



Welcome!  
*AMTAS Autumn '09 Meeting*

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# Update on AMTAS/JAMS

Summary prepared by

Mark Tuttle, UW  
AMTAS Director

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# FAA Center of Excellence Program

## *Background for 1<sup>ST</sup>-time Attendees*

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### FAA Centers of Excellence (CoEs):

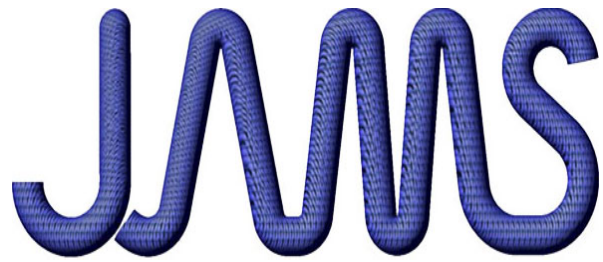
- Overall CoE program administered by Dr. Patricia Watts of the W. J. Hughes Res Ctr (Atlantic City, New Jersey)
  - CoEs are funded through cooperative agreements among academic institutions, their affiliate industrial partners, and the FAA
  - FAA provides funds that must be matched 1:1 by non-federal sources
  - Funded in three phases over a total period of 3-10 yrs
  - Seven FAA CoEs are active: [www.faa.gov/go/coe](http://www.faa.gov/go/coe)
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# "Acronyms," etc

## *Background for 1<sup>ST</sup>-time Attendees*

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- The FAA Joint Advanced Materials and Structures (JAMS) Center of Excellence was formed in 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)
  - Curt Davies is the FAA-JAMS Program Manager
  - JAMS is in Phase II of the ~10-yr funding cycle
  - All JAMS projects are related in some manner to safety and/or certification issues
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# JAMS CoE Member Schools

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## 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





# AMTAS Funding *Gloomy*

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- Overall federal funding of the FAA decreased during the 2009FY...led to a sharp decrease in AMTAS-JAMS funding
  - FAA funding for most AMTAS projects was reduced to \$34k for the 2009-10AY...
  - Funding at this level is enough to keep AMTAS projects on life-support (especially if an industrial cash-match was received), but not enough for project to flourish
  - Funding levels for 2010-11AY TBD
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# AMTAS Administrators

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- Prof. Mark Tuttle, UW  
AMTAS Director  
[tuttle@u.washington.edu](mailto:tuttle@u.washington.edu)
  - Prof. Kuen Lin, UW  
AMTAS Co-Director  
[lin@aa.washington.edu](mailto:lin@aa.washington.edu)
  - Ms. Ellen Barker, UW  
Assistant to the Director  
[nelle@u.washington.edu](mailto:nelle@u.washington.edu)
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# AMTAS Administrative Activities

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- Website updated regularly:  
<http://depts.washington.edu/amtas>
  - Monthly technical progress reports from all AMTAS PIs assembled and submitted to FAA
  - Quarterly financial reports from all AMTAS academic partners assembled and submitted to FAA
  - Organize/schedule/host meetings
  - AMTAS "news" - updates on AMTAS/JAMS activities e-mailed to interested persons every 3-4 months (about 1,000 persons presently)
  - Oversee 5-day short course and (potentially) facilitate new ones
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# AMTAS/JAMS Meetings

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- Semi-annual AMTAS meetings
    - Spring & Fall; typically 60-80 attendees
    - One-day mtg, usually (but not always) held on UW campus
    - 81 registrants for today's meeting
  - Annual JAMS meetings
    - Five held since initiation:  
WiSU→UW→Hughes Res Ctr (WiSU)→UW →WiSU
    - Typically ~100 attendees, representing all JAMS universities and many industrial partners
    - 2010 JAMS Meeting will be hosted by UW and held *in conjunction with the 2010 SAMPE in Seattle (week of May 17)*
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# 2010 JAMS Meeting

*Held in conjunction with SAMPE 2010*

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- SAMPE 2010:
    - Washington State Convention Center, 17-20 May (Mon-Thurs)
    - 1<sup>st</sup> time the SAMPE Spring Conference and Exhibition has been held in Seattle
    - Key SAMPE-JAMS connection:  
Dr. Bill Avery, SAMPE Int'l President 2008-09 and active AMTAS-JAMS participant
  - 2010 JAMS meeting:
    - Washington State Convention Center, 19-20 May (Wed-Thurs)
    - Separate SAMPE-AMTAS registration
    - SAMPE hotel room block available for JAMS participants
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## Semi-Annual AMTAS Meetings *Objectives*

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*"Generally":*

Autumn Meeting agenda devoted to

- Overall status of AMTAS-JAMS
- Research results presented by AMTAS PIs

Spring Meeting agenda devoted to

- Overall status of AMTAS-JAMS
  - Discussion/brainstorming of future research & education projects (funding for continuing or new AMTAS projects usually received during summer months)
  - Developments in other industries (e.g., tidal energy)
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# The Meeting Today

## *Early Morning Agenda*

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

- Advanced Materials & Manufacturing Training Innovation Center (AMMTIC) Cyndi Schaeffer,  
Edmonds CC  
*(10 min presentation and 5 min Q/A)*
  
- Composite Safety and Certification Initiative: Proposed Training Strategy C. Seaton, EdCC  
Larry Ilcewicz, FAA  
*(30 min presentation and 30 min Q/A)*

### 10:15-10:30am - Coffee Break

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# The Meeting Today

## Mid-Morning Agenda

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*(20-minute presentations followed by 10 min Q/A)*

### 10:30am-12:00pm - Research Projects II

- Identification and Validation of Analytical Chemistry Methods for Detecting Composite Surface Contamination and Moisture      Tomas Pribanic for Dwayne McDaniel, Florida Int'l Univ
- Improving Adhesive Bonding of Composites through Surface Characterization      Brian Flinn, UW
- Inverse/Optimal Thermal Repair of Composites      Ashley Emery, UW

12:00-12:45 pm - Lunch

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# The Meeting Today

## *Early-Afternoon Agenda*

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*(20-minute presentations followed by 10 min Q/A)*

### 12:45-2:15pm - Research Projects III

- Failure of Notched Laminates under Out-of-Plane Bending Tim Kennedy, OSU
- Development of Reliability-Based Damage Tolerant Structural Design Methodology Kuen Lin, UW
- Combined Global/Local Variability and Uncertainty in Integrated Aeroservoelasticity of Composite Aircraft Eli Livne, UW

2:15-2:45 pm - Break

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# The Meeting Today

## Late-Afternoon Agenda

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*(20-minute presentations followed by 10 min Q/A)*

### 2:45 - 4:15pm: Research Projects IV

- Certification of Discontinuous Composite Materials Forms for Aircraft Structures Mark Tuttle, UW
- Development and Evaluation of Frac Mech Test Methods for Sandwich Composites Dan Adams, UoU
- Standardization of Numerical & Experimental Methods for Crashworthiness of Composite Materials Paolo Feraboli, UW

4:15-4:30 pm: Wrap-up/Adjourn

4:30-6:00 pm: Informal reception and student displays

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# Let's Get Started!

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- We need your ideas and suggestions  
....please participate in the discussion  
throughout the day!
  - Any questions for me?
  - Enjoy the day!
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