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

AHS International

ATEC – Advanced Turbine Engine Company

East/West Industries

GE Aviation

Lockheed Martin Thermal Protection Products

Materials Research & Design, Inc.

Sikorsky Aircraft Corporation

Sikorsky-Boeing JMR Team

Triumph Aerospace Systems

Newport News

The Hampton Roads Chapter of the AHS International Presents the

TECHNICAL SPECIALISTS’ MEETING ON ROTORCRAFT STRUCTURES AND SURVIVABILITY

Structures Solutions for Future Vertical Lift

General Chairman: Mr. Jon Schuck
US Army
Aviation Development Directorate

Technical Chairpersons: Mr. Nate Bordick
US Army ADD-AATD
Dr. Mark E. Robeson
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

- Registration in Kearny’s
- All Sessions in Jefferson Davis Ampitheater

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 General Hooker's Redoubt, “Joint Multi-Role Technology Demonstrator,” Mr. David Friedmann, JMR TD Phase 1 Lead
• Session B: Durability & Damage Tolerance
• Banquet Social, 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 General Hill's Redoubt, “Smart Car Safety,” Mike Collins, Mercedes Product Expert, Tysinger Motors

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
• Adjourn

AHS Crash Safety Committee Meeting
5:00 PM, Tuesday, October 29
**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 “Certification of Composites Initiative,” Schuck, US Army AMRDEC  

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,” Marusich, 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  

6:00 – 7:00 PM Banquet Social  

7:00 – 9:30 PM Banquet  
“Smart Car Safety,” Mike Collins, Mercedes Product Expert, Tysinger Motors  

**TUESDAY, OCTOBER 29, 2013**

7:00 – 7:45 AM Continental Breakfast  
7:45 – 8:00 AM Welcoming Comments  

8:00 – 12:00 PM Session A: Structural Integrity and Structural Health Monitoring (SHM), Moderator – Bordick, US Army ADD-AATD  

8:00 – 8:30 AM “Progress and Planning for US Army Rotorcraft Structural Integrity Program Standardization,” Robeson, US Army ADD-AATD  
8:30 – 9:00 AM “SHM of Joints in Composite Laminate Structures,” Lissenden, Penn State University  
9:30 – 10:00 AM “Development of an Airframe Structural Integrity Management System,” Brookhart, Sikorsky  

10:00 – 10:30 AM Break  

11:00 – 11:30 AM “SHM-embedded Design for High Performance, Sustainable, and CBM-Enabling Structures of Future Vertical Lift,” Chang, Stanford University  
11:30 – 12:00 PM "The State of the Art and the Art of the Possible Using X-Ray Diffraction Residual Stress Measurement Technologies in Aerospace," Cuccia, Proto Manufacturing Inc.  

12:00 – 1:30 PM Luncheon  
Speaker: David Friedmann, Joint Multi Role Technology Demonstration Phase I Lead  

1:30 – 5:00 PM Session B: Durability and Damage Tolerance, Moderator – Robeson, US Army ADD-AATD  

1:30 – 2:00 PM “Simulation of Detecting Damage in Composite Stiffened Panel Using Lamb Waves,” Wang, NASA Langley Research Center  
2:00 – 2:30 PM “Analysis of Hydrodynamic Ram Compliant Structure,” Gatley, Boeing  
2:30 – 3:00 PM “Integrated Test/Modeling Analysis of Bonded Joints in Rotorcraft Composite Structures,” Gurvich, United Technologies Research Center  
3:00 – 3:30 PM Break  

3:30 – 4:00 PM “Assessing Rotorcraft Airframe Durability & Damage Tolerance,” Sarlashkar, Sikorsky  
4:00 – 4:30 PM “Full-Field Strain Analysis of Compressively Loaded Flat Composite Laminates Containing Undulated Fiber Architecture,” Henry, Penn State  
4:30 – 5:00 PM “Laser Peening for Improved Fatigue Lifetime of a Wing Attachment Shear-Tie – Application to Rotorcraft Structures,” Hackel, Metal Improvement Co.  

6:00 – 8:00 PM Exhibitors’ Reception