

2023 ASEE Annual Conference – Manufacturing Division Sessions

Session Title: Manufacturing (MFG) Division Poster Session

Time Slot: June 26th, 9:15 to 10:45 AM

Exhibit Hall ABCD, Baltimore Convention Center

Moderators: Dr. Yalcin Ertekin & Dr. Zhenhua Wu

- Board 123: Data Analytics Short Courses for Reskilling and Upskilling Indiana's Manufacturing Workforce
- Board 124: MAKER - Recycling HDPE in an Academic Makerspace
- Board 125: Taking an Experiential Learning Approach to Industrial IoT Implementation for Smart Manufacturing through Course Work and University-Industry Partnerships
- Board 126: Work in progress: Incorporating Virtual Programming Concepts in an Advanced Robotics Course for Machining Processing and Quality Inspection of CNC Machines and Industrial Robots

Session Title: Refining Manufacturing Education Practices

Time Slot: June 26th, 11:00 to 12:30 PM

Room 311, Baltimore Convention Center

Moderators: Dr. Faisal Aqlan & Dr. Rui Liu

- Assessment of the ABET Student Outcomes in a Service Learning based Subtractive Manufacturing Course
- Implementation of Actionable Gamification Design Framework in Machining Training
- Development of a SimEvents Model for Printed Circuit Board (PCB) Assembly Processes
- Exploring Student Learning Experience of Systems Engineering Course Developed for Manufacturing and Industrial Engineering Graduates

Invited Speaker Session: Defense Manufacturing and DoD Support for Manufacturing Education

Time Slot: June 26th, 1:30 to 3:00 PM

Room 311, Baltimore Convention Center

Moderator: Dr. Zhenhua Wu

- Speaker: Dr. Cindy Waters from Naval Surface Warfare Center

Session Title: Technology Integration in Manufacturing Curriculum

Time Slot: June 27th, 9:15 to 10:45 AM

Room 311, Baltimore Convention Center

Moderators: Dr. Aditya Akundi & Dr. Yue Zhang

- Integrating Engineering Standards into Manufacturing Engineering Curriculum
- Teaching Industrial Control with Open-Source Software
- Implement and Integrate Flipped Metrology Laboratory in Manufacturing Education
- Artificial Intelligence Solutions for System Design

Session Title: Manufacturing Workforce Development

Time Slot: June 27th, 11:00 AM to 12:30 PM

Room 311, Baltimore Convention Center

Moderators: Dr. Siamak Farhad & Dr. Hayder Zghair

- Curriculum Alignment for Workforce Development in Advanced Manufacturing
- Preparing the manufacturing workforce for Industry 4.0 technology implementation
- Implementing i4.0 Tech to Engineering Systems Lab for Smart Manufacturing Learning
- Design and Manufacturing Innovations in Modular Drone Design Enabled by Additive Manufacturing: Customizable Power Distribution Board

2023 ASEE Annual Conference – Manufacturing Division Sessions

Session Title: Virtual and Augmented Reality Applications in Manufacturing Education

Time Slot: June 27th, 1:30 to 3:00 PM

Room 311, Baltimore Convention Center

Moderators: Dr. Richard Zhao & Dr. Sajan Saini

- Decision support model to leverage extended reality technologies to augment manufacturing education
- Exploring Magic Interactions for Collaboration in Virtual Reality Learning Factory
- Implementing Virtual Reality Project Activities for Enhancing Student Learning Experience in Robotics and Automation
- Skilling for and Acculturation to Integrated Photonics Industry Using VR Simulations, Game-Based Learning, and Augmented Reality Games

Session Title: Project-Based and Experiential Learning in Manufacturing

Time Slot: June 27th, 3:15 to 4:45 PM

Room 311, Baltimore Convention Center

Moderators: Dr. Md Fashiar Rahman & Dr. Hannah Budinoff

- Exploring Systems Performance Using Modeling and Simulation – Project-based Study and Teaching
- Development of Al/Steel Resistance Spot Weld for Industrial Applications
- Integrating Entrepreneurially Minded and Project-Based Learning into a Manufacturing Supply Chain Course
- Using online learning modules to improve students' use of technical standards in additive manufacturing courses and projects

Manufacturing Division Panel: Four Pillars of Manufacturing Knowledge Revision

Education Time Slot: June 27th, 3:15 AM to 4:45 PM

Room 342, Baltimore Convention Center

Moderators: Dr. John Irwin & Suzanne Marzano

Manufacturing Division Social

Time Slot: June 27th, 7:00 PM to 9:00 PM

Venue: Rusty Scupper Restaurant, 402 Key Highway, Baltimore, MD 21230

Manufacturing Division Business Meeting

Time Slot: June 28th, 11:00 AM to 13:30 PM

Key 5, Hilton Baltimore Inner Harbor

Session Title: Design Experience in Manufacturing Education

Time Slot: June 28th, 1:30 to 3:00 PM

Room 335, Baltimore Convention Center

Moderators: Dr. Zhenhua Wu & Dr. Sheng-Jen Hsieh

- A New Course in Defense Manufacturing – An Introduction to Shipbuilding
- Design and Evaluation of Modules to Teach PLC Interfacing Concepts
- Development of a Product Pipeline System to Teach Industrial Manufacturing Automation