

# 2017 Dynamics and Control Program Annual Review

Dr. Frederick Leve | September 11-14, 2017 | Arlington, VA

Basic Research Innovation and Collaboration Center (BRICC)  
4075 Wilson Blvd., Suite 350 | Liberty Room  
Arlington, VA 22203

## Agenda Day 1 | September 11, 2017

Time	Title	Speaker
07:30-08:00	Registration	
08:00-08:30	Introductions	Dr. Frederick Leve AFOSR
08:30-09:00	Challenges and Strategies Related to Adaptive Control with Intermittent Feedback: Advancing Image-Based Control and Estimation for Autonomous Systems	Dr. Warren Dixon University of Florida
09:00-09:30	<a href="#">Discrete-Time Flocking for Sampled-Data Systems</a>	Dr. Jesse Hoagg University of Kentucky
09:30-10:00	<a href="#">Drift Counteraction Optimal Control: Theory, Computations and Applications</a>	Dr. Ilya Kolmanovsky University of Kentucky
10:00-10:30	<a href="#">Affine Multiplexing Networks: System Analysis, Learning and Computation</a>	Dr. Ufuk Topcu University of Texas Austin
10:30-11:00	<b>BREAK</b>	
11:00-11:30	<a href="#">Convexification of Motion Planning and Control Problems</a>	Dr. Behcet Acikmese University of Washington
11:30-12:00	<a href="#">Harness Smoothness to Accelerate Distributed Optimization Algorithms</a>	Dr. Na Li Harvard University
12:00-12:30	<a href="#">Data Driven Systems and Control Framework for Multiway Dynamical Systems</a>	Dr. Indika Rajapaske University of Michigan
12:30-14:00	<b>LUNCH</b>	
14:00-14:30	Title Unavailable	Dr. Mark Balas Embry Riddle University
14:30-15:30	<a href="#">Self-aware Vehicles for Urban Air Mobility: Challenges and Opportunities</a>	Dr. Irene Gregory National Aeronautics and Space Administration
15:30-16:00	<a href="#">(Adventures of) Systems Theory in Machine Learning: Modeling and Sensing of Spatiotemporal Processes</a>	Dr. Girish Chowdhary University of Illinois Urbana Champaign
16:00-16:30	<a href="#">Time-Varying Feedback for Robust Regulation in Prescribed Finite Time</a>	Dr. Miroslav Krstic University of California San Diego

16:30	MEETING ADJOURN FOR THE DAY	
Agenda Day 2   September 12, 2017		
Time	Title	Speaker
07:30-08:00	Registration	
08:00-08:30	Introductions	Dr. Frederick Leve AFOSR
08:30-09:00	<a href="#">Control &amp; Estimation in the Presence of Adversarial Action and Uncertainty</a>	Dr. Meir Pachter Air Force Institute of Technology
09:00-09:30	<a href="#">Minimum Energy Estimation and Moving Horizon Estimation</a>	Dr. Arthur Krener University of California Davis
09:30-10:00	<a href="#">A Distributed Algorithm for Finding a Common Fixed Point of a Family of Paracontractions and Some of Its Applications</a>	Dr. Steve Morse Yale University
10:00-10:30	<a href="#">Computation-based Probabilistic Validation of Complex Cyber-controlled Systems</a>	Dr. Geir Dullerud University of Illinois Urbana Champaign
10:30-11:00	BREAK	
11:00-11:30	Systemic Risk in Networks: Fundamental Limits and Tradeoffs	Dr. Nader Motee Lehigh University
11:30-12:00	<a href="#">Hybrid Multi-agent Distributed Optimization</a>	Dr. Andy Teel University of California Santa Barbara
12:00-12:30	<a href="#">Synchronization in Networks of Hybrid Systems</a>	Dr. Ricardo Sanfelice University of California Santa Cruz
12:30-14:00	LUNCH	
14:00-14:30	<a href="#">Opportunistic State-Triggered Control of Saddle-Point Dynamics for Network Optimization</a>	Dr. Jorge Cortes University of California San Diego
14:30-15:30	<a href="#">Theory-based Engineering of Biomolecular Circuits in Living Cells</a>	Dr. Domitilla Del Vecchio Massachusetts Institute of Technology
15:30-16:00	<a href="#">Controlling Collective Dynamics of Underactuated Ensembles</a>	Dr. Jr-Shin Li Washington University
16:00-16:30	<a href="#">Compositional Analyses of Dynamical Systems</a>	Dr. David Spivak Massachusetts Institute of Technology
16:30-17:00	<a href="#">Quantum Risk-Sensitive Criteria</a> <a href="#">On Risk-Sensitive Criteria for Linear Quantum Stochastic Systems</a>	Drs. Matthew James and Ian Peterson Australians National University
17:00	MEETING ADJOURN FOR THE DAY	

Agenda Day 3   September 13, 2017		
Time	Title	Speaker
08:00-08:30	<b>Registration</b>	
08:30-09:00	<a href="#">Rapid and Accurate Uncertainty Propagation for Nonlinear Dynamic Systems by Exploiting Model Redundancy</a>	Dr. Joseph Scott Clemson University
09:00-09:30	<a href="#">A New Approach to Network Optimization</a>	Dr. Alex Olshevsky Boston University
09:30-10:00	<a href="#">Dissipativity Theory for Nonlinear Stochastic Dynamical Systems</a>	Dr. Wassim Haddad Georgia Institute of Technology
10:00-10:30	<a href="#">A Primal-dual Method for Nonsmooth Composite Optimization</a>	Dr. Mihailo Jovanovic University of Southern California
10:30-11:00	<b>BREAK</b>	
11:00-11:30	<a href="#">Null Controllability of Diffusion and Super-diffusion Non-local Equations: What is so far Known and What is Unknown?</a>	Dr. Mahamadi Warma University of Puerto Rico
11:30-12:00	<a href="#">Synthesis of Reduced-Order Modeling, Global Sensitivity Analysis, and Uncertainty Quantification for Robust Control Design of Nonlinear Smart Composite Systems</a>	Dr. Ralph Smith North Carolina State University
12:00-12:30	<a href="#">Optimal Actuator/Sensor Location</a>	Dr. Kirsten Morris University of Waterloo
12:30-14:00	<b>LUNCH</b>	
14:00-14:30	<a href="#">Robust-to-dynamics Optimization</a>	Dr. Amir Ali Ahmadi Princeton University
14:30-15:00	<a href="#">Idempotent Methods for Regulator Problems</a>	Dr. Peter Dower University of Melbourne
15:00-15:30	<a href="#">Uncertainty Quantification for Non-parametric Estimation of Probability Measures and Delay Differential Equations Driven by Colored Noise</a>	Dr. Tom Banks North Carolina State University
15:30-16:00	<a href="#">Some Explicitly Solvable Stochastic Differential Games</a>	Dr. Tyrone and Bozena Duncan University of Kansas
16:00-16:30	<a href="#">Stationary Action and Embedded and Interacting Network Systems</a>	Dr. William (And George Yin) McEneaney University of California San Diego
16:30	<b>MEETING ADJOURN FOR THE DAY</b>	

Agenda Day 4   September 14, 2017		
Time	Title	Speaker
08:00-08:30	Registration	
08:30-09:00	<a href="#">Multi-UAV Control &amp; Decision Making</a>	Dr. David Casbeer AFRL/RQ
09:00-09:30	<a href="#">Admissible Shields” for Runtime Enforcement of Reactive Systems</a>	Dr. Laura Humphrey AFRL/RQ
09:30-10:00	<a href="#">Centrality-based Formation and Control</a>	Dr. Eduardo Pasilao AFRL/RW
10:00-10:30	<a href="#">Cooperation and Autonomy in Communication-Limited Environments</a>	Dr. Naira Hovakimyan University of Illinois Urbana Champaign
10:30-11:00	BREAK	
11:00-11:30	<a href="#">Stochastic Surveillance via Markov Chain Modeling and Optimization</a>	Dr. Francesco Bullo University of California Santa Barbara
11:30-12:00	<a href="#">Surviving the Data Deluge: A Combined Dynamical Systems / Machine Learning Approach</a>	Dr. Mario Sznaier Northeastern University
12:00-12:30	<a href="#">Remote Estimation and Tracking Over Shared Networks</a>	Dr. Nuno Martins University of Maryland
12:30-15:00	LUNCH	
15:00-15:30	Title Unavailable	Dr. Nicola Elia Iowa State University
15:30-16:00	<a href="#">State-dependent Networks: Signed Interactions and Time-scales</a>	Dr. Mehran Mesbahi University of Washington
16:00	MEETING ADJOURN	