

Aerospace Controls: Current Topics in Theory and Practice

IEEE TCAC Workshop, 2019 ACC, July 9, 2019

AGENDA - revised

- 8:00 – 8:45am **Coffee, Tea, and Pastries** (available 8:00-9:00)
- 8:45 – 9:00am **Introductions & Preliminaries – Rich Hull**
- 9:00 – 9:45am **”Robust Adaptive Control w/ applications in flight control” – Heather Hussain,**
Guidance, Navigation, Control and Autonomy, The Boeing Company, Tukwila, WA
- 9:45 – 10:30am **“L₁ Adaptive Control and Its Transition to Practice” – Naira Hovakimyan,**
W. Grafton and Lillian B. Wilkins Professor of Mechanical Science and Engineering,
University of Illinois at Urbana-Champaign
- 10:30 – 11:00am - **Coffee Break** (available 10:00-11:00am)
- 11:00 – 11:45am **“Adaptive Flight Control of Missiles: Needs and Challenges,” James Fisher and
D. Brett Ridgely,** Fellow, Raytheon Missile Systems, Tucson, Arizona
- 11:45 – 12:30pm **“Design of Secure, Spatially-Distributed, Data-Driven Control/Optimization
Algorithms” - Zhihua Qu,** Pegasus Professor and Chair, Department of ECE,
University of Central Florida, Orlando, Florida
- 12:30 – 1:30pm – **Lunch**
- 1:30 – 2:15pm **“Drift Counteraction Optimal Control for Aerospace Applications” - Ilya Kolmanovsky,**
Department of Aerospace Engineering, The University of Michigan
- 2:15 – 3:00pm **“Multi-agent cooperative control and estimation for flying cars and spacecraft swarms”
- Soon-Jo Chung,** Sc.D., Bren Professor of Aerospace,
Jet Propulsion Laboratory Research Scientist , Caltech, Pasadena, CA
- 3:00 – 3:30pm – **Coffee Break**
- 3:30 – 4:15pm **“Robust adaptive control of multi-rotor UAVs” - Andrea L’Afflito,**
Assistant Professor at the Grado Department of Industrial and Systems Engineering;
Virginia Tech
- 4:15 – 5:00pm **“Optimal Planning Strategies for Multiple UAV Missions” - Venanzio Cichella,**
Assistant Professor, Department of Mechanical Engineering, University of Iowa, Iowa City,
IA and **Naira Hovakimyan,** W. Grafton and Lillian B. Wilkins Professor of Mechanical
Science and Engineering, University of Illinois at Urbana-Champaign
- 5:00 – 5:45pm **“Novel Guidance Solutions and Nonlinear Control of Gun Launched Guided
Projectiles” - Richard A. Hull,** Technical Fellow, Collins Aerospace, Orlando, Florida.