

Manufacturing and Robotics Workshop

March 27-28, 2019, GTRI Conference Center, Atlanta, Georgia

Day 1: Wednesday, March 27, 2019

1:00 p.m.- 1:15 p.m.	Welcome	Ben Wang, Ph.D , Executive Director, Georgia Tech Manufacturing Institute
1:15 p.m.- 1:45 p.m.	Keynote Address	Presentation: Automation Transformation: Challenges in Manufacturing Jennifer Burke, Ph.D. , Manager for Advanced Production Systems Boeing Research & Technology
1:45 p.m.- 2:10 p.m.	Manufacturing Sector Challenges: Automotive	Presentation: Honda Automation to Power Dreams Alex Lentz , Department Manager-Line 1 Paint and Plastics Honda
2:10 p.m.- 2:35 p.m.	Manufacturing Sector Challenges: Industrial Automation Technology	Presentation: Smart-Flexible Manufacturing (Focused on Smart Machines) Dave Leonhard , Regional Manager, Architecture & Software Business, SW Region Rockwell Automation
2:35 p.m.- 2:50 p.m.	BREAK	
2:50 p.m.- 3:15 p.m.	Manufacturing Sector Challenges: Food and Agriculture	Presentation: Robotics in Food Processing Wayne Daley, Ph.D. , Principal Research Engineer and Fellow at the Georgia Tech Research Institute (GTRI); Associate Division Chief, Food Processing Technology Division, GTRI
3:15 p.m.- 3:40 p.m.	Manufacturing Sector Challenges: Aerospace	Presentation: Automation Enablers in Aerospace Manufacturing John Semmens , Applications Engineering Manager Lockheed Martin Aeronautics Company
3:40 p.m.- 4:05 p.m.	Robotics Sector Challenges	Presentation: Managing Collaborative Automation with Tooling and Product while Providing Software that is Intuitive and Homogeneous Joe Gemma , Chief Regional Officer-North America KUKA
4:05 p.m.- 4:30 p.m.	Systems Integrator Challenges	Presentation: R&D Challenges and Opportunities in Manufacturing for a Robotics Systems Integrator Mark Ligler , Vice President Factory Automation Systems
4:30 p.m.- 4:40 p.m.	BREAK	
4:40 p.m.- 5:00 p.m.	Discrete Parts Sector Challenges	Presentation: Robotic Applications in Manufacturing Rahul Chaudhari , Manager, Process Design and Development The Timken Company
5:00 p.m.- 6:00 p.m.	Breakout Session	Determining the Needs of the Industry
6:00 p.m.	Adjourn	

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Day 2: Thursday, March 28, 2019

7:30 a.m.- 8:15 a.m.	Continental Breakfast	
8:15 a.m.- 8:25 a.m.	Welcome	
8:25 a.m.- 8:45 a.m.	Knowledge Driven Robotics	Presentation: Agile Robot Tasking Stephen Balakirsky, Ph.D. , Principal Research Scientist and Director of Technical Initiatives for Petit Institute for Bioengineering and Bioscience
8:45 a.m.- 9:05 a.m.	Autonomy	Seth Hutchinson, Ph.D. , Executive Director, Institute for Robotics and Intelligent Machines (IRIM) Professor and KUKA Chair for Robotics in the School of Interactive Computing Georgia Institute of Technology
9:05 a.m.- 9:25 a.m.	Perception and Machine Learning	Presentation: Towards Lifelong, Fine-Grained, and Multi Modal Perception Zsolt Kira, Ph.D. , Assistant Professor, Georgia Institute of Technology; Branch Chief of Machine Learning and Analytics Group, GTRI, and Associate Director of Georgia Tech's Machine Learning Center
9:25 a.m.- 9:45 a.m.	Human-Robot Interaction	Presentation: Trajectory Learning from Human Demonstrations Sonia Chernova, Ph.D. , Assistant Professor School of Interactive Computing, Georgia Institute of Technology
9:45 a.m.- 10:05 a.m.	Manufacturing	Presentation: Accurate Robotic Machining: Challenges & Needs Shreyes Melkote, Ph.D. , Professor, Georgia Institute of Technology, Associate Director of the Georgia Tech Manufacturing Institute (GTMI) Christopher Saldana, Ph.D. , Assistant Professor, The George W. Woodruff School of Mechanical Engineering, Georgia Institute of Technology
10:05 a.m.- 10:25 a.m.	Exoskeletons and Human Augmentation	Presentation: Exoskeleton Technology for Human Augmentation Greg Sawicki , Associate Professor, Director of Human Physiology of Wearable Robotics (PoWeR) Lab Georgia Institute of Technology
10:25 a.m.- 10:45 a.m.	BREAK	
10:45 a.m.- 11:45 a.m.	Breakout Session	Determining the Research Needs
11:45 a.m.- 1:15 p.m.	Lunch	Lunch Presentation: Shane Groves , Lead Equipment Engineer Warner Robins Air Logistics Complex
1:15 p.m.- 1:45 p.m.	Workshop Report	
1:45 p.m.	Adjourn	
SHUTTLE WILL RUN FROM 2:15 P.M.- 6:15 P.M. FROM THE GTRI CONFERENCE CENTER TO THE RESEARCH SHOWCASE LOCATED AT TECHNOLOGY SQUARE RESEARCH BUILDING		

Robotics Research Showcase

TSRB Banquet Hall and Auditorium, Atlanta, Georgia

Thursday, March 28, 2019

3:00 p.m. – 4:30 p.m.	Student Posters	
4:30 p.m. – 5:15 p.m.	Faculty Research Presentations	
4:30 p.m. – 4:45 p.m.	Ani Mazumdar , Assistant Professor, Woodruff School of Mechanical Engineering	
4:45 p.m. – 5:00 p.m.	Matthew Gombolay , Assistant Professor, School of Interactive Computing	
5:00 p.m. – 5:15 p.m.	Sam Coogan , Assistant Professor, School of Electrical and Computer Engineering	
5:15 p.m. – 6:00 p.m.	Panel Discussion on the Future of Robotics	Panelists: Sonia Chernova , Associate Professor, School of Interactive Computing, Georgia Institute of Technology Magnus Egerstedt , Steve W. Chaddick School Chair and Professor, School of Electrical and Computer Engineering Charlie Kemp , Associate Professor, Coulter Department of Biomedical Engineering Gary McMurray , Division Chief and Principal Research Engineer, Georgia Tech Research Institute Panagiotis Tsiotras , Dean's Professor and David & Andrew Lewis Chair, School of Aerospace Engineering
6:00 p.m.	Adjourn	

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