

Multi-Vehicle and Assured Autonomous Control for Aerospace Applications

IEEE TCAC Workshop, 2021 CCTA,
August 8, 2021, 8:30am-5:30pm (Pacific Time)

Pacific Time

AGENDA

- 8:30 – 9:00am **Start-Up, Introductions & Preliminaries – Dr. Richard A. Hull**
- 9:00 – 9:45am **Towards Trustworthy Autonomy: How AI can help address fundamental learning and adaptation challenges. - Prof. Gokhan Inalhan**, Cranfield University, UK
(15 Minutes for Q&A, Discussion ... or Break)
- 10:00 – 10:45am **An Optimal Kalman-Consensus Filter for Distributed Implementation over Dynamic Communication Network” – Matthew D. Howard**, Ph.D. Candidate, and **Prof. Zhihua Qu**, Pegasus Professor and Chair, Department of ECE, University of Central Florida, Orlando, Florida
(15 Minutes for Q&A, Discussion ... or Break)
- 11:00 – 11:45am **Aerial Co-robots of the Future: Safety, Intelligence, Certification – Prof. Naira Hovakimyan**, W. Grafton and Lillian B. Wilkins Professor of Mechanical Science and Engineering, University of Illinois at Urbana-Champaign
(15 Minutes for Q&A, Discussion ... or Break)
- 12:00 – 1:00pm – **1 Hour Break for Lunch**
- 1:00 – 1:45pm **Optimal Planning Strategies for Multiple UAV Missions – Prof. Venanzio Cichella**, Assistant Professor, Department of Mechanical Engineering, University of Iowa, Iowa City, Iowa and **Prof. Naira Hovakimyan**
(15 Minutes for Q&A, Discussion ... or Break)
- 2:00 – 2:45pm **Autonomy in Aerospace at the Intersection of Machine Learning, Control and Physics – Dr. Evangelos Theodorou**, Associate Professor, Autonomous Control and Decision Systems Laboratory, School of Aerospace Engineering, Georgia Institute of Technology
(15 Minutes for Q&A, Discussion ... or Break)
- 3:00 – 3:45pm **Defense Against Adversarial Swarms with Parameter Uncertainty – Prof. Isaac Kaminer**, Department of Mechanical and Aerospace Engineering, Naval Postgraduate School, Monterey CA, and **Prof. Venanzio Cichella**
(15 Minutes for Q&A, Discussion ... or Break)
- 4:00 – 4:45pm **The intersection between Machine Learning & GNC” – Dr. Heather Hussain, Dr. Joseph Gaudio, and Dr. James Paduano**, The Boeing Company, Tukwila, Washington
(15 Minutes for Q&A, Discussion ... or Break)
- 5:00 - 5:15pm **Final Questions, Comments, Wrap-Up - All**