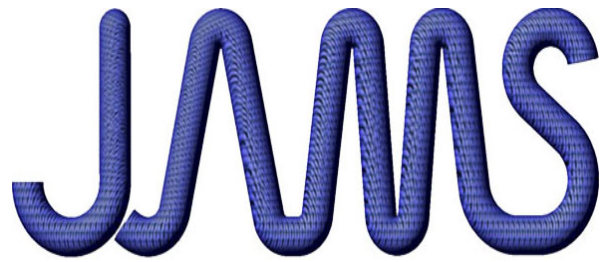# *Welcome!*

JAMS/AMTAS Fall 2010 Meeting

Edmonds Conference Center

21 October 2010

Introduction
Background

- The FAA Joint Advanced Materials and Structures (JAMS) Center of Excellence was formed in late 2003 and consists of two university teams:

  - AMTAS ('A'dvanced 'M'aterials in 'T'ransport 'A'ircraft 'S'tructures)

  - CECAM ('Ce'nter for 'C'omposites and 'A'dvanced 'M'aterials)

JAMS CoE Member Schools

AMTAS (Advanced Materials for Transport Aircraft Structures)

- University of Washington, Lead
- Washington State University
- Oregon State University
- Edmonds Community College
- Florida International University
- University of Utah

CECAM (Center for Composites and Advanced Materials)

- Wichita State University, Lead
- Northwestern University
- Purdue University
- Tuskegee University
- University of Delaware
- University of California at Los Angeles

- Curt Davies of the FAA W. J. Hughes Research Center (New Jersey) is JAMS Program Manager

- Larry Ilcewicz, FAA NRS, Composites (Renton) also helps guide all AMTAS projects

- UW-AMTAS Administration provided by:
    - Prof. Mark Tuttle, Director
    - Prof. Kuen Lin, Co-Director
    - Ms. Ellen Barker, Assistant to the Director

- Funds provided by the FAA must be matched 1:1 by non-federal sources

Special thanks to..

- The Boeing Company
- Our many additional industrial partners, particularly
  - Hexcel Corporation
  - Cytec
  - Toray
  - General Plastics
  - Intec

Special thanks to..

- The University of Washington:
  - Provost Office
  - College of Engineering
  - Department of Aeronautics and Astronautics
  - Department of Materials Science and Engineering
  - Department of Mechanical Engineering

A Couple of Changes

- In future technical progress reports will be submitted bi-monthly rather than monthly

- AMTAS meetings (like this one) will be held once per year, in the late October/early November timeframe

- JAMS meetings will continue to be held once per year, in the May/June/July timeframe

- Executive planning sessions to identify new/continuing research topics held 1-2 times per year

- 8:30-9:00 am: Welcome/Review

  Mari Ostendorf, UW
  Larry Ilcewicz, FAA
  Mark Tuttle, UW

- 9:00-10:15 am: Research Projects I

  (~15-minute presentations followed by 5 min Q/A)

  - Certification of Discontinuous Composite Composite Materials Forms for Aircraft Structures

    Tory Shifman/Mark Tuttle, UW

  - Certification of Discontinuous Composite Composite Materials Forms for Aircraft Structures

    Marco Ciccu/Paolo Feraboli, UW

  - Industry feedback

    Bill Avery, Boeing

10:10-10:30 am - Coffee Break

The Meeting Today
Mid-Morning Agenda

10:30am-12:00 pm – Research projects II

(15-minute presentations followed by 5 min Q/A)

- Effect of Surface Contamination on Composite Bond Integrity and Durability	Tomas Pribanic/ Dwayne McDaniel, FIU
- Improving Adhesive Bonding of Composites through Surface Characterization	Ashley Tracey/ Brian Flinn, UW
- Durability of Adhesively Bonded Joints for Aircraft Structures	Mark Tuttle for Dan Adams, U of U
- Industry Feedback	Kay Blohowiak, Boeing

12:00-12:45 pm - Lunch

12:45-2:15 pm – Research Projects III

(15-minute presentations followed by 5 min Q/A)

- Failure of Notched Laminates under Out-of-Plane Bending   John Parmigiani, OSU

- Probabilistic Fracture Analysis of Disbond in Bonded-Bolted Composite Structures   Chi Ho Cheung/ Kuen Lin, UW

- Inverse/Optimal Thermal Repair of Composites   Ashley Emery, UW

- Industry Feedback   Gerry Mabson, Boeing

2:15-2:45pm - Break

The Meeting Today
Late Afternoon Agenda

<u>2:15-3:55 pm – Research Projects IV</u>

(15-minute presentations followed by 5 min Q/A)

- Standardization of Numerical & Experimental   Bonnie Wade/
  Methods for Crashworthiness of   Paolo Feraboli, UW
  Composite Materials

- Combined Global/Local Variability and   Eli Livne, UW
  Uncertainty in Integrated Aeroservoelasticity
  of Composite Aircraft

- Industry Feedback   Mostafa Rassaian, Boeing

3:55-4:05 pm: Education

- Composite Structural Engineering Safety   Charles Seaton, WiSU
  Awareness Course Development

4:05-4:30pm: Wrap-up/Adjourn   Mark Tuttle, UW

- Please participate in the discussion throughout the day

- Please participate in the discussion throughout the day

- Comments or Questions before we begin?