

IDETC-CIE 2023

International Design Engineering Technical Conferences & Computers and Information in Engineering Conference

In-Person Event

Boston Park Plaza, Boston MA | August 20–23, 2023

Greetings CIE COMMUNITY! We are excited to meet you again in person at the 43rd Computers and Information in Engineering Conference (CIE). See below for some highlights of the week, including a Monday morning Keynote, Monday evening reception and Tuesday Awards Luncheon. We look forward to seeing you all in Boston!

CATERINA RIZZI, CIE CONFERENCE CHAIR

ROBERT WENDRICH, CIE PROGRAM CHAIR

PLEASE READ THROUGH TO LEARN ABOUT WHAT IS HAPPENING (INCLUDING FREE DRINKS AND DINNER!)

PLEASE ALSO NOTE THAT THE CIE PANELS ARE NOT IN PARALLEL WITH CIE TECHNICAL SESSIONS AND FOR DETAILS ALSO SEE [LINK!](#)

THE 2023 ASME CIE CONFERENCE HIGHLIGHTS: RECEPTION, AWARDS, KEYNOTES, PANELS, TC AND DIVISION MEETINGS

SUNDAY, AUGUST 20, 2023

ASME 2023 STUDENT HACKATHON

The Student Hackathon concludes on Sunday evening with winners to be announced at Closing Ceremony. Winners will also be announced at CIE Awards Luncheon on Tuesday, August 22.

MONDAY, AUGUST 21, 2023

CIE KEYNOTE TALK

The CIE Keynote Talk will be on Monday morning at 10:50 AM from Dr. Mike Molnar, founding director of the Advanced Manufacturing National Program Office, the interagency team responsible for the Manufacturing USA program. Dr. Mike Molnar will present his speech titled: "ADVANCING U.S. MANUFACTURING-OPPORTUNITIES FOR INNOVATION, COLLABORATION AND COMPETITIVENESS."

CIE INDUSTRIAL PANEL

This year, the industrial panel will take place from 4:10 PM to 5:50 PM and it is titled "KNOWLEDGE TRANSFER (KT) IN EDUCATION, ACADEMIA AND INDUSTRY: FORWARD THINKING TO PRESERVE ENGINEERING LEADERSHIP". The following panelists will provide their expertise: Mike Molnar (NIST), Janis Terpenney (NSF and George Mason University), Giorgio Colombo, (Politecnico Milano), Scarlett Miller's (Penn State University), and Marc Halpern (Gartner, Inc.). Robert Wendrich from Rawshaping Technology RBSO based in the Netherlands, will be the chair and moderator. The panel will address challenges and approaches to KT and a live question and answer session will be featured so that the audience can engage with these leaders.

CIE STUDENT POSTER SESSION & RECEPTION

This year the CIE will hold a reception in conjunction with the CIE Student Poster Session at 6:00 PM. Come see selected CIE posters (All Stipend Awardees) and learn about their cutting-edge CIE research. Dr. Mike Molnar will announce the poster winners.

The reception will be a cash bar with tickets to be provided for the first drink, use the time to reconnect in person with colleagues we have not seen in a few years!

IDETC/CIE OPENING RECEPTION

The conference Opening Reception will take place from 7:00 PM to 9:00 PM.

TUESDAY, AUGUST 22, 2023

VES PANEL

The VES Panel titled "2VESACCESS" – ACCESSIBILITY, INCLUSION AND WELLBEING IN VIRTUAL ENVIRONMENT" will be held on Tuesday morning at 11:00 AM. Panelists include James Yang (Texas Tech University), Daniele Regazzoni (University of Bergamo), Tahira Reid (Pennsylvania State University), Chih-Hsing Chu (National Tsing Hua University), Yunbo Zhang (Rochester Institute of Technology), and Vinayak Krishnamurthy (Texas A&M University) will be chair and co-chairs respectively.

CIE AWARDS LUNCHEON

On Tuesday at 12:10 PM, come for lunch and stay to recognize some of the longstanding and emerging leaders of our community. Several Division-level awards will be handed out including Lifetime Achievement, Leadership, Research Excellence, CIE Best Papers and Posters. Please note that tickets were included with full registration purchases (for either CIE or DED Luncheon).

AMS-SEIKM-CAPPD PANEL

This panel, titled "Digital Twin for Smart Manufacturing", will be held on Tuesday afternoon at 2:20 PM. Panelists include Wei Chen (Northwestern University), Yan Lu (NIST), Satyandra K. Gupta (University of Southern California), Conrad Tucker (Carnegie Mellon University) and John G. Michopoulos (Naval Research Laboratory). The panel will discuss challenges and technical approaches related to: Emerging methods for model building, calibration & validation, adaptive learning & updating for DT, Application, Gaps and Challenges, Future Insights.

CIE DIVISION MEETINGS

The CIE Division Meeting and Technical Committee meetings will be held on Tuesday evening. The four TC meetings will begin at 6:10 PM and beverage and snacks will be provided to the first 20 meeting attendees (first come first serve basis). The CIE General Meeting will immediately follow at 7:10 PM. All are welcome, come have your voice heard as the CIE Division looks towards our strategy and future!

WEDNESDAY, AUGUST 23, 2023

CIE JCISE PANEL

This panel, titled "Challenges and Opportunities in Computing Research to Enable Next-Generation Engineering Applications" will be held on Wednesday morning at 8:00 AM. Panelists include: Janet Allen (University of Oklahoma), William Bernstein (NIST), Jitesh Panchal (Purdue University), and Anurag Purwar (Stony Brook University). Sk Gupta (University of Southern California) and Yan Wang (Georgia Institute of Technology) will be chair and co-chair respectively.

This panel will identify challenges and opportunities in emerging areas, such as artificial intelligence (AI), machine learning (ML), edge computing, meta-computing, and quantum computing and inspire new researchers to join the field and become a part of the CIE community.

VES JCISE PANEL

This panel, titled "JCISE Spotlight Talks on Extended Reality in Design and Manufacturing" will be held on Wednesday morning at 10:00 AM. Organizers are: Hanzhong Xu, (Shanghai Jiao Tong University), Chu Chih-Hsing (National Tsing Hua University), and Ipsita Ananya (Purdue University). Papers accepted to the JCISE special issue on extended reality in design and manufacturing have been invited. The purpose of the special issue is to solicit articles describing fundamental and applied research on XR techniques, solutions, and challenges in the area of design and manufacturing.

CIE KEYNOTE

SPEAKER: DR. MIKE MOLNAR

TITLE: ADVANCING U.S. MANUFACTURING-OPPORTUNITIES FOR INNOVATION, COLLABORATION AND COMPETITIVENESS

TIME: 10:50 AM EST, Monday, August 20, 2023

ABSTRACT

Substantive improvements in the health, robustness and innovative capacity of the U.S. manufacturing sector have an unrivaled ability to boost the nation's global economic competitiveness. The Manufacturing USA® program, in conjunction with the Manufacturing Extension Partnership program, is helping to lead the way. Across a range of sectors – biomanufacturing, microelectronics, digital controls and automation, clean energy manufacturing, and advanced materials – Manufacturing USA institutes are bringing together researchers from industry, universities, and national labs to create and transition innovative technologies into scalable, cost-effective, and high-performing production capabilities while preparing the technology-ready workforce needed to win in the global arena. During this presentation, updates will be shared about significant developments, new program initiatives, including opportunities for innovation, collaboration, and competitiveness.

BIOGRAPHY

Dr. Mike Molnar is the founding director of the Advanced Manufacturing National Program Office, the interagency team responsible for the Manufacturing USA program. Mike also leads the NIST Office of Advanced Manufacturing and serves as co-chair of the National Science and Technology Council, Subcommittee on Advanced Manufacturing – the team responsible for the National Strategic Plan for Advanced Manufacturing.

Prior to joining federal service in 2011 Mike had a successful industry career, including 25 years leading manufacturing and technology development at Cummins, a U.S. based global company that designs, manufactures, and distributes engines and power generation products. Midcareer he served as the first Manufacturing Policy Fellow in the White House Office of Science and Technology Policy. He earned a Bachelor's in Mechanical Engineering and Master's in Manufacturing Systems Engineering from the University of Wisconsin, and an Executive MBA from the University of Notre Dame. He is a licensed Professional Engineer, Certified Manufacturing Engineer, and was elected a Fellow of SME and a Fellow and Honorary Member of ASME.