

Workshop on Aeroelastic Certification: Tools, Test, Decision Making

SCHEDULE

SCHEDULE			
TIME		Monday, October 27, 2008	
5:00-7:00 pm	Early Registration		
TIME		Tuesday, October 28, 2008	
7:00-8:30	Registration		
7:30-8:30	Continental Breakfast on outdoor patio under terrace		
8:30-8:50	Opening Comments	Beran & Denegri	
8:50-9:30	Keynote Speaker	Rudy Yurkovich	A Method for Aeroelastic Certification based on Robust Flutter Speeds
9:30-9:45	Break		
Session I	Decision Making and Testing		Chair: Bill Anderson
09:45-10:00	Invited Talk	Faustino Zapata	Aeroelastic Certification Approach of USAF aircraft
10:00-10:15	Invited Talk	Charles Denegri	Aeroelastic Certification of Aircraft with Stores – Bridging the Gap Between Analysis & Flight Test
10:15-10:25	Tech. Presentation 1	David Boyce	Flight Flutter Certification Approach of the F-35 Joint Strike Fighter Based on Correlation of Finite Element Model Analysis
10:25-10:35	Tech. Presentation 2	Brent Whiting	Boeing Phantom Works Structures perspective on Tools and Tests to certify future ISR aircraft
10:35-10:45	Tech. Presentation 3	Vin Sharma	Laser Doppler Vibrometry for Aircraft Structure Dynamic Testing
10:45-10:55	Tech. Presentation 4	Wolfgang Luber	EF2000 Aeroelastic Clearance Program
10:55-11:05	Tech. Presentation 5	P. Karkle, S. Kuzmina, and F. Ishmuratov	Some features of the modern aircraft certification in the aeroelasticity
11:05-11:20	Break		
11:20-12:00	Panel I		
12:00-1:30	Lunch on outdoor patio under terrace		
Session II	Uncertainty Quantification and LCO		Chair: LtCol Phil Morgan
1:30-1:50	Invited Talk	Ned Lindsley	A NICE Online Tool: Progress of the Nonlinear Interactive Clearance Environment (NICE) Program
1:50-2:00	Tech. Presentation 1	Fariba Fahroo	Multi-Scale Fusion of Information for Uncertainty Quantification and Management in Large-Scale Simulations, an Air Force
2:00-2:10	Tech. Presentation 2	Roger Ghanem and Maarten Arnst	Rational Model Validation under Uncertainty with Application to Aeroelasticity
2:10-2:20	Tech. Presentation 3	Muhammad Hajj and Ali Nayfeh	Analysis and Uncertainty Quantification of Flutter Aspects of a Goland+ Wing with Store
2:20-2:30	Tech. Presentation 4	Philip Beran	Uncertainty Quantification and Aeroelastic Certification
2:30-2:40	Tech. Presentation 5	Andrev V. Styuart, Kuen Y. Lin, and Eli Livne	Probabilistic Modeling of Structural/Aeroelastic Life Cycle for Reliability Evaluation of Damage Tolerant Composite
2:40-2:50	Tech. Presentation 6	Dale M. Pitt, Darin P. Haudrich, and Michael J. Thomas	Probabilistic Aeroelastic Analysis and Its Implications on Flutter Margin Requirements
2:50-3:00	Tech. Presentation 7	Ken Badcock	CFD Based Aeroelastic Stability Predictions Under the Influence of Structural Uncertainty
3:00-3:20	Break		
3:20-3:30	Tech. Presentation 8	Earl Dowell	Aeroelastic Induced Limit Cycle Oscillations in High Performance Aircraft
3:30-3:40	Tech. Presentation 9	Oddvar Bendiksen	Aeroelastic Certification Challenges of Transonic Aircraft
3:40-3:50	Tech. Presentation 10	Baoyuan Wang and Ge-Cheng Zha	Numerical Simulation of Transonic Limit Cycle Oscillations Using High Order Schemes
3:50-4:30	Panel II		
5:00	Meet in Lobby of Hotel for Departure to Evening Events		
5:30 - 10pm	Dinner at the L'Auberge de Sedona		

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TIME	Wednesday, October 29, 2008		
7:00-8:30	Continental Breakfast on outdoor patio under terrace		
Session III	Modeling and Reduced Order Modeling		Chair: Chuck Denegri
8:30-8:50	Invited Talk	Scott Morton	Aeroelastic Analysis and Certification Support Using CREATE/Kestrel
8:50-9:00	Tech. Presentation 1	Lawrence A. Bergman, Alexander F. Vakakis, D. Michael McFarland	Recent Advances in Passive Aeroelastic Flutter Suppression and in System Identification of Nonlinear Modal Interactions in
9:00-9:10	Tech. Presentation 2	Moti Karpel and Daniella Raveh	Dynamic Gust Loads, Current Practices and Future Trends
9:10-9:20	Tech. Presentation 3	Marc P. Mignolet, X.Q. Wang, Kwangkeun Kim, and Vishal	Reduced Order Modeling for Geometrically Nonlinear Structural Dynamic Problems
9:20-9:30	Tech. Presentation 4	D. D. Liu, P. C. Chen, Z. Wang, S. Yang, and Z. Zhang	Aeroelastic ROM-ROM Methodology
9:30-9:40	Tech. Presentation 5	Paul Cizmas	Variable-Fidelity Unsteady Aerodynamics for Aeroelastic Applications
9:40-9:50	Tech. Presentation 6	Max F. Platzer	On the Computability of Dynamic Airfoil Stall
9:50-10:10	Break		
10:10-10:20	Tech. Presentation 7	Raymond A. de Callafon, Jie Zeng, and Martin J. Brenner	Step-Based Identification Methods for AeroElastic Dynamic Modeling
10:20-10:30	Tech. Presentation 8	Dong-Hwan Lee and P. C. Chen	Studies of Aerodynamic Influence of Under-Wing Stores on Flutter Characteristics of F-16
10:30-10:40	Tech. Presentation 9	Robert A. Canfield and Iain Ferguson	Aerodynamic and Structural Modeling Effects on Subsonic and Transonic Flutter Prediction for F-16 Store Configuration
10:40-10:50	Tech. Presentation 10	Ronald Stearman and Bettie Margaret Smith	Higher Order Statistical Signal Analysis
10:50-11:00	Tech. Presentation 11	Harijono Djodihardjo	Aerodynamic-Acoustic-Structure Coupling Scheme for Acoustic Effects on Aeroelastic Structures
11:00-11:40	Panel III		
11:40-1:15	Lunch on outdoor patio under terrace		
1:15-3:00	Panel IV		
3:00-3:30	Closing Comments		
5:00	Meet in Lobby of Hotel for Departure to Evening Events		
5:30 - 9pm	Dinner at Los Abridados		