

Portfolio Discovery Workshop Agenda

CSL Studio Conference Room 1232; October 15, 2019

- 8:30 Coffee and tea
- 8:45 Geir Dullerud - Center for Autonomy Welcome and Overview**
- Technical Session 1 – Chair: Girish Chowdhary**
- 9:15 **Minh Do** - Radar+Vision Perception; Mobile Vision
- 9:30 **David Forsyth** - Visual Sensing
- 9:45 **Katie Driggs-Campbell** - Human Behavior Prediction and Decision-Making for Autonomous Vehicles
- 10:00 **Saurabh Gupta** - Vision + Robotics
- 10:15 DISCUSSION
- 10:30 BREAK**
- Technical Session 2 – Chair: Katie Driggs-Campbell**
- 10:45 **Bill King** - Towards Autonomous Systems for Additive Manufacturing
- 11:00 **Placid Ferreira** - Cyberphysical Manufacturing
- 11:15 **Joseph Bentsman** - Autonomy for Physically Multi-Phase Systems with Moving Boundaries: Application to Continuous Steel Casting & Electrosurgery.
- 11:30 **Elizabeth Hsiao-Wecksler** - On the Development of Smart Actuated Devices for Disability, Workforce, and Healthcare Training Applications.
- 11:45 **Girish Chowdhary** - Challenges in algorithms and systems for adaptive autonomy
- 12:00 LUNCH**
- Technical Session 3 – Chair: Matt West**
- 13:00 **Farzad Kamalabadi** - High-Precision Formation of Several Small Satellites - Challenging Alignment Stability Requirement Demanding Sophisticated Automation Strategies.
- 13:15 **Girish Krishnan** - Towards Autonomous Soft Robots
- 13:30 **Sibin Mohan** - Anomaly Detection in UAV Swarms
- 13:45 **Or Dantsker** - A Solar-Powered Computationally-intensive Unmanned Aircraft
- 14:00 **Bob Norris** - Systems Engineering Across Autonomous and Unmanned Aerial, Underwater, On-road and Off-Road Systems
- 14:15 **Karrie Karahalios** - How we Determine What Values we Want to Instill in Autonomous Systems
- 14:30 DISCUSSION
- 14:45 BREAK**
- Technical Session 4 – Chair: Geir Dullerud**
- 15:00 **Ravi Iyer** - Domain-guided AI-driven Safety Assessment Methods for Autonomous Vehicles under Faults
- 15:15 **Melkior Ornik** - Harnessing Prior and Side Information for Better Estimation, Learning, and Planning for Autonomous Systems.
- 15:30 **Matt West** - Reinforcement Learning for High-bandwidth Control of Legged Locomotion
- 15:45 **Shihao Wang (Kris Hauser)** - Intelligent Motion Lab Research Overview
- 16:00 **Aditya Gahlawat (Naira Hovakimyan)** - Safe Mobility in Urban Environments
- 16:15 **Ritwika Ghosh (Sayan Mitra)** - Verification, Synthesis and Programming Systems for Robotics and Autonomy
- 16:30 **Diane Uwacu & James Motes (Nancy Amato)** - Planning Motions and Tasks for Manipulators, Multi-Robot Systems and Biomolecules
- 16:45 **Tim Bretl** – The Role of the Built Environments in Autonomous Systems
- 17:00 END & Brief Closing Remarks**