



AGENDA

Federal Aviation Administration
Joint Advanced Materials & Structures (JAMS) Center of Excellence
4th Annual Technical Review Meeting

Hosted by AMTAS
Future of Flight
Forward and Aft Cabin Rooms
June 17 – June 19, 2008

Tuesday, June 17, 2008

AM

- 7:00 Registration
Continental Breakfast — sponsored by A&P Technology
- 8:15 Call to Order/Welcome
(Curtis Davies, FAA; Mark Tuttle, AMTAS Director; Barry Smith, Exec. Dir., Future of Flight)
- 8:30 [Introduction to FAA Research](#) (Curtis Davies, FAA)
- 8:50 [FAA Composite Safety and Certification Program](#) (Larry Ilcewicz, FAA)
- 9:15 [Aging of Composite Aircraft Structures: Beechcraft Starship Teardown and Decommissioned Boeing 737 Tail](#)
(Lamia Salah, Wichita State University)
- 10:00 Break
- 10:15 [Crashworthiness of Composite Fuselage Structures—Material Dynamic Properties](#)
(Suresh Keshavanarayana, Wichita State University)
- 10:45 [Standardization of Numerical and Experimental Methods for Crashworthiness Energy Absorption of Composite Materials](#)
(Paolo Feraboli, University of Washington)
- 11:15 [Damage Tolerance Testing and Analysis Protocols for Full-Scale Composite Airframe Structures Under Repeated Loading](#)
(Waruna Seneviratne, Wichita State University)
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- 11:45 Lunch — sponsored by A&P Technology
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Tuesday, June 17, 2008

PM

- 12:45 [Fluid Ingression Damage Mechanism in Composite Sandwich Structures](#)
(Allison Crockett, Wichita State University)
- 1:15 [Certification by Analysis](#)
(Gerardo Olivares, Wichita State University)
- 1:45 [Airframe Technology Assessment of the Airworthiness of Unmanned Aerial Systems](#)
(Allison Crockett, Wichita State University)
- 2:15 [Course Development: Composites Awareness for the Aviation Safety Inspector](#)
(Charles Seaton, Edmonds Community College)
- 2:45 Go to Tour boarding location
- 3:00–5:00 Boeing tour — sponsored by The Boeing Company
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- 5:00–6:00 Cash bar
- 6:00–8:00 Dinner — sponsored by The Boeing Company
Location: Future of Flight StratoDeck
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Wednesday, June 18, 2008

AM

- 7:30 Continental Breakfast — sponsored by Cytec Engineered Materials
- 8:00 [Damage Tolerance and Durability of Adhesively Bonded Composite Structures](#)
(Thomas Siegmund and CT Sun, Purdue University)
- 8:30 [Development of Reliability-Based Damage Tolerant Structural Design Methodology](#)
(Chi Ho Cheung and Kuen Y. Lin, University of Washington)
- 9:00 [Damage Tolerance and Durability of Fiber-Metal Laminates for Aircraft Structures](#)
(Jenn-Ming Yang, UCLA)
- 9:30 [Structural Health Monitoring for Life Management of Aircraft](#)
(S. Krishnaswamy, Northwestern University)
- 10:00 Break
- 10:15 [Impact Damage Formation on Composite Aircraft Structures](#)
(Hyonny Kim, University of California San Diego)
- 10:45 [The Effects of Damage and Uncertainty on the Aeroelastic / Aeroservoelastic Behavior and Safety of Composite Aircraft](#)
(Eli Livne, University of Washington)
- 11:15 [Production Control Effect on Composite Material Quality and Stability](#)
(Beth Clarkson, Wichita State University)

Wednesday, June 18, 2008

11:45 Lunch — sponsored by Cytec Engineered Materials

PM

12:45 [Evaluation of Friction Stir Weld Process and Properties for Aerospace Application](#)
(Christian Widener, Wichita State University)

1:15 [Failure of Notched Laminates under Out-of-Plane Bending](#)
(Tim Kennedy, Oregon State University)

1:45 [VARTM Variability and Substantiation](#)
(C. Josiah Hughes, University of Delaware)

2:15 [Development and Evaluation of Fracture Mechanics Test Methods for Sandwich Composites](#)
(Dan Adams, University of Utah)

2:45 Break

3:00 [Bonded Repair of Composite Airframe Laminate and Sandwich Structures](#)
(Lamia Salah, Wichita State University)

3:30 [Improving Adhesive Bonding of Composites through Surface Characterization](#)
(Brian Flinn, University of Washington)

4:00 Adjourn

Thursday, June 19, 2008

AM

7:30 Continental Breakfast

8:00 [Methods for the Evaluation of Carbon Based Composite Surfaces for Subsequent Adhesive Bonding](#)
(Bill Stevenson, Wichita State University)

8:30 [Identification and Validation of Analytical Chemistry Methods for Detecting Composite Surface Contamination and Moisture](#)
(Xiangyang Zhou, University of Miami for Florida International University)

9:00 Presentation: 787 Dreamliner: Advanced Composite Applications
(Al Miller, The Boeing Co.)

10:30 Break

Thursday, June 19, 2008

Aviation Industry Perspective on the Presented Research

- 11:00 [Dick Bossi, The Boeing Co.](#)
- 11:15 [Mike Mott, Hawker Beechcraft Corp.](#)
- 11:30 [Rick Young, NASA Langley Research Center](#)
- 11:45 [Alain Landry, Bombardier Aerospace](#)
- 12:00 Feedback from the audience

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- 12:15 Concluding Comments and Wrap-up
- 12:30 Adjourn



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**Members of the FAA Joint Advanced Material and Structures (JAMS)
Center of Excellence**