The Hampton Roads Chapter of AHS would like to gratefully acknowledge the following exhibitors, who have participated in and supported this meeting.

LIST OF EXHIBITORS

- Advanced Technologies, Inc.
- The Boeing Company
- GE Aviation
- MECHSIM Engineering Solutions
- Pratt & Whitney
- Sikorsky Aircraft Corporation
- Sikorsky-Boeing JMR Team
- Triumph Aerospace Systems
- Newport News
- American Helicopter Society

PROGRAM AGENDA

The Hampton Roads Chapter (HRC) of the American Helicopter Society, International (AHS,I) Presents the

TECHNICAL SPECIALISTS’ MEETING ON ROTORCRAFT STRUCTURES AND SURVIVABILITY

Structures Solutions for Future Vertical Lift

General Chairman: Mr. Jon Schuck
US Army ADD

Technical Chairpersons: Dr. Mark E. Robeson
US Army ADD-AATD
Mr. Nate Bordick
US Army ADD-AATD
Dr. Karen E. Jackson
NASA Langley Research Center

Exhibit Hours
Tues., 29 Oct 2013, 7:00 AM-5:00 PM, 6:00-8:00 PM
Wed., 30 Oct 2013, 7:00 AM-5:00 PM, 6:00-7:00 PM
Thursday, 31 Oct 2013, 7:00-9:00 AM
Exhibit Chairman: David Meyer, Boeing

October 29-31, 2013
Ft. Magruder Hotel and Conference Center
Williamsburg, Virginia
**Quick Look Agenda**

**Monday, October 28, 2013**
- Golf Tournament, The Pines Golf Course, Ft. Eustis, VA
- Meeting Registration 4:00-7:00 PM

**Tuesday, October 29, 2013**
- Continental Breakfast, 7:00-7:45 AM
- Welcoming Comments, 7:45-8:00 AM
- **Session A: Structural Integrity and SHM**
  - Luncheon, 12:00 – 1:30 PM
    - Guest speaker: TBD
    - Topic: Joint Multi Role Tech Demo
- **Session B: Durability & Damage Tolerance**
  - Exhibitor’s Reception, 6:00-8:00 PM
  - Dinner - On Your Own

**Wednesday, October 30, 2013**
- Continental Breakfast, 7:00-7:45 AM
- Announcements, 7:45-8:00 AM
- **Session C: Ongoing/Future Programs**
  - Lunch (on your own) 11:30–1:30 PM
- **Session D: Crashworthiness**
- Exhibitors Reception, 6:00-7:00 PM
- Banquet: 7:00– 9:30 PM
  - Guest Speaker: TBD

**Thursday, October 31, 2013**
- Continental Breakfast, 7:00-7:45 AM
- Exhibit Hall, 7:00-9:00 AM
- Announcements, 7:45-8:00 AM
- **Session E: Crash/Vulnerability Reduction**
  - Closing Comments, 12:00 PM
  - Adjourn, 12:15 PM

**TUESDAY, OCTOBER 29, 2013**
- 7:00 – 7:45 AM Continental Breakfast
- 7:45 – 8:00 AM Welcoming Comments

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:00 – 8:30 AM</td>
<td>“Progress and Planning for US Army Rotorcraft Structural Integrity Program Standardization,” Robeson, US Army ADD-AATD</td>
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<td>8:30 – 9:00 AM</td>
<td>“SHM of Joints in Composite Laminate Structures,” Lissenden, Penn State University</td>
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<td>9:30 – 10:00 AM</td>
<td>“Development of an Airframe Structural Integrity Management System,” Brookhart, Sikorsky</td>
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<td>10:00 – 10:30 AM</td>
<td>Break</td>
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<tr>
<td>11:00 – 11:30 AM</td>
<td>“SHM-embedded Design for High Performance, Sustainable, and CBM-Enabling Structures of Future Vertical Lift,” Chang, Stanford University</td>
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<td>12:00 – 1:30 PM</td>
<td>Luncheon, Guest Speaker: TBD, Topic: Joint Multi Role Technology Demonstration</td>
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<tr>
<td>1:30 – 5:00 PM</td>
<td>Session B: Guest Speaker: TBD, Topic: Joint Multi Role Technology Demonstration</td>
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<td>1:30 – 2:00 PM</td>
<td>“Probabilistic Investigation of Composite Damage Progression and Failure Predictions,” Haynes, US Army Research Laboratory</td>
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<td>2:00 – 2:30 PM</td>
<td>“Analysis of Hydrodynamic Ram Compliant Structure,” Gatley, Boeing</td>
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<td>2:30 – 3:00 PM</td>
<td>“Integrated Test/Modeling Analysis of Bonded Joints in Rotorcraft Composite Structures,” Gurvich, United Technologies Research Center</td>
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<td>3:00 – 3:30 PM</td>
<td>Break</td>
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<tr>
<td>3:30 – 4:00 PM</td>
<td>“Assessing Rotorcraft Airframe Durability &amp; Damage Tolerance,” Sarlashkar, Sikorsky</td>
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<td>4:00 – 4:30 PM</td>
<td>“Full-Field Strain Analysis of Compressively Loaded Flat Composite Laminates Containing Undulated Fiber Architecture,” Henry, Penn State</td>
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<tr>
<td>4:30 – 5:00 PM</td>
<td>“Laser Peening for Improved Fatigue Lifetime of a Wing Attachment Shear-Tie – Application to Rotorcraft Structures,” Hackel, Metal Improvement Co.</td>
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<tr>
<td>6:00 – 8:00 PM</td>
<td>Exhibitors’ Reception</td>
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WEDNESDAY, October 30, 2013

7:00 – 7:45 AM Continental Breakfast
7:45 – 8:00 AM Announcements

8:00 – 11:30 PM Session C: Ongoing/Future Programs and Structures Technology, Moderator – Jackson, NASA

8:00 – 8:30 AM “An Introduction to the Combat Tempered Platform Demonstration,” Cappelli, Sikorsky Aircraft
8:30 – 9:00 AM “NASA’s Advanced Composites Project,” Young, NASA Langley Research Center
9:00 – 9:30 AM “Composite Certification Initiative,” Schuck, US Army

9:30 – 10:00 AM Break

10:00 – 10:30 AM “Micromechanical Model of X-Cor and K-Cor Reinforced Foams,” Caputo, Materials Research and Design
10:30 – 11:00 AM “Damage Tolerance Stretched Broken Carbon Fiber,” Crocco, US Army ADD-AATD
11:00 – 11:30 AM “Advances in Prediction of Residual Stress and Part Distortion of Machined Components,” Erickson, Third Wave Systems

11:30 – 1:30 PM Lunch (on your own)

1:30-5:30 PM Session D: Crashworthiness
Moderator – Charles Clarke, Sikorsky

1:30 – 2:00 PM “Evaluation of the Transport Rotorcraft Airframe Crash Testbed (TRACT) Full Scale Crash Test,” Annett, NASA Langley
2:00 – 2:30 PM “Active Crash Protection System (ACPS),” Bolukbasi, The Boeing Company
2:30 – 3:00 PM “Investigation of Human Kinematics and Risk of Injury during a Vertical Crash using THOR Dummy and Human Finite Element Models,” Untaroiu, Virginia Tech
3:00 – 3:30 PM “Biodynamic Model Development for Intense Shocks,” Singh, University of Maryland

3:30 – 4:00 PM Break

4:00 – 4:30 PM “Impact Testing and Simulation of Composite Airframe Components,” Jackson, NASA Langley Research Center
5:00 – 5:30 PM “Impact Testing and Simulation of a Full-Scale Composite Fuselage Section,” Fasanella, National Institute of Aerospace

5:30 Break for the Day

6:00 – 7:00 PM Exhibitors’ Reception

7:00 – 9:30 PM Banquet, Guest speaker - TBD

THURSDAY, October 31, 2013

7:00 – 7:45 AM Continental Breakfast
7:45 – 8:00 AM Announcements

8:00 – 12:00 PM Session E: Crashworthiness and Vulnerability Reduction, Moderator – Bark, NAVAIR

8:00 – 8:30 AM “Predicted Performance of an Optimized Energy-Absorbing Crashworthy Seat During Idealized and Actual Crash Pulses,” Richards, BAE Systems
8:30 – 9:00 AM “Side-Facing Seat Injury Criteria and Testing Methodology Development,” Richards, BAE Systems
9:00 – 9:30 AM “Aircraft Seat Certification by Analysis from a Regulatory Perspective,” Pellettiere, FAA
9:30 – 10:00 AM “Appropriate Dynamic Testing of Seats Installed in Rotorcraft,” Miles, FAA

10:00 – 10:30 AM Break

10:30 – 11:00 AM “Variable Profile Energy Absorbers,” Labun, SAFE, Inc.
11:00 – 11:30 AM “Development of Ballistic Tolerant Aircraft Structure,” McCarthy, The Boeing Company
11:30 – 12:00 PM “Blast Analysis of Aircraft Structure,” Chiu, The Boeing Company

12:00 PM Closing Comments

12:15 PM Adjourn
MEETING REGISTRATION FORM
AMERICAN HELICOPTER SOCIETY (AHS)
HAMPTON ROADS CHAPTER
International Technical Specialists’ Meeting on
Rotorcraft Structures and Survivability
October 29-31, 2013
Fort Magruder Hotel and Conference Center
Williamsburg, Virginia

Register online at www.vtol.org or
Fax or mail completed form to: 703-739-9279, AHS International, 217 N Washington St, Alexandria, VA 22314-2838

NO TELEPHONE RESERVATIONS ACCEPTED

Name: ________________________________________ Name on Badge: __________________________
Spouse’s Name: _________________________________________________________________________
Mailing Address: ________________________________________________________________________
City/State/Zip code: ______________________________________________________________________
Employer: ______________________________________________________________________________
Office Phone: _____________________________  Job Title: _____________________________________
E-Mail Address: _____________________________________  Fax: _______________________________

REGISTRATION TYPE:  
2.5 Days  1.5 Day  Total

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<td>AHS Non-Member</td>
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Member Number___________________  Registration Amount $______

2.5 Day Registration includes: Continental breakfasts, breaks, luncheon and dinner banquet. The Non-Member 2.5 day rate includes one-year AHS membership.

1.5 Day Registration includes: Continental breakfasts, breaks, luncheon and/or banquet if scheduled for the days attending.

Please register in advance to aid in planning and enable pre-registration and badge-making.

A convenience charge of $25.00 will be added if registering on-site.

GUIDELINES FOR REGISTRATION TYPE: Student refers to full-time students only. The Á la Cart rate is restricted to employees of government agencies that have specific policies not to fund travel for conferences or require exceptionally high and virtually unobtainable approval to attend. Continental breakfast, break, luncheon and banquet tickets will be available at registration for Á la Cart registrants and spouses of paid registrants based on hotel food service rates.

REGISTRATION AND HOTELRESERVATIONS: Registration by this form should be mailed to the AHS International address above. Registration online should be made at the web address above. Registrations will be considered complete only when payment is received. Hotel reservations may be made online at www.fortmagruderhotel.com or by telephone at (757) 573-4102. For either reservation use group code AHS.

REGISTRATION PAYMENT METHOD:
☐ Check  ☐ Wire Transfer  ☐ MasterCard  ☐ Visa  ☐ American Express

Make payable to AHS International (US$ Only)
Card Number ____________________________
Exp. Date ___________ Signature ________________
REGISTRATION CANCELLATION:
Cancellations must be received in writing and must be postmarked NLT 21 October 2013.
There will be a $25.00 cancellation fee for credit card transactions.
For registration questions, please contact Kay Brackins at (703) 684-6777 x103 or kbrackins@vtol.org.