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**AGENDA** (subject to change)

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Federal Aviation Administration  
**Joint Advanced Materials & Structures (JAMS) Center of Excellence**  
**6<sup>th</sup> Annual Technical Review Meeting**

May 19–20, 2010

Hosted by AMTAS  
Washington State Convention & Trade Center  
Room 400, North Lobby

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**Wednesday, May 19, 2010**

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**AM**

- 7:00 Registration and Continental Breakfast
- 8:00 Call to Order/Welcome  
(**Curtis Davies**, JAMS Program Manager; **Mark Tuttle**, AMTAS Director;  
**John Tomblin**, CECAM Director; **Bill Avery**, SAMPE)
- 8:15 Introduction to FAA Research (**Curtis Davies**, FAA)
- 8:35 FAA Composite Safety and Certification Initiatives (**Larry Ilcewicz**, FAA)

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**SESSION 1: STRUCTURAL INTEGRITY**

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- 9:20 Aging Effects Evaluation of a Beechcraft Starship Main Wing  
(**John Tomblin** and Lamia Salah, Wichita State University)
- 9:40 Development and Evaluation of Fracture Mechanics Test Methods for Sandwich Composites (**Jeff Kessler** for Dan Adams, University of Utah)
- 10:00 Break
- 10:20 Failure of Notched Laminates under Out-of-Plane Bending  
(**John Parmigiani**, Oregon State University)
- 10:40 Structural Health Monitoring for Life Management of Aircraft  
(**S. Krishnaswamy**, Jan Achenbach and I.M. Daniel Northwestern University)
- 11:00 **Session 1 Discussion / Industry Feedback**
- 11:40 Lunch

**Wednesday, May 19, 2010**

**PM**

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**SESSION 2: CERTIFICATION / REPAIR**

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- 12:20 Safety Management (**Charlie Seaton** and John Tomblin, Wichita State University)
- 12:40 Certification of Discontinuous Composite Material Forms for Aircraft Structures (Paolo Feraboli, Mark Tuttle, **Marco Ciccu** and Tory Shifman, University of Washington)
- 1:00 CACRC Depot Bonded Repair Investigation – Round Robin Testing (**John Tomblin** and Lamia Salah, Wichita State University)
- 1:20 Inverse/Optimal Thermal Repair of Composites (**Ashley Emery**, University of Washington)
- 1:40 Statistical Analysis Program for Generating Material Allowables (**Suresh Keshavanarayana**, Wichita State University)
- 2:00 Break
- 2:20 VARTM Variability and Substantiation (**Dirk Heider**, University of Delaware)
- 2:40 Environmental Compensation Factor Influence on Composite Design and Certification (**Waruna Seneviratne** and John Tomblin, Wichita State University)
- 3:00 **Session 2 Discussion / Industry Feedback**
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**SESSION 3: BONDING**

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- 3:40 Identification and Validation of Analytical Chemistry Methods for Detecting Composite Surface Contamination and Moisture (**Xiangyang (Joe) Zhou**, University of Miami for Dwayne McDaniel, Florida International University)
- 4:00 Evaluation of Friction Stir Weld Process and Properties for Aerospace Application: e-NDE for Friction Stir Processes (**Jeremy Brown** for Dwight Burford, Wichita State University)
- 4:20 Improving Adhesive Bonding of Composites through Surface Characterization (**Brian Flinn**, University of Washington)
- 4:40 **Session 3 Discussion / Industry Feedback**
- 5:20 Adjourn

**Thursday, May 20, 2010**

**AM**

7:30 Continental Breakfast

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**SESSION 4: CRASHWORTHINESS**

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8:00 Crashworthiness of Composites (**Suresh Keshavanarayana**, Wichita State University)

8:20 Certification by Analysis I and II (**Gerardo Olivares**, Wichita State University)

8:40 Standardization of Numerical and Experimental Methods for Crashworthiness  
Energy Absorption of Composite Materials  
(**Francesco Deleo** and **Paolo Feraboli**, University of Washington)

9:00 **Session 4 Discussion / Industry Feedback**

9:40 Break

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**SESSION 5: DAMAGE TOLERANCE**

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10:00 Load-Life-Damage hybrid Approach for Substantiation of Composite Aircraft  
Structures (**Waruna Seneviratne** and **John Tomblin**, Wichita State University)

10:20 Analysis of Fasteners as Disbond Arrest Mechanism for Laminated Composite  
Structures (**Chi Ho Eric Cheung** and **Kuen Y. Lin**, University of Washington)

10:40 Impact Damage Formation on Composite Aircraft Structures  
(**Hyonny Kim**, University of California San Diego)

11:00 Integrated Aeroservoelastic Uncertainty / Damage Tolerance / Reliability of Composite  
Aircraft (**Eli Livne**, University of Washington)

11:20 **Session 5 Discussion / Industry Feedback**

Noon Lunch

**PM**

12:40 FAA Program Manager Feedback/ Future Thrusts (**Curtis Davies**, FAA)

1:20 Concluding Comments and Wrap-up (**Curtis Davies** and **Larry Ilcewicz**, FAA)

2:00 Adjourn



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