



Wright Brothers Institute:
 Tec^Edge Innovation & Collaboration Center
 5000 Springfield St #100
 Dayton, OH 45431

Agenda Day 1 – July 18, 2016

Time	Title	Speaker
12:00-1:00	Registration	
1:00-1:30	Welcome/Opening Remarks	Fillerup, James
1:30-2:00	A Cellworks Optimization Method for Air Vehicle Design	Kobayashi, Marcelo University of Hawaii
2:00-2:30	The Analysis of Small Lighter than Air Vehicles	Palazotto, Anthony AFIT
2:30-3:00	Multi-Resolution Non Local Metastructures for the Passive Control of Broadband Non-Stationary Dynamics in Thin Walled Structures	Semperlotti, Fabio Purdue University
3:00-3:30	BREAK	
3:30-4:00	Multi-field Compliant Mechanisms of Adaptive Foldable Structures	Muliana, Anastasia Texas A&M University
4:00-4:30	Design Synthesis for Direct Digital Fabrication of Hypersonic Systems	Liu, David AFIT
4:30-5:00	Scaling of Wideband Deployable Antennas for CubeSats	Pellegrino, Sergio California Institute of Technology
MEETING ADJOURNED FOR THE DAY		

Agenda Day 2 – July 19, 2016

Time	Title	Speaker
8:00-8:30	Registration	
8:30-9:00	A Modular Meta-Structure Approach -- Creating A New Paradigm of High Performance Structural Systems Distributed Shape and Property Measurements of Adaptive Modular Structures	Wang, Kon-Well, University of Michigan
9:00-9:30	Development of Component Mechanisms for Origami Inspired Designs	Cho, Kyu-Jin Seoul National University, Korea
9:30-10:00	Composite Structure with Origami Core	You, Zhong University of Oxford, UK
10:00-10:30	BREAK	
10:30-11:00	Adaptive Structural Vibrations for Multifaceted Motivity	Tarazaga, Pablo Virginia Polytech Institute
11:00-11:30	Enhancing Durability and Mobility Through Optimized Plasticity	Vermaak, Natasha Lehigh University
11:30-12:00	Spatially Distributed Compliant Passive Elements for Increased Agility of Flapping Wing Unmanned Air Vehicles	Hubbard, James/Mary Frecker Maryland University
12:00- 1:00	LUNCH	
1:00-1:30	Variable Stiffness Wing Structures With Compliance For Aeroelastic Morphing	Paolo Ermanni ETH, Zurich
1:30-2:00	Design and Development of Anisotropic Adaptive Materials	Reich, Greg AFRL/Mat'ls and Manufacturing
2:00-2:30	Tailoring Piezoimpedance Surface and Configurations of Carbon Nanotube Yarn Sensors for Integrated Damage Detection in Composite Materials	Belay, Kalayu Florida A&M University
2:30-3:00	Piezoelectric Sensor/Actuator for Aeronautical Structures Based PVdF-CN	Avila, Antonio Fed. Univ. of Belo Horizonte, BR
3:00-3:30	BREAK	
3:30-4:00	Novel Photomechanical Fiber Structures	Oates, William Florida State University
4:00-4:30	A Multi-Physics Approach to Validation of Failure Models in Extreme Thermoacoustic Environments	Lambros, John Univ. of Illinois Champaign
4:30-5:00	Validation of Multi-physics Failure Models in Extreme Environments	Patterson, Eann A. University of Liverpool
	MEETING ADJOURNED FOR THE DAY	

Agenda Day 3 – July 20, 2016

Time	Title	Speaker
8:00-8:30	Registration	
8:30-9:00	Quantum Speedup for Turbulent Combustion Simulations	Givi, Peyman University of Pittsburgh
9:00-9:30	Applications of Quantum Computing in Aerospace Science and Engineering	Meyer, David / Peter Love UC San Diego / Tufts Physics
9:30-10:00	Response of Aerospace Materials to Shock Loading and Extreme Environments	Shukla, Arun Univ. of Rhode Island
10:00-10:30	BREAK	
10:30-11:00	Nonlinear Dynamics and Global Stability of Aircraft Structures	Stanciulescu, Ilinca Rice University
11:00-11:30	Multiscale-Multiphysics Computational Framework for Damage Prognosis	Oskay, Caglar Vanderbilt University
11:30-12:00	A Microstructural Hierarchy Model for Uncertainty Reduction in Fatigue Life Prediction	Pilchak, Adam AFRL/ Mat'ls and Manufacturing
12:00-12:15	BREAK	
12:15-12:45	Structural-Scale Life Prediction of Aero-Structures Experiencing Combined Extreme Environments	Penmetsa, Ravi AFRL/ Aerospace Systems
12:45-1:15	Continuous Real-Time State Monitoring in Highly Dynamic Environments	Anton, Steven Tennessee Technology Univ.
1:15-1:30	Intro to AIR FORCE MUSEUM	Intro by Mike Spottswood AFRL/ Aerospace Systems
	LUNCH	
2:00-5:00	Site Visit: AIR FORCE MUSEUM	
	MEETING ADJOURNED FOR THE DAY	

Agenda Day 4 – July 21, 2016

Time	Title	Speaker
8:00-8:30	Registration	
8:30-9:00	Structure-Scale Simulation and Experiments for Hypersonic Platforms	Beberriss, Timothy AFRL/ Aerospace Systems
9:00-9:30	Structural Response Prediction for Reusable Hypersonic Platforms	Spottswood, Mike AFRL/ Aerospace Systems
9:30-10:00	Functional Mapping Approach to Incorporate Epistemic Uncertainty	Mahadevan, Sankaran Vanderbilt University
10:00-10:30	BREAK	
10:30-11:00	3-D Multi-Scale Modeling Combined with Machine Learning for a Novel Structural-Prognosis Framework	Spear, Ashley University of Utah
11:00-11:30	An Integrated Experimental-Numerical Framework for Study of Early Fatigue Damage	Huang, Haiying University of Texas-Arlington
11:30-12:00	Identifying the Crack Driving Force Mechanism Through a Data-driven, Bayesian Analysis of Existing High Energy Diffraction Microscopy Experiments	Sangid, Michael Purdue University
12:00-1:00	LUNCH	
1:00-1:30	Evolution of Sub-Grain Level Driving Forces for Microstructurally Small Crack Growth	Musinski, William AFRL/ Mat'ls and Manufacturing
1:30-2:00	Intrinsic Scale Effects in the Deformation of Structural Materials	Woodward, Christopher AFRL/ Mat'ls and Manufacturing
2:00-2:30	Development of Micro-scale Resonance Ultrasound Spectroscopy for High Spatial Resolution Measurement of Elastic Constants	Shade, Paul AFRL/ Mat'ls and Manufacturing
2:30-3:00	BREAK	
3:00-3:30	A New Methodology for Determining Residual Stresses in Processed Polycrystals with Design Level Fidelity	Miller, Matt / Beaudion Armand Cornell University
3:30-4:00	The Effect of High Altitude Environments on the Dislocation Structure Evolution During Fatigue Cracking of Legacy and Next Generation Aerospace Aluminum Alloys	Burns, James University of Virginia
4:00-4:30	Image-Based Modeling of Polycrystalline Metallic Materials	Ghosh, Somnath Johns Hopkins University
	MEETING ADJOURNED	

Agenda Day 5 – July 22, 2016		
Time	Title	Speaker
8:00-8:30	Registration	
8:30-9:00	MURI Center for Material Failure Prediction through Peridynamics	Madenci, Erdogan Arizona University
9:00-9:30	Hierarchically-Driven Approach for Quantifying Fatigue Crack Initiation	Solanki, Kiran Arizona State Univeristy
9:30-10:00	Progressive Damage Prediction Techniques for Composite HALE Aircraft Wings	Hodges, Dewey George Tech
10:00-10:30	BREAK	
10:30-11:00	A Novel Multiscale Design of Interfaces for Polymeric Composites and Bonded Joints using Additive Manufacturing	Prabhakar, Pavana University of Texas-El Paso
11:00-11:30	Representative Structural Element: A New Paradigm	Liu, Ling/ Yu, Wenbin Utah State Univ./ Purdue
11:30-12:00	Extreme-Value Processing-Microstructure-Property Relationships in SiC/SiC Ceramics	Przybyla, Craig AFRL/ Mat'ls and Manufacturing
12:00-2:00	REVIEW ENDS / BREAK ADVISORY COMMITTEE	