



Holiday Inn - Ballston

Arlington, VA

AGENDA Day 1 – Tuesday, July 17, 2012

Time	Title of Project	Speaker
7:00-8:15	Registration	
8:15-8:30	Opening Remarks	Douglas Smith, Air Force Office Of Scientific Research
8:30-9:15	TBD	Clancy Rowley, Princeton University
9:15-9:45	Exploiting the Nonlinear Dynamics of Near-Wall Turbulence for Skin-Friction Reduction	Mike Graham, University of Wisconsin
9:45-10:15	Control of Boundary Layer Separation for Lifting Surfaces: Investigations using Numerical Simulations, Theory, Wind/Water Tunnel and Free-Flight Experiments	Hermann Fasel, University of Arizona
10:15-10:45	BREAK	
10:45-11:15	On Controlling the Flow in a Mixing Layer or Wake Created Downstream of a Lambda Notch Simulating the Flow	Israel Wygnanski, University of Arizona
11:15-11:45	Joint Computational/Experimental Study of Physics-Based Control of Jets in Crossflow	Krishnan Mahesh, University of Minnesota
11:45-12:15	Flow Control at Low Reynolds Number Through Manipulation of the Separation Streamline	Geoff Spedding, University of Southern California
12:15-1:30	LUNCH	
1:30-2:00	Transitory Flow Control of Unsteady Separation	Ari Glezer, Georgia Tech
2:00-2:30	Multidimensional Forcing Strategies for Wake Control	Jim Gregory, Ohio State University
2:30-3:00	Transition Control with Dielectric Barrier Discharge Plasmas	Sven Grundmann, TU Darmstadt
3:00-3:30	BREAK	
3:30-4:00	On the Flow Physics of Effectively Controlled Open Cavity Flows	Larry Ukeiley, University of Florida
4:00-4:30	Loss Mechanisms in Three Dimensional Boundary Layer Separation	Scott Morris, University of Notre Dame
4:30-5:00	BUSINESS MEETING	
5:00	ADJOURN FOR THE DAY	



Flow Interactions & Control Program Review

Dr. Douglas Smith | July 17-19, 2012 | Arlington, VA

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AGENDA Day 2 – Wednesday, July 18, 2012

Time	Title of Project	Speaker
7:30-8:30	Registration	
8:30-9:15	TBD	Norman Schaeffler, NASA-LaRC
9:15-9:45	An Integrated Study of Separation Control – Flow Physics, Nonlinear Dynamics and Effective Control Strategies	Lou Cattafesta, University of Florida
9:45-10:15	Understanding the Flow Physics of Energy Extraction from Gusting Flows to Enhance Micro Air Vehicle Performance	David Williams, IIT
10:15-10:45	BREAK	
10:45-11:15	Flow Control for Flight Control	Jurgen Seidel, USAF
11:15-11:45	Near Wall Shear Stress Modification using an Active Piezoelectric Nanowire Surface	Henry Sodano, University of Florida
11:45-1:00	LUNCH	
1:00-1:30	Development and Application of Energetic Actuators for Shear and Vortex Dominated Flow Control	Farrukh Alvi and Bo Cybyk, Florida State University
1:30-2:00	Development of a Compact and Easy-to-use 3-D Camera for High-Speed Turbulent Flow Fields	Brian Thurow, University of Auburn
2:00-2:30	MAV Unsteady Aerodynamics	Michael Ol, AFRL/RB
2:30-3:00	BREAK	
3:00-3:30	Theoretical, Computational and Experimental Studies of the Aerodynamics of Perching Flight	Ashok Gopalarathnam, North Carolina State University
3:30-4:00	Flapping-Wing Propulsion Characterized using Optimal Vortex Formation (YIP10)	Matt Ringuette, SUNY-Buffalo
4:00-4:30	Fundamental Bounds on Vortex Shedding in Forward Flapping Flight (YIP11)	James Buchholz, University of Iowa
4:30-5:00	High-Resolution Computational Studies and Low-Order Modeling of Agile Micro Air Vehicle Aerodynamics	Jeff Eldredge, UCLA
5:00	ADJOURN FOR THE DAY	



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AGENDA Day 3 – Thursday, July 19, 2012

Time	Title of Project	Speaker
7:00-8:15	Registration	
8:15-8:45	Multidisciplinary Computational Aerodynamics	Miguel Visbal, AFRL/RB
8:45-9:15	Flow Structure and Loading on Revolving-Pitching Wings	Don Rockwell, Lehigh University
9:15-9:45	Cyber-Physical Fluid Dynamics - Propulsion, Hovering and Flight	Charles Williamson, Cornell University
9:45 -10:15	BREAK	
10:15-10:45	High Fidelity Simulation of Highly Flexible Membrane Wings for Small/Mini/Micro Air Vehicles	Ray Gordnier, AFRL/RB
10:45-11:15	Control of Low Reynolds Number Flows with Fluid-Structure Interactions	Ismet Gursul, Bath
11:15-11:45	Unsteady Aerodynamics of Flapping Wings with/without a Flexible Trailing Edge using High Resolution MTV Measurements	Manooch Koochesfahani, Michigan State University
11:45-1:00	LUNCH	
1:00-1:30	Characterization of the Time-Dependent Fluid-Structure Interaction and Passive Flow Control of Low Reynolds Number Membrane Wings	Paul Hubner, University of Alabama
1:30-2:00	Experimental and Computational Analysis of Intermittent Flapping Flight	Scott Thomson, BYU
2:00-2:30	Flow Modulation and Force Control of Flapping Wings	Xinyan Deng, Purdue University
2:30-3:00	Characterization and Low-Dimensional Modeling of Urban Fluid Flow	Dietmar Rempfer, IIT
3:00-3:30	BREAK	
3:30-4:00	An Integrated Study of Flight Stabilization with Flapping Wings in Canonical Urban Flows	Rajat Mittal, Johns Hopkins University
4:00-4:30	Design of Mavs for Turbulent Environments	Rich Snyder, AFRL/RB Mike Sytsma, AFRL/RW
4:30-5:00	Multidisciplinary Investigations of Unsteady Aerodynamics and Flight Dynamics In Rapidly Maneuvering Micro Air Vehicles	Sergey Shkarayev, University of Arizona
MEETING ADJOURNED		