AGENDA (subject to change)

Federal Aviation Administration
Joint Advanced Materials & Structures (JAMS) Center of Excellence
6th Annual Technical Review Meeting
May 19–20, 2010
Hosted by AMTAS
Washington State Convention & Trade Center
Room 400, North Lobby

Wednesday, May 19, 2010

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 Program (Larry Ilcewicz, FAA)

SESSION 1: STRUCTURAL INTEGRITY

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
### SESSION 2: CERTIFICATION / REPAIR

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

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<th>Time</th>
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<th>Presenter(s)</th>
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<tr>
<td>3:40</td>
<td>Identification and Validation of Analytical Chemistry Methods for Detecting Composite Surface Contamination and Moisture</td>
<td>Xiangyang (Joe) Zhou, University of Miami for Dwayne McDaniel, Florida International University</td>
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<td>4:20</td>
<td>Improving Adhesive Bonding of Composites through Surface Characterization</td>
<td>Brian Flinn, University of Washington</td>
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<td>4:40</td>
<td>Session 3 Discussion / Industry Feedback</td>
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<td>5:20</td>
<td>Adjourn</td>
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AM

7:30 Continental Breakfast

SESSION 4: CRASHWORTHINESS

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

SESSION 5: DAMAGE TOLERANCE

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

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