

# AMTAS Autumn 2004 Meeting

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# WELCOME!

November 10, 2004



# AMTAS Autumn 2004 Meeting

## *Early Morning Agenda*

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- 8:30-8:40 AM Introductions Mark Tuttle, UW
- 8:40-9:20 AM AMTAS Adm & Status Mark Tuttle & Ellen Barker, UW
- 9:20-9:50AM Composite Safety & Certification Initiatives Larry Ilcewicz, FAA

### Research Projects I

- 9:50-10:10AM Combined Global/Local Variability and Uncertainty in Integrated Aeroservoelasticity of Composite Aircraft Eli Livne, UW
- 10:10-10:40AM The Effect of Surface Treatment on the Degradation of Composite Adhesives Lloyd Smith, WSU

### Coffee Break (10:40-10:50AM)



# AMTAS Autumn 2004 Meeting

## *Mid-Morning Agenda*

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### Research Projects II

- 10:50-11:10 AM Improved Adhesive Bonding of Composites through Surface Characterization Brian Flinn & Molly Phariss, UW
- 11:10-11:40 AM Reliability-based Damage Tolerant Design Kuen Lin, UW

### Training Development Project

- 11:40AM-12noon Course Development: Maintenance of Composite Aircraft Structures Charles Seaton, ECC

### Lunch Break (12noon-1:00PM)



# AMTAS Autumn 2004 Meeting

## *Early Afternoon Agenda*

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### Presentations by AMTAS Industry Partners

- 1:00-1:30 PM      Update on 7E7 Composites      Al Miller,  
Boeing
- 1:30-2:00 PM      Composite Repair Heating  
Methods      Howard Banasky  
HEATCON

Coffe Break (2:00-2:15PM)



# AMTAS Autumn 2004 Meeting

## *Late Afternoon Agenda*

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### Breakout Sessions

- 2:15-3:15 PM                      Breakout Sessions                      All

Attendees divided into four groups. Each group considers

- Basic/applied research needs that should be addressed by AMTAS
- Educational/training courses that should be developed by AMTAS
- Long-term growth of AMTAS (new funding/members)

- 3:15-3:45 PM                      Group Report-outs
- 3:45-4:15PM                      General Discussion/Next Steps

Adjourn



# FAA COE for Advanced Materials in Transport Aircraft Structures (AMTAS)

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## AMTAS Administration and Status

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November 10, 2004



# Background – FAA Centers of Excellence

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- FAA Centers of Excellence (COE) are:
  - Funded through cooperative agreements among academic institutions, their affiliate industrial partners, and the FAA
  - Funded in three “phases” over a total period of 10 yrs (expected to be self-supporting thereafter)
  - FAA funding must be matched from non-federal sources
  - Currently 6 FAA COE’s exist



# FAA COE on Advanced Materials

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- Oct 2003: FAA released solicitation to establish a Center of Excellence on Advanced Materials
- Dec, 2003: FAA announced a joint award to University of Washington (UW) and Wichita State University (WiSU)
  - UW: Center for Advanced Materials in Transport Aircraft Structures (AMTAS)
  - WiSU: Center of Excellence for Composites and Advanced Materials (CECAM)





# FAA COE on Advanced Materials

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- Activities carried out by UW-AMTAS and WiSU-CECAM are coordinated by the FAA Program Manager, Mr. Curt Davies
  - Each team received Phase I funding (~\$500k/yr for 3 years)
  - Overall AMTAS mission:
    - Perform research studies
    - Provide educational opportunities
    - facilitate technology transfer
- pertinent to the use of advanced materials in transport aircraft



# AMTAS Participants

*Representing the FAA*

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- Patricia Watts, Director COE Program  
Curt Davies, Program Manager  
Peter Shyprykevich, R&D Manager

(W.J. Hughes Research Center, Atlantic City,  
NJ)

- Larry Ilcewicz, NS&TA - Composites  
(offices in Renton, WA)



# AMTAS Participants

*Administered by the UW*

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- Mark Tuttle, Director
- Kuen Lin, Co-Director
- Ellen Barker, Assistant to the Director



# AMTAS Participants

## *Academic Partners*

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- University of Washington (UW)
- Washington State University (WSU)
- Oregon State University (OSU)
- Edmonds Community College (ECC)



# AMTAS Participants

## *Industry Partners*

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- The Boeing Co
- HEATCON Composite Systems
- Northwest Composites
- Integrated Technologies (INTEC)
- Toray
- Hexcel
- Composite Solutions
- Triumph Composite Systems
- Stoddard International



# Current AMTAS Funding

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- Sept 1: received total of \$647k in FAA funding:
  - Univ Washington:
    - Administrative funding: \$76k
    - 3 Research projects, totaling: \$425k
  - Washington State University:
    - 1 Research project: \$51k
  - Edmonds Community College:
    - 1 Training development project: \$95k
- \$500k/yr in matching funds (cash/in-kind) pledged by AMTAS academic & industry partners

