



# Fall Conference

October 11–14, 2016

Chicago, Illinois

# New Partnerships for Workforce Advancement



Hosted by



Harper College®

In partnership with



Fabricators & Manufacturers Association, International®

# CONFERENCE PROGRAM

## Welcome to Harper College



On behalf of the Board of Trustees, faculty and staff at Harper College, I am honored to welcome the National Coalition of Advanced Technology Centers to the Chicago area and Illinois. Harper is preparing to celebrate its 50th anniversary.

Our proud heritage begins with our namesake, William Rainey Harper, the first president of the University of Chicago, who began the community college movement. Harper serves four counties in the northwest suburbs of Chicago with a population of 530,000 and offers associate degrees, certificate programs and the first two years of a baccalaureate degree. Approximately 1,600 full- and part-time staff, including 230 full-time faculty members, support students and deliver programs at our main 200-acre campus in Palatine, as well as at our extension sites in Prospect Heights and Schaumburg.

Our district includes 30,000 businesses representing all sectors and sizes. We support these important partners by providing a talent pipeline that ensures business viability and continuity. Harper is proud of its business relationships and was recognized in 2013 by the American Association of Community Colleges for our outstanding corporate partnerships.

In 2012, Harper was awarded a \$13 million Department of Labor TAACCCT grant to support advanced manufacturing workforce development throughout the State of Illinois. In addition, we have embarked on several apprenticeship programs that are proving to be the ultimate earn-and-learn models.

Last year, the Fabricators and Manufacturers Association honored us with a \$500,000 grant to help expand our manufacturing lab and support Harper's newest initiative: The Harper Promise Program. This program provides high school students, beginning as freshmen, the opportunity to prepare for the challenges of college and the world of work. Students must meet benchmarks in five criteria: solid grades, good attendance, on-time graduation, quality work and community service, to earn a tuition-free semester at Harper. These Promise Scholars continue to attend Harper College tuition-free on a semester-by-semester basis (up to four semesters), if they meet the same criteria. We truly believe this program will be a game changer for our community.

There is always so much to learn at NCATC conferences—so I encourage you to network with colleagues, visit with exhibitors and sponsors, and share information.

I hope you enjoy the conference sessions and tours with area businesses.

Kenneth L. Ender, Ph.D., President, Harper College



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# Conference Schedule at a Glance

## Tuesday, Oct 11

- 1:00–5:30 P.M. Registration (Hyatt Lobby)
- 5:00–5:15 P.M. Load Buses for Harper College (Hyatt Lobby)
- 5:30–7:30 P.M. Opening Reception with Exhibit Preview (Harper College Wojcik Conference Center)
- 7:30 P.M. Shuttle Bus to Hyatt Hotel

## Wednesday, Oct 12 All events at Harper College

- 7:30 A.M.–4:00 P.M. Registration (Hyatt Lobby)
- 7:30–7:45 A.M. Load Buses for Harper College (Hyatt Lobby)
- 8:00–9:00 A.M. Breakfast/Keynote
- 9:00 A.M.–5:00 P.M. Exhibits Open
- 9:15–10:30 A.M. Visit Exhibits
- 10:45–11:30 A.M. Concurrent Sessions
- 11:45 A.M.–1:15 P.M. Lunch/Keynote
- 1:15–2:15 P.M. Visit Exhibits
- 2:30–3:15 P.M. Concurrent Sessions
- 3:30–5:00 P.M. Harper ATC Lab Tours
- 5:00 P.M. Shuttle Bus to Sandvik Tour or Hyatt Hotel

## Thursday, Oct 13 All Events at Hyatt Hotel

- 7:30 A.M.–Noon Registration (Hyatt Lobby)
- 7:45–8:30 A.M. Breakfast/Keynote
- 8:45–9:15 A.M. NCATC Business Meeting
- 9:15–9:45 A.M. Visit Exhibits
- 9:45–10:30 A.M. Concurrent Sessions
- 10:30–11:00 A.M. Dedicated Exhibit Time
- 11:00–11:45 A.M. Concurrent Sessions
- 12:15–1:15 P.M. Lunch/Keynote
- 1:30–2:15 P.M. Concurrent Sessions
- 2:15–3:15 P.M. Visit Exhibits
- 3:15–4:00 P.M. Concurrent Sessions
- 5:30–7:30 P.M. Evening Jazz Social with the Harper College Jazz Ensemble (Hors d'oeuvres/Cash Bar)

## Friday, Oct 14

- 7:30–8:15 A.M. Breakfast/Keynote
- 8:30–9:00 A.M. Load Buses/Transport to Tours
- 9:00 A.M.–12:30 P.M. Tours
- 12:30–1:00 P.M. Depart Tours for Hotel, Box Lunches Provided

## Tuesday, October 11

### 5:30–7:30 P.M., OPENING RECEPTION WITH EXHIBIT PREVIEW Harper College Wojcik Conference Center

Buses to Harper College will load from the Hyatt lobby from 5:00 to 5:15 and will return at 7:30.





**8:00–9:00 A.M., BREAKFAST AND KEYNOTE, Wojcik Amphitheater**

***The 21st Century Community College***

**Dr. Kenneth Ender, President, Harper College**

**9:00 A.M.–5:00 P.M. EXHIBITS OPEN, Wojcik Dining Room** (Dedicated Times: 9:15–10:30 A.M., 1:15–2:15 P.M.)

## **10:45–11:30 A.M. CONCURRENT SESSIONS**

### **W216/217: Fab Labs as a Tool for Technical Certification**

As Fab Labs proliferate across the U.S., a need for specialized training for facilitators, technicians, and instructors, “Train the Trainer” becomes essential for successfully leveraging a Fab Lab’s potential. An often overlooked component in Fab Lab operations is the personnel and technical training required to operate an effective program. By partnering with a variety of organizations and equipment vendors, Fab Labs can offer relevant training and certifications to empower their staff and enhance their effectiveness. **Greg Herker, John Zehren, Gateway Technical College**

### **W214/215: Recruiting and Developing Machine Tool Technicians**

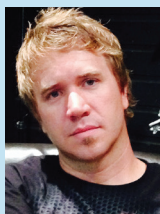
Recruiting and developing machine tool technicians is challenging and calls for a creative approach. The training required to put a highly functioning tech rep on the road in front of customers is time consuming and requires incentives for retention. Learn how TRUMPF is tackling this challenge and how creative metrics systems are used to retain excellent technicians. **Sarah Michaud, Robert Leahy, TRUMPF Inc.**

### **W201: On The Road Again...Making ElectroMechanical and Automation Training Mobile**

Northeast Wisconsin Technical College is delivering ElectroMechanical and Automation training to district high schools and businesses through its new 53 foot trailer—an ElectroMechanical Mobile Lab. This session will describe how the training is conducted using our MobileModular™ trainers and provide a tour of the mobile lab itself. **Pam Mazur, Northeast Wisconsin Technical College**

### **W202: Educational Paradigm to Prepare Students for Emerging Technologies and Life-long Careers**

Learning, understanding, and developing competence in technical skills remains important; however, alone it isn’t going to be sufficient. Through industry partnerships new educational paradigms must be established to prepare students for emerging technologies and life-long careers. Within this session we will dialogue the topic and create a working group to advance an educational paradigm that adequately prepares technology students for their futures. **Darrell Kesler, Ivy Tech Community College Northeast**



**11:45 A.M.–1:15 P.M., KEYNOTE AND LUNCH, Wojcik Amphitheater**

***Be Equipped to Impact Your Community***

**Jeremy Bout, Producer/Host, Edge Factor/EduFactor**

## **2:30–3:15 CONCURRENT SESSIONS**

### **W216/217: Innovative Approaches to Registered Apprenticeships**

Northeast Alabama Community College and Harper College have been recognized by the US Department of Labor as having unique and innovative approaches to Registered Apprenticeships, including the colleges serving as the apprenticeship sponsor. Learn how these colleges have partnered with local industry to provide enhanced opportunities for their students while meeting industry needs. **Mike Kennamer, Northeast Alabama Community College; Rebecca Lake, Harper College**

### **W214/215: “We Build” Our Future**

As our customer and workforce needs continue to change, we’ve re-evaluated our talent development and management strategies to maintain our position as an industry leader. We’ll share some of our opportunities, key partnerships, and the strategies we’re utilizing to drive organic growth, operational excellence, and maintain our entrepreneurial, decentralized culture. **Craig Treichel, Miller Electric Mfg. Co.**

# Wednesday, October 12

## 2:30–3:15 CONCURRENT SESSIONS (cont.)

### **W201: Fill Your Classrooms with Inspired Students**

Join Toni Neary from Edge Factor to see the eduFACTOR platform and find tools to engage and inspire your audiences to fill your classrooms with the next generation of makers. Edge Factor is pushing back the edge with high-end new media productions created to inspire the next generation and highlight advanced technology in motion.

**Toni Neary**, *Edge Factor*

### **W202: Industry and College Partnerships**

This presentation will showcase the KY State Federation for Advanced Manufacturing Education collaborative. This activity partners Kentucky manufacturers with the community college system (KCTCS) to implement a unique work study program as a pipeline to future employment with sponsoring companies. **Sutton Davis**, *Toyota*; **Pam Hatcher**, *Bluegrass Community and Technical College*

## 3:30–5:00 P.M. TOURS of Harper College Advanced Technology Labs

Group A: HVAC/R Lab

Group B: FMA Metal Fabrication Lab

Group C: Electronics/Mechatronics Lab

Group D: Nursing Simulation Technology Lab (Virtual Hospital)

## 3:30–5:00 P.M. NCATC Strategic Partner Alliance - Leadership Meeting

W201 (by invitation)

### 5:00 P.M.

Conference participants not attending the Sandvik Tour will return to the Hyatt.

## 5:00–6:30 P.M. SANDVIK COROMANT CENTER TOUR

Loading for bus transport to Sandvik Tour will begin at 5:00 (Wojcik Lobby).

Our workforce is our future. Join NCATC Strategic Partner Sandvik, the global leader in metal cutting solutions, to experience the impact of IIoT and its effect on how students can access useful information to enhance their growth. We will share the latest updates in advanced machining technology education along with technical demonstrations at the Schaumburg, Illinois, Sandvik Coromant Center. Refreshments will be served. Bus will return to Hyatt after tour.



# Thursday, October 13

## 7:30 A.M.–4:30 P.M., EXHIBITS OPEN, Hyatt Hallways

Dedicated Times: 9:15–9:45 A.M. and 2:15–3:00 P.M.



### 7:45–8:30 A.M., BREAKFAST AND KEYNOTE, Mahogany Room (Hyatt)

***Dispelling Apprenticeship Myths: Five Reasons Your Company Should Join the Apprenticeship Movement***

Jim Nelson, Illinois Manufacturers Association

### 8:45–9:15 A.M., NCATC Business Meeting/Election

## 9:45–10:30 CONCURRENT SESSIONS

### **Sage: Apprenticeship Works!**

Apprenticeship Works, the National Advanced Manufacturing Apprenticeship Program, makes apprenticeship more accessible and affordable for employers, helping reduce skills gaps. This national effort is funded by a \$4.9 million grant to expand on the Robert C. Byrd Institute's proven apprenticeship model. **Lucinda Curry**, *Robert C. Byrd Institute*

### **Maize: Reaching Out to Underrepresented Populations**

This session will share successful strategies for reaching out to underrepresented populations through engaging, hands-on activities. These activities attracted individuals that might otherwise have had little exposure to the highly technical program areas of lasers, robotics, and other advanced technologies. Best practices and lessons learned by the Midwest Photonics Education Center will be shared with attendees, including a Photonics Camp for Latino students, Women Exploring STEM Day, and a Technology Summer Camp for inner-city Chicago high school students. **Greg Kepner**, *Indian Hills Community College*

### **Mahogany: Inspiring the Next Generation of Makers with eduFACTOR**

This session will provide an in-depth walk-through of eduFACTOR's online tools and feature Edge Factor media that give a voice to the innovative makers who are pushing back the edge of what's possible. We will show how our resources can raise awareness and guide the next generation to launch amazing careers in the industry that changes lives and builds our world. **Toni Neary**, *Edge Factor*

### **Copper: Using Industry Credentials as a Tool for Prior Learning Assessment and Articulation**

Many colleges and their company partners are struggling to make sense of how to best use industry credentials. Ultimately, using them to benefit individuals in their efforts to find employment and/or advance careers is ideal. This session explores a model that uses the credential as both a prior learning assessment and articulation tool. Learn how eight colleges collaborated to form the Michigan Coalition for Advanced Manufacturing (MCAM) to update curriculum, align with industry credentials, and develop prior learning assessment strategies and articulation/transfer models in production, welding, machining and multi-skilled/mechatronics. This session will focus on the agreement that emerged that allows students to leverage credentials to credits as well as credits between college partners. **Tom Crampton**, *Mott Community College*; **Don Hutchison**, *Macomb Community College*

## 11:00–11:45 CONCURRENT SESSIONS

### **Sage: Stackable Certificates: Accessible Pathways to Degree Completion**

Mapping Upward, a project of the U.S. Department of Education, is building the capacity of community colleges to improve career and technical education credential attainment rates through stackable credentials, a series of shorter pathways to associate degrees in high-demand fields. Learn about technical assistance being delivered by the project and how two NCATC colleges have leveraged stackable certificates to make degree completion more attainable for more students, while ensuring CTE programs of study are demand-driven and yield valuable industry credentials. **Hope Cotner**, *CORD*; **Maria Coons**, *Harper College*; **Debbie Davidson**, *Gateway Technical College*

### **Maize: Transformation Instructional Design – M-SAMC**

Building on AMTEC vetted competencies, thirteen community colleges from ten states with strong historical and economic ties to manufacturing partnered in the M-SAMC consortium to develop performance-based objectives (PBOs), which combine competencies into common tasks/objectives that can be reliably verified for competency attainment. BCTC began implementing the PBO curricula during the summer of 2015. **William Franklin**, **Paul Turner**, *Bluegrass Community and Technical College (BCTC)*

## 11:00–11:45 CONCURRENT SESSIONS (cont.)

### **Mahogany: How Manufacturers' Risk Management and Property & Casualty Insurance Costs Can Be Positively Impacted by Employees with Work-related Certificates and Certifications**

Discussion regarding the value placed by insurance underwriters on a certified or certificated workforce and adherence to industry standards when assessing risk and insurance pricing for manufacturers. We will discuss how this aspect of employee education is a frequently overlooked financial consideration to the employer and thus a selling benefit to the manufacturing community provided by the educational community. **Roger Wilson**, *CNA Insurance*

### **Copper: Successful Hybrid Models of Workforce Development for Advanced Manufacturing**

A robust panel of experts from industry, apprenticeships, and workforce development discuss how Tooling U-SME has partnered with manufacturing employers and higher learning institutions to take competency-based learning and skills tracking to a whole new level. Our NEW On-The-Job (OTJ) training framework was designed by industry, for industry's incumbent workforce and apprenticeships needs. Never before have employers been better equipped to track OTJ training along with TU-SME classes – all in one place – online! We engage the learner and provide the roadmap for success! **Denise Ball**, *Tooling U-SME*; **Brad Kent**, *ThyssenKrupp Crankshaft*; **Lucinda Curry**, *RCBI/Marshall University*; **Stuart Templeton**, *Harper College*



## 12:15–1:15 P.M. LUNCH AND KEYNOTE, Mahogany Room/Hyatt

### **Methods for Talent Attraction, Retention and Educational Partnerships**

**Jon DeWys and Laura Elsner**  
DeWys Manufacturing/DeWys University

## 1:30–2:15 CONCURRENT SESSIONS

### **Sage: FREE NSF ATE Resources from Manufacturing Centers to Support Your Technical Programs**

Looking for manufacturing education resources? All NSF ATE Centers have developed a wealth of best and promising practices, skills alignments, curriculum, and other resources that support two-year academic technical manufacturing programs. Learn more about six ATE Advanced Manufacturing Centers, their resources, and how best to access them in this fast-paced session.

**Marilyn Barger**, *FLATE*; **Karen Birch**, *RCNGM*

### **Maize: Tools of Sustainable Education Industry Partnerships**

Throughout the Multi-State Advanced Manufacturing Consortium's TAACCCT grant period, technological systems-centered learning approaches were implemented, creating new instructional tools that improved learning and assessment strategies at Henry Ford College and their national partners. Driven by business and industry's need

for intensive skills-based college education, the consortium found that one key to sustainable partnerships is clear industry and education learning outcomes, known as performance-based objectives (PBOs), and industry-like labs and projects. Courses are built from credit-based modules with clearly defined learning outcomes and offered in an environment of flexible delivery. Modules can be built into 1 credit hour courses, which allows for the implementation of stackable credentials and modularized learning. Hear more about how education becomes customizable for industry and more easily obtainable for students through this approach. **Gary Saganski**, **Kevin Ridge**, **Jim Anderson**, *Henry Ford College*

**1:30–2:15 concurrent sessions are continued on page 8.**



## 1:30–2:15 CONCURRENT SESSIONS (cont.)

### ***Mahogany: When Industry Speaks...We Listen: Building a 21st Century Manufacturing Lab with Industry Partners at the Table***

The newly designed 18,260 square foot TEAM Center launched Richland College to the forefront of high level, student-focused education in a state-of-the-art facility. With leading edge, industry-quality technology, the Richland College TEAM Center offers students hands-on learning experiences and delivers career-focused training leading to high-demand jobs in engineering, electrical engineering technology, electronics technology, and advanced manufacturing. Richland College is well positioned in North Texas to continue to foster relationships with local industry partners and emerge as a preferred provider of a quality workforce. This collaborative model has allowed education and industry to come together and bridge the gap between a desperately

needed trained workforce and a responsive educational institution. **Rose Galloway**, *Richland College*; **Nick Graff**, *Dallas County Community College District*

### ***Copper: Why Certifications in Education Matter***

Certifications in an education program are increasingly being promoted to help ensure student employability. The added benefit to most programs is the increased exposure to the industry they promote. Without these certifications how are we going to close the skills gap in the United States? This presentation will demonstrate the value of integrating the credentialing process into an education program, how it can be done, and some potential outcomes. **Nicholas Goodnight**, *Ivy Tech Community College Northeast*

## 3:15–4:00 CONCURRENT SESSIONS

### ***Sage: Accelerating Pathways with Credentials***

Through a MnAMP TAACCCT grant South Central College redesigned our manufacturing programs to align with industry recognized credentials. New portable, stackable pathways were developed with avenues for apprenticeships, workforce placement, and Credit for Prior Learning opportunities. We will also demonstrate models of instruction that have been designed to better serve veterans, incumbent workers, and high school students that have created pathways into our manufacturing programs. **Anne Willaert, Marcia Danielson, Kelcey Woods**, *South Central College*

### ***Maize: GADgET & NBT Summer Manufacturing Camps: A Success Story in Preparing Tomorrow's Manufacturers***

GADgET (Girls Adventuring in Design, Engineering and Technology) shows how it is possible to get girls interested in manufacturing. Using the NBT camp model of introducing manufacturing and entrepreneurship, the GADgET program is designed to strengthen each participant's sense of self efficacy through the ownership of an idea, from concept to build, employing practices, methods, and tools used in a variety of STEM careers. **Antigone Sharris, Andrea Blaylock**, *Triton College*; **Cynthia Day**, *FMA*

### ***Mahogany: Imagineering! The Lifeblood of Learning!***

Introduced by Alcoa in the 40's, "Imagineer" is the combination of imagination and engineer! Learning is a behavior requiring commitment on the learner's part and imagination on the part of the facilitator, especially in the world of technology. The success of a learner relates not only to the content of the learning but to the Imagineering applied in designing the learning methodology. This session focuses on the challenges facing the delivery of postsecondary education and the revolution required to extinguish a broken model. Imagineering learning methods are key to successful graduation! **John Calver**, *Thomas Nelson Community College*

### ***Copper: BridgeValley ATC Workforce Initiatives with Rockwell Automation***

Learn about ways that BridgeValley Community and Technical College meets its regional workforce needs, including working with Rockwell Automation to serve the Manufacturing, Chemical and Energy sectors. You will learn about how a Process Training Unit and other equipment can provide real-world workforce solutions. **Jeff Wyco**, *BridgeValley Community and Technical College*; **David Chasse**, *Rockwell Automation*

**4:00–5:00 P.M. FMA Certified Education Center Council Meeting, Maize** (by invitation)

**5:30–7:30 P.M. EVENING JAZZ SOCIAL with the Harper College Jazz Ensemble**  
**Mahogany Room (Hyatt), Hors d'oeuvres/Cash Bar**





## 7:30–8:15 A.M., BREAKFAST AND KEYNOTE, Mahogany Room/Hyatt

### *How Partnerships Are Paying Off*

Mike Mastroianni, President, Rock Valley College

## 8:30–9:00 A.M. Load Buses for Industry Tours

Hyatt Lobby

## 9:00 A.M.–12:30 P.M. INDUSTRY TOURS



### C. Cretors & Co., Wood Dale, IL

Closed-toe shoes are recommended.

For over 125 years, C. Cretors & Company has been a leader in the multi-billion U.S. concession business. They are credited as being the catalyst for the creation of the modern concession industry with the original popcorn machine patent. Today, they are the leading designers and manufacturer of Concession, Foodservice and Food Processing equipment, which are manufactured exclusively in the United States. *(C. Cretors & Co. reserves the right to pre-screen attendance rosters and decline admittance into their plant. Attendees will be notified of the host's decision in advance.)*



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### DMDII (Digital Manufacturing and Design Innovation Institute), Chicago, IL

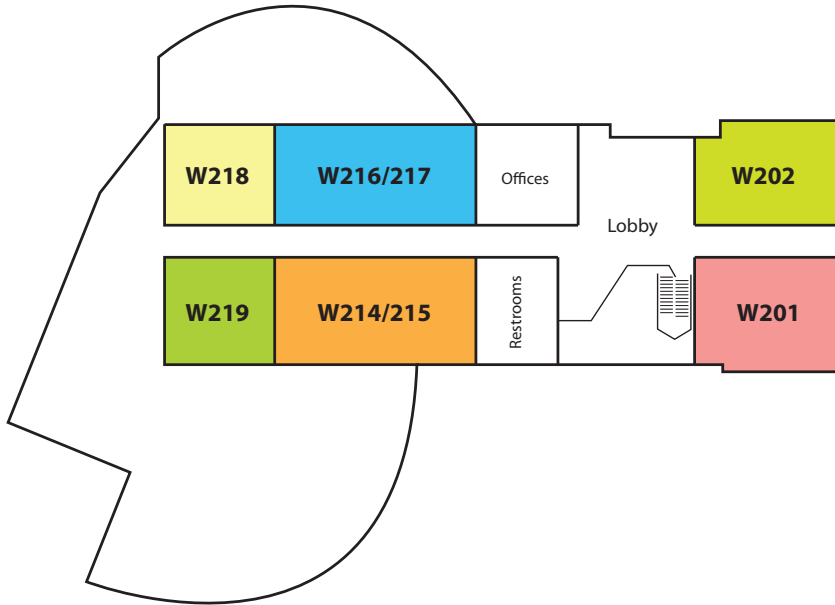
DMDII is a federally funded research and development organization of UI LABS that encourages factories to deploy digital manufacturing and design technologies.

## 12:30–1:00 P.M. Box lunches on the bus

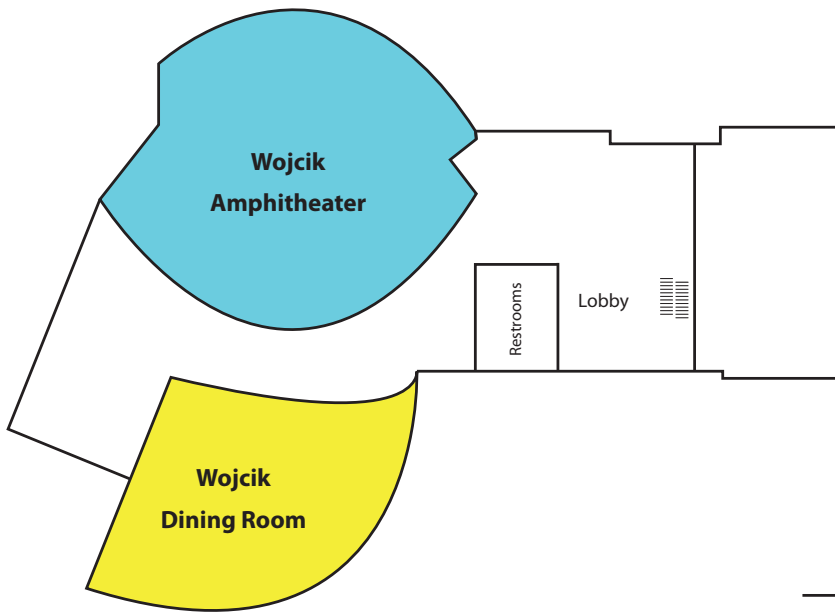
## Special Thanks to the 2016 NCATC Fall Conference Planning Committee

FMA: Jim Warren, Cindy Day, Ann Schneider, Larry Clark  
NCATC: Craig McAtee, Holly Rolf, Hope Cotner, Nick Graff, Tom Crampton  
Harper College: Maria Coons, Nick Smith, Mark Mrozinski

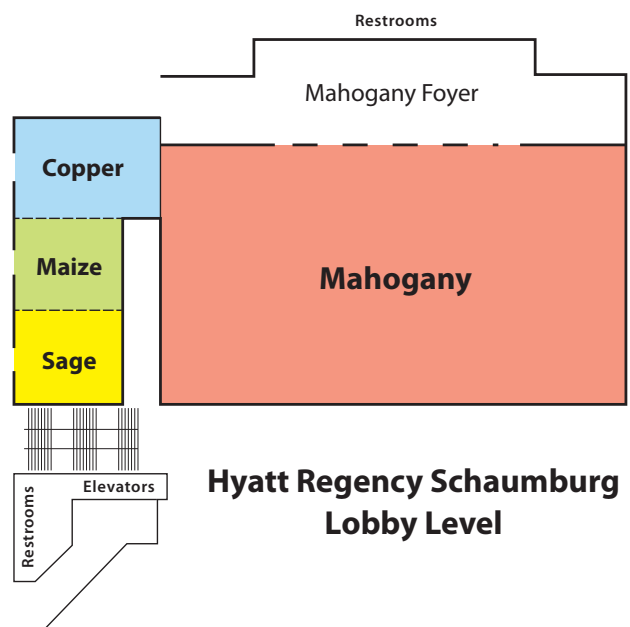
# Meeting Spaces



**Harper College  
Wojcik Center, 2nd Floor**



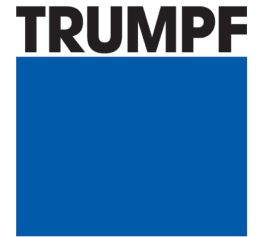
**Harper College  
Wojcik Center, 1st Floor**



**Hyatt Regency Schaumburg  
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About



Established in 1988, the National Coalition of Advanced Technology Centers (NCATC) is a network of higher education resources that advocates and promotes the use of technology applications that enhance economic and workforce development programs and services. With over 160 member institutions ranging from colleges and universities to the corporate community, NCATC provides technical assistance through its Membership Assistance Program, grant evaluation, publications, and access to best practices from the nation's top ATCs. To learn more, visit [www.ncatc.org](http://www.ncatc.org).



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About



The Fabricators & Manufacturers Association, International (FMA) is a professional organization with more than 2,500 members working together to improve the metal processing, forming, and fabricating industry. Founded in 1970, FMA brings metal fabricators and equipment manufacturers together through technology councils, educational programs, networking events, and the FABTECH® trade show. The official publications of FMA include *The FABRICATOR*®, *The Tube & Pipe Journal*®, *STAMPING Journal*®, *Practical Welding Today*®, *The Fabricator*® en Español, *Canadian Metalworking*, and *Canadian Fabricating & Welding*. [www.fmanet.org](http://www.fmanet.org)

