

# 2021 Unsteady Aerodynamics and Turbulent Flow Program Review Pt. 1

Dr. Gregg Abate | July 26-27, 2021 | Virtually

## Agenda Day 1 | Monday, July 26, 2021

Time	Topic	Speaker
10:45-11:00	Zoom Room opens, test communications, breakouts	
11:00-11:10	Intro & Welcome	Gregg Abate, AFOSR
11:10-11:35	Learning to Fly: Using Distributed Pressure Sensing and Network Strategies for Control in Gusty Environments	David Rival, Queen's University, Canada Melissa Green, Syracuse University
11:35-11:50	Absolute Instability of Interacting Planar Mixing Layers and Wakes	Leonardo Alves, Universidade Federal Fluminense (UFF), Brazil (SOARD)
11:50-12:15	Multi-stream near-wall Turbulence Dynamics	Mark Glauser, Syracuse University Datta Gaitonde, Ohio State University
12:15-12:40	Breakout Discussions	
12:40-13:05	(YIP) Reducing Transient Energy growth in Shear Flows using Sensor-based output Feedback Control	Maziar Hemati, University Of Minnesota
13:05-13:45	Flow Physics and Control of 3-D Separation on 3-D Swept Wings (Wrap-up)  Flow Physics and Control of 3-D Separation on Finite Span, Tapered and Swept Wings (New Start)	Miki Amitay, Rensselaer Polytechnic Institute Vassilios Theofilis, University of Liverpool, UK Sam Taira, University of California Los Angeles
13:45-14:10	Breakout Discussions	
14:10-14:35	High-fidelity Simulation of Complex Multi-disciplinary Interactions in Air Vehicle	Miguel Visbal/Dan Garmann/Caleb Barnes, AFRL, Aerospace Systems Directorate (RQ)
14:35-15:00	Numerical Investigation of Two- and Three-dimensional Wake Effects in High-lift Low-pressure Turbine Flows	Andreas Gross, New Mexico State University
15:00-15:25	The Effect of Unsteadiness on Three Dimensional Endwall Flows in a Turbine Passage	Chris Marks, AFRL, Aerospace Systems Directorate (RQ)
15:25-15:50	Breakout Discussions	
15:50-16:00	Wrap-up & Adjourn	

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## Agenda Day 2 | Tuesday, July 27, 2021

Time	Topic	Speaker
10:45-11:00	Zoom Room opens, test communications, breakouts	
11:00-11:10	Intro & Welcome	Gregg Abate, AFOSR
11:10-11:35	(YIP) Resolvent-based Estimation for Control of Turbulent Aerodynamic Flows	Aaron Towne, University of Michigan
11:35-12:00	Fundamental Interaction Mechanisms of Roughness-induced Flows with Surface Textures	David Goldstein, University of Texas at Austin Ed White, Texas A&M University Saikishan (Sai) Suryanarayanan, University of Texas at Austin
12:00-12:25	Onset and Prediction of Orbital Motions of Streamwise Vortices	Justin Jaworski, Lehigh University
12:25-12:50	Breakout Discussions	
12:50-13:15	Embedded Flow Control for High work / Low Reynolds Turbines - BFCNTUR	Guillermo Paniagua, Purdue University
13:15-13:40	Rapid (on-demand) Control of Shock-dominated Flows by Filamentary Plasma	Sergey Leonov, University Of Notre Dame
13:40-13:55	(YIP) Towards Real-Time, 3D Coherent Structure Estimation for Flow Over Finite Wings (New Start)	Frank Lagor, SUNY Buffalo
13:55-14:20	Breakout Discussions	
14:20-14:30	Wrap-up & Adjourn	