

Unmanned and Autonomous Systems

- Jnaneshwar Das (Upenn)
 - Future of Aerial Autonomy
- Claire Tomlin (Berkeley)
 - Safe Learning in Unmanned and Autonomous Systems
- Rohit Dureja (Iowa State)
 - Scalable design space analysis for future traffic management
- Ricardo Sanfelice (UC Santa Cruz)
 - Overcoming Algorithm Design Challenges in Networked Autonomous Systems via Hybrid Predictive Control
- Craig Marcinkowski (Gryphon Sensors)
 - Project U-SAFE
- Yan Wan (UT Arlington)
 - Safe Integration of UAVs into the National Airspace System

- How do you define the area?
- Why is the area disruptive?
- What can't we do now that could happen?

Unmanned Systems

- Networked Distributed Systems with humans in the loop
- Large-scale
- Uncertain
- Resource-constrained

- Integration of the infrastructure
- Interaction with the physical infrastructure
 - Physical actions (other than monitoring and data collection)
- Uncertainty
 - Models of unknown environments
 - Safe learning
 - Model checking
- Resiliency/safety challenges
 - Communication failures/cyber-attacks
 - Weather/environment
- Resource constraints
 - Control techniques - tradeoffs between accuracy and power
 - Recharging