



AMTAS/JAMS Status and Future Plans

Summary prepared by

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AMTAS Director



FAA Center of Excellence Program

Background for 1ST Time Attendees

FAA Centers of Excellence (COEs):

- 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
- Six FAA COE's currently exist:

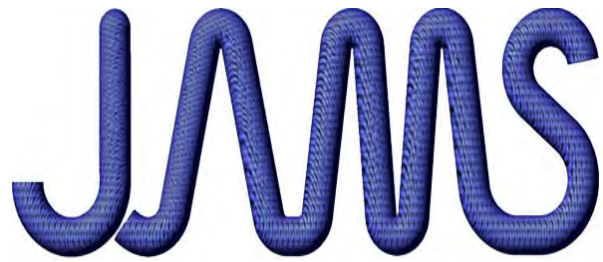
<http://www.coe.faa.gov/>



"Acronyms"

Brief Background for 1ST 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 funding cycle
 - All JAMS projects are related in some manner to safety and/or certification issues



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





AMTAS Administrators

- Prof. Mark Tuttle, UW
AMTAS Director
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- Prof. Kuen Lin, UW
AMTAS Co-Director
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- Ms. Ellen Barker, UW
Assistant to the Director
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AMTAS Administrative Activities

- Website updated more-or-less continuously:
<http://depts.washington.edu/amtas>
- Monthly technical progress reports from all AMTAS academic partners assembled and submitted to FAA
- Quarterly financial reports from all AMTAS academic partners assembled and submitted to FAA
- AMTAS "news" - updates on AMTAS/JAMS activities e-mailed to interested persons every 1-2 months (about 700 persons, presently)
- Organize-schedule-host meetings



AMTAS/JAMS Meetings

- Semi-annual AMTAS meetings
 - Spring & Fall; typically 60-80 attendees
 - One-day mtg, usually (but not always) held on UW campus
 - 88 registrants for today's meeting (all time high!)
- Annual JAMS meetings
 - Four held since initiation (WiSU→UW→Hughes Res Ctr→UW)
 - Typically ~100 attendees, representing all JAMS universities and many industrial partners
 - 2009 JAMS Meeting:
 - Hosted by WiSU
 - Date & Details TBD



Short Course

- AMTAS Institute on Advanced Aircraft Composites
 - Five-day “cover the waterfront” composites course intended for degreed/practicing engineers
 - Organized and led by Kuen Lin
 - ~10 instructors (5 from academia, 5 from industry/gov)
 - Self-sufficient: \$2,500 tuition fee
 - Has been offered three times:
 - 18-22 Sept '06 (21 attendees)
 - 19-23 Mar '07 (25 attendees)
 - 17-21 Sept '07 (14 attendees)
 - Next offering scheduled 23-27 March '09
 - Registration begins January
 - Details at <http://depts.washington.edu/amtas/> (or contact Ellen)



Objectives During Semi-Annual AMTAS Meetings

"Generally":

Spring Meeting agenda devoted to

- Overall status of AMTAS-JAMS
- Discussion/brainstorming of future research & education projects (funding for continuing or new AMTAS projects typically received during summer months)

Autumn Meeting agenda devoted to

- Overall status of AMTAS-JAMS
- Research presentations by AMTAS PIs



The Meeting Today

Early Morning Agenda

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

9:00-10:30am - Research Projects I

- Analytical Chemistry Methods for Detecting Composite Surface Contamination M. Tuttle for D. McDaniel, FIU
- Improving Adhesive Bonding Through Surface Characterization B. Flinn, UW
- Precise Control of Cure Processes During Repair of Aircraft Structures A. Emery, UW

10:30-10:45am - Coffee Break



The Meeting Today

Mid-Morning Agenda

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

10:45am-12:15pm - Research Projects II

- Failure of Notched Laminates under Out-of-plane Bending T. Kennedy, OSU
- Reliability-Based Damage Tolerant Structural Design Methodology K. Lin, UW
- Global/Local Variability and Uncertainty in Aeroservoelasticity of Composite Aircraft E. Livne, UW

12:15-1:00 pm - Lunch



The Meeting Today

Early-Afternoon Agenda

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

1:00pm-2:30pm - Research Projects III

- Certification of Discontinuous Composite Material Forms for Aircraft Structures P. Feraboli, UW
- Devel/Evaluation of Fracture Mechanics Tests Methods for Sandwich Composites A. Gill/D. Adams, UoU
- Standardization of Num & Exp Methods for Crashworthiness of Composite Materials P. Feraboli, UW

2:30-3:00 pm - Break



The Meeting Today

Late-Afternoon Agenda

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

3:00pm-4:00pm: Research Projects IV

- Course Development: Composites Awareness for the Aviation Safety Inspector C. Seaton, EdCC
- Advanced Materials & Manufacturing Training Innovation Center (AMMTIC) J. Mosier, EdCC

4:00-4:15 pm: Wrap-up/Adjourn



Let's Get Started!

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