

NSF Smart Manufacturing Summit 2021

July 29, 2021

TIME(Eastern)	SESSION
9:00-9:05AM	Welcome/Overview and Goal of the Meeting Mike White, Interim Associate Dean of Technical Programs at Marion Technical College
9:05-9:15AM	Opening Remarks Dr. Ryan McCall, President of Marion Technical College
9:15-9:45AM	The Need for Smart Manufacturing Skills at Honda Speaker: Scot McLemore, Workforce Partnerships Manager, American Honda Motor Company
9:45-10:15AM	SACA Certifications - Prepare Students for a Career with Industry 4.0 Skills Speaker: James Wall, Executive Director, Smart Automation Certification Alliance (SACA)
10:15-10:30AM	BREAK
10:30 -10:50AM	NSF Project Updates Speaker: Dr. Elizabeth Azhikannickal, Assistant Professor and Director Engineering Technologies at Marion Technical College
10:50-11:20AM	Smart Manufacturing Skills and Training Needs – an evolved set of requirements Speaker: Marion (Rick) Earles, Senior Director of Industry and Innovation, Team NEO
11:20-11:50PM	Factory Automation Integration with Manufacturing Execution Systems (MES) and Supervisory Control and Data Acquisition (SCADA) Speaker: Darryl Young, Engineering Manager, Whirlpool Marion Operations
11:50-12:30PM	LUNCH BREAK
12:30-1:00PM	Industry 4.0/Smart Manufacturing--Drivers, Impacts and Implementation Keys Speaker: Tony Oran, Vice President, Festo Didactic, Inc.
1:00-1:15PM	IIoT (Summer Camp Part I) Speaker: KS Ku, Professor, Business and Information Technologies at Marion Technical College
1:15-1:30PM	Robotics (Summer Camp Part II) Speaker: Dr. Feng Hua, Associate Professor, Electrical Engineering Technology at Marion Technical College
1:30-1:45PM	Survey/Evaluation Form Blake Urbach, Principal Consultant, Preferred Program Evaluations
1:45-2:00PM	Closing Remarks Bob Haas, Vice President of Academic Affairs and Student Services at Marion Technical College

Our Guest Speakers

Scot McLemore

Workforce Partnerships/Government and Industry Relations

American Honda Motor Company



Scot McLemore, American Honda Motor Company, is a manager within the Workforce Partnerships team as part of the Government and Industry Relations Division. He is responsible for strategy development of Honda's future technical workforce focusing on creating a pipeline of technical talent from middle school through college and into manufacturing and product development roles.

McLemore's career at Honda spans 31 years, including engineering, human resource and corporate affairs functions, focusing on technical development and acquisition. He began his career with Honda in 1990 as a manufacturing engineer in the welding department at the Marysville Auto Plant (Marysville, Ohio). He then served as the manager of corporate technical development for Honda of America Mfg., Inc., leading engineering development as well as an extensive technical training program providing skill enhancement for equipment technicians, engineers and production associates.

McLemore is an appointed member of Governor DeWine's Ohio Executive Workforce Board, Chairman of the Ohio Manufacturing Association's Manufacturing Sector Partnership Leadership Council, Vice-President of the Central Ohio Manufacturing Partnership, member of the Higher Learning Advocates Network of Champions, as well as a member of several advisory committees for regional career/technical centers and workforce development organizations.

McLemore earned his Bachelor of Science in Computer Integrated Manufacturing Technology from Purdue University.

James Wall

Executive Director

Smart Automation Certification Alliance



James Wall is currently the Executive Director of the Smart Automation Certification Alliance (SACA). In that capacity, he is responsible for the development and deployment of the new SACA Skill Standards and Certifications.

Prior to joining SACA, he was with National Institute for Metalworking Skills (NIMS) serving as Executive Director and Deputy Director for 12 years.

Jim also has a background in education having been a faculty member at the Pennsylvania State University, Workforce Education and Development Program where he helped develop new career and technical education instructors. While at Penn State, he also directed a multi-year project to upgrade the metalworking programs across the state.

Jim was the owner of a company that did precision machining, welding, and fabrication of down-hole drilling equipment for the oil and gas industry. Jim started his professional career as a high school career and technical instructor teaching machining.

Marion (Rick) Earles
Senior Director, Industry and Innovation
Team NEO



Rick Earles identifies and facilitates product development and commercialization opportunities for regional innovation clusters. In this role, he engages value chain members and assists them in identifying and collaborating with potential partners, capturing funding, creating prototypes and attracting regional talent.

With over 25 years of experience, Rick specializes in technology innovation, technology-based business development and technology-based economic development. He is experienced in organic business growth through new product development, the implementation of strategic alliances, mergers and acquisitions, and the expansion into new market opportunities.

Before joining NorTech, now Team NEO, in 2011, Rick was Executive Director at CANEUS, an international industry trade association that facilitates the development and commercialization of micro and nano technologies for aerospace applications. Previously, he managed the commercialization of harsh environment MEMS/NEMS technologies as Vice President at Glennan Microsystems, a public-private partnership for the research, development and application needs of NASA and industry. He has also worked for businesses ranging from Fortune 500 companies to small start-ups and has provided development services for a number of Small Business Development Centers in Northeast Ohio.

Experienced in micro and nano technology, electronics, electric power, software and fluid power, Rick has authored a number of technical articles, papers and reports. He holds a patent for an active vibration control product for semiconductor manufacturing equipment.

Rick has a Bachelor of Science in Electrical Engineering from the University of Wisconsin.

Darryl Young
Engineering Manager,
Whirlpool Marion Operations



Technical manager with 24 years of manufacturing experience that started at the floor level. Specializing in large-scale manufacturing through experience in the welding, automotive and appliance industries. Comprehensive knowledge and ability to manage and execute all aspects of paint applications, robotics, complex automated machinery, equipment maintenance, press/stamping/fabrication, product testing, factory manufacturing execution systems including supervisory control and data acquisition and machine controls. Team building mindset with growth, personnel development, winning attitude and continuous improvement as the priorities. Devoted to mentoring others and education for all ages.

Darryl is the Engineering Manager for the Marion Operations of Whirlpool Corporation with 24 years manufacturing experience. He earned his Bachelor of Science in Chemical engineering from the University of Cincinnati and an MBA from Tiffin University. He is a Certified Six Sigma Blackbelt and a Certified Alpine Skiing Instructor. In addition to these accomplishments, he is also a Licensed NHRA Driver, Commercial Driver's License (having previously held a NASCAR license).

Tony Oran
Vice President
Festo Didactic Inc.



For over 25 years Tony Oran has worked at the convergence of manufacturing and education. He is dedicated to finding ways to bring industry leaders together with leaders in career and technical education (CTE) to co-develop real-time solutions to issues around manufacturing technologies and the skills gap.

Tony is the Vice President at Festo Didactic, North America, a leading provider of advanced solutions for technical and industrial education. Tony has been a driving force in developing Festo's Industry 4.0 Certification developed with NC3 (National Coalition of Certification Centers) a comprehensive certification program that prepares students for high-tech careers. Tony's dedication to finding effective training programs that augment traditional learning paths extends to the expansion of Festo's award-winning apprenticeship program in Mason, Ohio, bringing higher education and industry together to prepare students for new careers, like mechatronics.

Before joining Festo, he established his career in the asset management and industrial distribution industries.

Our Project Team

Elizabeth Azhikannickal, Ph.D.
Assistant Professor and Director, Engineering Technologies
NSF Grant Principal Investigator

Elizabeth earned her Bachelor of Science and Master of Science degrees in Mechanical Engineering from Queen's University in Ontario, Canada. She earned her Ph.D. in Mechanical Engineering from McMaster University in Ontario, Canada. She has experience teaching in engineering programs at both the university and community college levels. She has taught courses in statics, strength of materials, materials science and fluid power. She has close to 8 years of experience conducting technical research, in collaboration with industry, in the area of laser transmission welding and lightweight materials development for automotive applications. She has served as the faculty advisor for students carrying out projects in the area of sustainable energy and 3D printing.

Mike White, MA**Interim Associate Dean of Technical Programs****NSF Co-Principal Investigator**

Mike White is Interim Associate Dean of Technical Programs. He has worked in higher education for 10 years in multiple roles including director, instructional designer, faculty, Canvas/Blackboard administrator. He has experience teaching courses in Video and Photography Technologies, Web Design, Digital Image Manipulation, Management and Computer Systems. Mike is a Quality Matters Coordinator and Peer Reviewer who has peer reviewed over numerous courses for QM across the United States. Mike earned his Bachelor of Science degree in Elementary Education at The Ohio State University in Marion. He earned his Master of Arts degree in Educational Technology at The Ohio State University.

Feng Hua, Ph.D.**Associate Professor, Engineering****NSF Co-Principal Investigator**

Feng Hua joined the faculty of the Dept. of Engineering Technologies at MTC in 2009. He teaches electrical engineering courses such as PLCs, Robots and Automated Process Control. He received a Bachelor's degree of electrical engineering from Shanghai JiaoTong University and a Ph.D. of Engineering from Louisiana Tech University. He has experience in industries including high voltage testing, electrical power system, process automation and semi conductive fabrication.

Ks Ku, M.S., ICP, CCAI, CCNA**Faculty, Information Technology Program**

Joel Ks Ku has been teaching computer courses since 2004, when he graduated with a Master's in Applied Computing with a concentration in Software Engineering. He had several working experiences including IT support department from local schools and a printer manufacturing company with several industry certifications. He says he likes computers but he likes people more.

Blake Urbach, M.S.**Principal Consultant,****Preferred Program Evaluations**

Blake Urbach, M.S., is the Principal Consultant of Preferred Program Evaluations. She has 18 years of experience in the evaluation of grant-funded projects. Ms. Urbach collaborates with public and private entities on the design and execution of program evaluations for the purpose of informing educational and social policy. Through meaningful data and dynamic visuals, she makes targeted recommendations that have the power to engage stakeholders, increase understanding, and contribute to positive social change.