated learning systems, and industry-approved curriculum required for these skills.

Center Street D

Leveraging Advanced Learning Solutions for Lean Six Sigma: A Case Study

Carol Dierdorff, Rob Stewart, OpusWorks

Samantha Kaplan, Cuyahoga Community College

Cory D. Melvin, Envision RX

Discover how one company leveraged its college's partnership with OpusWorks® to more effectively teach Lean Six Sigma, execute projects, and improve the bottom line. Understand how they accessed a variety of offerings from both the contract training and public course offerings to build their culture of continuous improvement. Identify the steps you need to take back so that your college can deliver similar advanced learning solutions. Enable your customers to achieve greater success levels in their Lean Six Sigma/Continuous Process Improvement efforts!

12:30–1:45 P.M.

LUNCH Hope E

Industry 4.0 Brief Report Out

Amanda Kosty, AACC

Ryan Kish, Arconic Foundation

Tony Oran, Festo Didactic

Jasson Everett, Amatrol

Ray Koukari, Gateway Technical College

Amanda Beaton, Siemens



Keynote: Rob Gorham

Executive Director

America Makes

Manufacturing USA's First

Innovation Institute –

NAMII to America Makes



America Makes

1:10–1:45 P.M.



PLENARY PANEL: Manufacturing USA Workforce Development Initiatives with Community Colleges, Hope E
 Mary Ann Pacelli (Moderator), NIST/MEP Workforce Director
Rob Gorham, CEO, America Makes / **Emily McGrath**, NextFlex
Steve Catt, ARM Institute / **Todd Oldham**, REMADE Institute
 Emerging, disruptive technologies and other innovations continue to change the landscape of the current and future advanced manufacturing technical workforce. The majority of businesses and industries scramble to identify the core skills, career/education pathways, and manufacturing processes needed to meet their current and future demands. Panelists of the ManufacturingUSA Institutes will highlight proven models.



1:50–2:30 P.M.

Exhibitors and Strategic Partners Roundtable, Hope E

2:45–4:45 P.M.

TRI-C ATC TOURS *(Buses load 2:30–2:45 outside hotel lobby; DEPART at 2:45 sharp.)*

Group A: Mechatronics, Automation / Industry 4.0
 Group B: Idea Station / Fab Lab / 3D-Additive Manufacturing
 Group C: Creative Arts - STEAM Labs



5:30–9:00 P.M.

Group Picture, Dinner Reception and Tour
 Rock & Roll Hall of Fame & Museum

Thursday, September 20

7:30–1:30 P.M.

Registration, Lakeside Foyer

7:30 A.M.–7:30 P.M.

Exhibits Open, Hope D (Dedicated Times: 7:30–8:00 / 10:45–11:15)

8:00–8:45 A.M.

Breakfast, Hope E



Keynote
Peter Zierhut
 Haas Automation
The Manufacturing Classroom of the Future



9:00–9:45 A.M.

CONCURRENT SESSIONS

Center Street B

Engaging Manufacturing’s Next Generation through Full Contact Innovation
Bill Padnos, Stacey Schroeder, NTMA

Manufacturing companies and postsecondary institutions must collaborate to address two of industry’s biggest challenges: a need to attract the best and brightest into the variety of careers manufacturing has to offer, and a need to align public perception of manufacturing with the clean, high-tech facilities of today. To overcome those challenges, high school students need both a catalyst to serve as a “WOW” factor and to develop critical job-driven, STEM skills. Through the NRL program, students are immersed in an authentic, real-world manufacturing experience that has a powerful impact on student learning and postsecondary educational pathways.

9:00–9:45 A.M. Concurrent Sessions (cont.)

Center Street C

Qualification for Industry 4.0**Tony Oran**, Festo Didactic

In a working world that is changing fast, career and technical educators are searching for the answer to the question: “How do we help current and future manufacturing workers skill, upskill, and reskill to stay competitive?” The answer is industry-led apprenticeships and certifications that are stackable, portable, and accredited by a third-party organization. The Festo Qualification for Industry 4.0 Program is a comprehensive certification program developed by industry experts and educators that ensures students have qualifying skills upon graduation, including soft skills such as effective communication, managing others, and critical thinking. Industry’s reliance on advanced technologies, combined with the skills gap created by the ongoing generational change-out are driving organizations to find innovative learning methods to ready their employees for this transformational change. Join us to experience new learning approaches that will ensure your organization will succeed in the digital era.

Center Street D

Creating Data Driven Career Pathways for “Stackability”**Todd Oldham**, Monroe Community College

Using 5 + years of NYS unemployment insurance data, this session will share where CTE graduates are being hired and how they perform with wage progression in targeted occupations (graduates = academic certificate [~30 credits], associate level [~60 credits], long-term non-credit industry certificates [450 hours]). Understand how CTE non-completers perform in the market in comparison to these graduates from CTE programs over multiple tax years. Learn how to use this data approach to better inform how a local labor market responds to the accumulated competencies taught in both credit and non-credit formats.

10:00–10:45 A.M.

CONCURRENT SESSIONS

Center Street B

Connecting Learners to Opportunity:**Industry 4.0 and the Industrial Internet of Things (IIoT)****Nancy Chapko**, Gateway Technical College**Kim Vosicky**, WIDS – Worldwide Instructional Design System

Industry 4.0 manufacturing systems are highly automated and incorporate intelligent processing. How can students prepare for this skill-intensive work? A case study of a successful initiative—developed by the collaborative partnership of several Wisconsin technical colleges, their stakeholders, and industry partners—reveals some clues.

Center Street C

Collaboration Is Key: Partnerships Are Critical to Building Out Apprenticeships in Manufacturing**Lucinda Curry, Becky Calwell**, Robert C. Byrd Institute**Susan Muha**, Maher & Maher**Sandra Everett**, Lorain County Community College

With the support of an American Apprenticeship Initiative (AAI) grant, Marshall University’s Robert C. Byrd Institute (RCBI) launched a program that helps manufacturers establish apprenticeship programs in more than 15 advanced manufacturing occupations. RCBI, along with Maher & Maher and Lorain County Community College, will share insights on lessons learned and best practices from these experiences, especially as they relate to the need to work collaboratively. They will all provide examples of working partnerships and will lead an open discussion on the challenges of partnerships and how the challenges can be resolved.

10:00–10:45 A.M. Concurrent Sessions (cont.)

Center Street D

AMTEC – Next Generation

Sheri Plain, Jason Simon, Cindy Fiorella, AMTEC

AMTEC's future has never looked brighter! Referred to as AMTEC – Next Generation, a new leadership team is in place to work with industry and educational partners to advance AMTEC to the next level. Learn more about the exciting new opportunities for AMTEC – Next Generation!

Hope E

How the BILT Model Improves Employer Engagement

Ann Beheler, National Convergence Technology Center

The Business and Industry Leadership Team (BILT) Model is a process whereby employers provide co-leadership for college and grant-funded programs, including curriculum and other forms of engagement. The model has been explained and taught to colleges coast to coast. This session will focus on the essentials of the BILT and examples of successful adoption/adaptation of the model.

10:45–11:15 A.M.

Break and Dedicated Exhibitor Time, Hope D

11:30 A.M.–12:15 P.M.

CONCURRENT SESSIONS

Center Street B

Rebooting America's Apprenticeship Program

Denise Ball, Tooling U-SME

Montez King, NIMS

Rebecca Lake, Harper College

Margo Meyer, Rhodes State College

Join an expert panel in a robust conversation and discussion on what the newly developed Industry-Recognized Apprenticeship Program (IRAP) is all about.

Center Street C

Stackable Credentials in Cyber Security

Zack Hubbard, Angelo Markantonakis, Michael Quillen, Van Madray, Rowan-Cabarrus Community College

To increase student employability, RCCC has worked to embed professional certifications and credentials into our Cyber Security degree. Learn more about how we prepare students for certifications, how we pay for certifications, and our special Test Fest event that is held annually at our Technology Center.

Center Street D

An Employer Engagement Playbook for Community Colleges

Starr Sherman, Cuyahoga Community College

M. Judith Crocker, MJ Crocker & Associates, LLC

Nikki Glazer Stoicoiu, The New Growth Group, LLC

Cuyahoga Community College partnered with a local workforce consultant group to explore the role of the employer in addressing current skill gaps and the emerging Industry 4.0 trends. The project team used a framework to identify and analyze manufacturing workforce programs that exemplify best practices, resulting in sustainable partnerships with measurable outcomes. This session will present the process and introduce an Employer Engagement Playbook designed to guide community colleges in collaborating with employers and other key stakeholders to meet current and future workforce needs.

12:30–1:30 P.M.

LUNCH Hope E

12:45–1:45 P.M.

Tooling U-SME Inaugural Pinnacle Awards to Tri-C (3), Hope E**PLENARY SESSION: New Data on the Workforce: Time to Take Action!**

Jeannine Kunz, Tooling U-SME

Mary Ann Pacelli, NIST MEP

Roy Swift, Workcred

This presentation will share data and recommendations from two recently completed reports:

- *Workforce Challenges: State of Workforce and Pipeline Development*, Tooling U-SME
- *Examining the Quality, Market Value, and Effectiveness of Manufacturing Credentials in the United States*, Workcred with NIST MEP

The presenters will share details of the two projects and will feature recommendations for multiple stakeholders including manufacturers, credentialing organizations, and educators. The presenters will then lead discussion to generate ideas for educators and other stakeholders to discuss and share recommendations and ideas to address the survey reports results.

Tooling U-SME—Tooling U-SME's *Industry Pulse: 2018 Manufacturing Workforce Study* explored the challenges facing manufacturers over the next three years due to the skills crisis. Tooling U-SME explored company turnover and looming retirements and what companies are doing to address skills challenges, and looked for gaps that still need to be remedied. The skills crisis, along with a tight labor market with no end in sight, is causing manufacturers to step up and start to address the workforce and skills challenges they're facing. This presentation will share key findings as well as recommendations for helping manufacturers train and develop their workforce while facing a tight employment market. We'll report on:

- Top business challenges manufacturers will face over the next three years with workforce, technology, and operations;
- The impact of turnover and looming retirements on the bottom line;
- Actions companies are taking to address these challenges and where they need help; and
- Case examples of companies implementing solid programs for onboarding, upskilling, and building their future pipelines.

NIST MEP with Workcred—The recently released report by Workcred, funded by NIST MEP, examines how credentials are currently used in hiring and retention practices, and how credentialing can be improved to advance the manufacturing industry. The presentation will share data and recommendations from a recently completed survey of manufacturing credentials in the US. This extensive report surveyed a wide range of manufacturing sectors, facility sizes, geographic regions, and job roles. The report provides insights on how credentials are used and valued by industry at a time when US manufacturers report a skills gap and provides recommendations for credentialing and workforce stakeholders, including:

- Improving understanding about the content, use, and value of credentials;
- Expanding the use of quality standards for credentials;
- Strengthening relationships between employers, education and training providers, and credentialing organizations;
- Adding an employability skills component to existing and new credentials;
- Creating credentials that focus on performance and address new roles; and
- Increasing the number of apprentices and expand apprenticeships to more occupations.



1:45–4:30 P.M.

LCCC ATC Tours (Buses load 1:45 outside hotel lobby; DEPART 2:00 sharp.)



Group A: Microelectrical / Mechatronics (MEMS) Lab
 Group B: Digital Manufacturing / Automation Labs
 Group C: FAB LAB / Maker Space / 3D-Additive
 Group D: Mobile Welding Lab



4:45–5:30 P.M.

NCATC Strategic Partner Leadership (SPL) Meeting (by invitation)

5:30–7:30 P.M.

Reception, Awards, Small Plates and Cash Bar with Exhibitors, Hope D

Friday, September 21

7:30–8:30 A.M.

BREAKFAST Hope E

7:45–8:00 A.M.

2018 NCATC Innovation Award to Bryan Albrecht, President, Gateway Technical College (WI)



8:00–8:30 A.M.

Keynote: Chris Mapes, CEO Lincoln Electric



Addressing the Skills Gap Through Education and Innovation



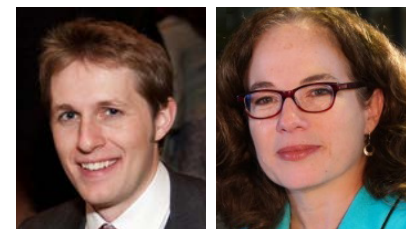
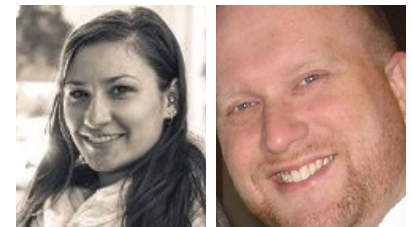
8:30–9:00 A.M.

PLENARY PANEL: A Strategic Imperative: Aligning 21st-Century Technology and Talent, Hope E



Brynt Parmeter (Moderator), **Emily McGrath** NextFlex
Michael Britt-Crane, Department of Defense (DoD): OSD ManTech & ManufacturingUSA

Tim Good, Blue Spark Technologies; **Terri Sandu**, LCCC
 The Department of Defense, through the ManufacturingUSA National Institutes for Manufacturing Innovation, is very interested in the creative blending of project- and work-based learning programs for creating the talent needed by industry over time. This national security imperative will ensure that there is an alignment of effort and action between the advancement and adoption of 21st-century technologies with the attraction, recruitment, and training of 21st-century talent. This approach requires outreach and immersion with young people at the K-12 level. It also requires creative ways for students in higher education and industry to connect with one another in mutually beneficial and risk mitigated relationships.



9:00–9:30 A.M.

NCATC Business Meeting and 2019 Board Elections, Hope E

9:20–9:50 A.M.

Optional Tour: Global Center for Health Innovation (coordinated at the Hilton)

10:00 A.M.–1:00 P.M. **INNOVATION TOURS** (Buses load 9:45 with 10:00 DEPARTURE outside hotel lobby. Box lunches provided at tour sites.)

TOUR A
Lincoln Electric Welding
Technology & Training Center



The WTTC at Lincoln Electric is a 130,000-square-foot, state-of-the-art facility dedicated to training in the craft and science of welding. Internationally recognized for best practices in welding education, the WTTC features 166 welding and cutting booths, a virtual reality lab, a 100-seat auditorium, and extensive seminar and classroom space.

TOUR B
Cleveland Clinic Medical
Device Solutions / Innovation
& Prototyping Center



The Cleveland Clinic MDS enhances and creates medical devices. MDS engineers use rapid prototyping to manufacture complex prototypes. The Innovation & Prototyping Team uses state-of-the-art computer-aided design (CAD), finite element analysis (FEA), and computational fluid dynamics (CFD) modeling software.

TOUR C
think[box] at Case Western
Reserve University



CWRU's center for innovation and entrepreneurship is much more than a fabrication laboratory. It's a place where the engineering, design, arts, science, medical, and business communities can interact in exploring cross-discipline innovation. This seven-story 50,000-square-foot facility is the largest open-access innovation center at any university in the world.

1:00 P.M.

2018 NCATC Conference Ends

Special Thanks to Our Exhibitors

ACT, Inc.	MT/Connect
Amatrol, Inc.	National Coalition of Certification Centers (NC3)
American Association of Community Colleges (AACC)	National Robotics League (NRL)
American Welding Society (AWS)	National Tooling & Manufacturing Association (NTMA)
Arconic Foundation	NIST / Manufacturing Extension Partnerships (MEP)
FLATE	NOCTI Business Solutions
Haas Automation (Diamond Sponsor)	OpusWorks / The Quality Group (Gold Sponsor)
Hampden Engineering Corp.	Panasonic (Silver Sponsor)
Lincoln Electric (Platinum Sponsor)	Siemens
Manufacturing Skill Standards Council (MSSC)	SkillsUSA Ohio
Manufacturing USA Institutes (America Makes [3D/Additive], ARM [robotics], NextFlex [flexible electronics], ReMade [remanufacturing])	The Association for Manufacturing Technology (AMT)
Mark C. Perna, Author & Speaker	Tooling U-SME (Gold Sponsor)
Miller Electric	Weld-Ed (NSF Welding Education Center)
	Worldwide Instructional Design Systems (WIDS)
	Zeiss Industrial Metrology

Special Thanks to the 30th Anniversary NCATC Fall Conference Planning Committee

Tri-C Team: William Gary, Alicia Booker, Lynne Flournoy, Valerie Joshua-Noel, and Monique Umphrey
LCCC Team: Kelly Zelesnik, Terri Burgess Sandu, Sandra Everett, Tracy Green, and Bernie Gosky

Thank You, Conference Sponsors!

Diamond Level

Haas Automation is the largest machine tool builder in the United States, and one of the largest builders of CNC (computer numerically controlled) machines in the world. All Haas products are manufactured in the company's 1.1-million-square-foot facility in Southern California and distributed through a network of more than 170 Haas Factory Outlets, in more than 60 countries. Every HFO has complete showroom facilities, factory-trained service personnel, extensive spare-parts inventories, and fully stocked service vehicles to provide the industry's best service and support.

Haas CNC machines are used by job shops, contract engineering firms, and manufacturers worldwide to make parts for nearly every

industry—aerospace, automotive, mold & die, electronics, medical, telecom, motorsports, electronics, defense, oil & gas, and more.

Haas is committed to supporting education through various initiatives including its HTEC network, which counts over 2000 educational institutions nationwide and over 1000 internationally. HTEC affiliated schools provide elementary and advanced training to students at high schools, community colleges, trade centers, and universities. (haascnc.com)



Platinum Level



Founded in 1895, Lincoln is the world leader in the design, development, and manufacture of arc welding products, robotic welding systems, plasma and oxyfuel cutting equipment. (lincolnelectric.com)

Gold Level



Tooling U-SME is the industry leader in manufacturing training. For 80+ years, we have worked with manufacturers to build training programs and support workforce learning. (toolingu.com)



OpusWorks accelerates skill-building, transforms culture, and increases return on investment through advanced learning solutions and project execution tools. (opusworks.com)

Silver Level



Panasonic endeavors to offer "A Better Life, A Better World" to each and every customer around the world across its four core business areas: Consumer Electronics, Housing, Automotive, and B2B. (panasonic.com)