

Recent AMTAS Activities and Future Plans

Summary prepared by Mark Tuttle, UW AMTAS Director



Recent Activities Since 11 April Spring Meeting

- Hosted the second JAMS technical peer review meeting, involving all participants in both AMTAS and CECAM
 - 20-22 June 2006, ~90 attendees
 - Kane Hall, UW campus
 - 18 presentations of JAMS research studies
 - 3 presentations by industry (Toray, Cytec, C&D Zodiac)
 - 4 concluding "industry feedback" speakers (Bell Helicopters, Spirit Aerosystems, Cessna, Boeing)
 - Luncheon w/technical presentation sponsored by Abaqus
 - Barbeque (@UW-Waterfront Act Ctr) sponsored by Toray
 - Research project summaries, slides used during presentations, and photos taken during event all available on AMTAS website (http://depts.washington.edu/amtas/)



Recent Activities Since 11 April Spring Meeting

- AMTAS website updated/maintained continuously
- Progress in all AMTAS projects (will be summarized by individual PIs)
- Presentations describing FAA COE program, JAMS, and AMTAS activities (presentations can be downloaded from AMTAS website):
 - Opening ceremonies of the NW Composites Centre, Manchester UK, 12 May 2006
 - Combined meeting of the NATO AVT Lecture Series and the IEEE Seattle Chapter meeting, Seattle WA, 16 October 2006



Since 11 April Spring Meeting

Short Course: AMTAS Institute on Advanced Aircraft Composites

- Organized and led by Kuen Lin
- Five-day intermediate-level course
- \$2,500 tuition fee
- Offered 18-22 Sept '06 with 23 students:
 - Boeing (Seattle, Wichita, Long Beach): 14
 - C&D Zodiac: 5
 - Cytec (UK): 1
 - Trulife: 1
 - Wright-Patterson AFB: 1
 - Commercial Aviation Services: 1



Advanced Materials in Curriculum and Instructors

| Day 1 | Overview/New Develop Lin (UW), Stickler (Boeing) | Materials Flinn (UW), Das (UW) |
|----------|---|--|
| Day 2 | Tooling Dickson (Boeing) | Manufacturing I Das (UW), Soleiman (Boeing) |
| Day 3 | Analysis Methods Lin (UW) | Design Methodologies Eastman (Boeing) |
| Day 4 | Manufacturing II McCarville (Boeing) | Test Methods Tuttle (UW), Pomering (INTEC) |
| Day 5 | Prod Lifecycle Management Richey/McPherson (Boeing) | Nondestructive Inspection Swartz (FAA) |



MTAS AMTAS Short Course

- Next offering (tentatively) scheduled for 19-23 March 2007
- Must attract ~25 students

Updates posted at:

http://depts.washington.edu/amtas/courses/ShortCourses.html



TAS Future Plans

Continuing projects

- Reliability-based Damage Tolerant Design (Kuen Lin, UW)
- Combined Global/Local Variability and Uncertainty in Integrated Aeroservoelasticity of Composite Aircraft (Eli Livne, UW)
- Improving Adhesive Bonding of Composites through Surface Characterization (Brian Flinn, UW)

Concluding projects

- The Effects of Surface Treatment on the Degradation of Composite Adhesives (Lloyd Smith, WSU)
- Course Development: Maintenance of Composite Aircraft Structures (Charles Seaton, EdCC)

New Project

 Modeling Progressive Damage in Composite Aircraft Structures (Tim Kennedy, OSU...will provide progressive damage models for inclusion in "Reliability-based Damage Tolerant Composite Design" project by K. Lin)



Future Plans

- JAMS/AMTAS presentations (Tuttle):
 - UK/US Manufacturers Summit, Manchester UK, 30 Oct-2 Nov 2006
 - University of Carlos III at Madrid, Madrid, Spain, 3 Nov 2006
- Collaborations involving student and/or faculty exchange between University of Washington and University of Manchester initiated and will be expanded



- Three-year, Phase I funding of JAMS/AMTAS expires in August 2007
- Over next several months:
 - Technical activities of JAMS/AMTAS/CECAM activities reviewed
 - Financial audit of JAMS/AMTAS/CECAM performed

...and decision on Phase II funding will be made