

**MEETING No. 110**  
**AEROSPACE CONTROL AND GUIDANCE SYSTEMS COMMITTEE**

Hilton Garden Inn  
14 Great Falls Plaza  
Auburn, ME 04210  
207.784.4433

**October 10 – 12, 2012**

**Tuesday            1.0 PLANNING ADVISORY BOARD MEETING**

9-Oct-12            Location – TBD  
7:00pm

Chairman	David Klyde
Vice-Chairman	Lou Knotts
Immediate Past Chairman	Gary Balas
Treasurer	Stan Pszczolkowski
Secretary	Jan De Luca

**Board Members**

C. Belcastro	P Hattis	D Schmidt
D Bodden	R Hess	M Tischler
D Doman	S Jacobson	M Waszak
S Donley	G Jenney	J Weyrauch
M Draper-Donley	B Lee	K Wise
S Garg	R Mehra	
I Gregory	D Mitchell	

**Wednesday        2.0 REGISTRATION AND BREAKFAST**

10-Oct-12        Location – TBD  
7:00 am – 8:30 am

**Wednesday        3.0 GENERAL BUSINESS MEETING**

10-Oct-12        Location – TBD  
8:30 am – 9:00 am    David Klyde – Chairman

**Wednesday        4.0 GENERAL COMMITTEE TECHNICAL SESSION**

10-Oct-12        Marge Draper-Donley and Christine Belcastro Co-Chairs  
9:00 am – 12:00 pm

**4.1 Research Institutions, Industry, and University Reports**

4.1.1 Research Institutions and Companies

4.1.1.1 Systems Technology, Inc. – Dave Klyde

4.1.1.2 Scientific Systems Company – Raman Mehra

4.1.1.3 Mitchell Aerospace Research – Dave Mitchell

4.1.1.4 Calspan – Lou Knotts

4.1.2 Universities

4.1.2.1 Texas A&M – John Valasek

4.1.2.2 Naval Post Graduate School – Isaac Kaminer

4.1.2.3 University of Minnesota – Gary Balas

4.1.2.4 University of Illinois Urbana-Champaign – Soon-Jo Chung

#### **4.2 Government Agencies Summary Reports**

##### 4.2.1 NASA

4.2.1.1 Dryden – Steve Jacobson

4.2.1.2 Engineering & Safety Center – Ken Lebsock

4.2.1.3 Glenn – Sanjay Garg

4.2.1.4 Langley – Carey Buttrill

##### 4.2.2 DoD

4.2.2.1 AFRL – Dave Doman

4.2.2.2 AFDD (Army) – Mark Tischler

**Wednesday**  
10-Oct-12  
12:00 pm – 1:30 pm  
**LUNCHEON – TBD (meet in Subcommittees)**  
Subcommittee chairs, members and attendees will meet for lunch and agenda planning for Meeting No. 111.

**Wednesday**  
10-Oct-12  
1:30 pm – 2:10 pm  
**5.0 2<sup>nd</sup> ANNUAL DAVE WARD MEMORIAL LECTURE**  
TBD

**Wednesday**  
10-Oct-12  
2:10 pm – 3:30 pm  
**6.0 SUBCOMMITTEE D – DYNAMICS, COMPUTATIONS, AND ANALYSIS**  
Ron Hess and Dave Doman, Co-Chairs  
Dave Schmidt, Vice Chair  
6.1 “Handling Qualities Optimization & Trade-offs for Business Jet Flight Control Design,” Tom Berger, UARC/AFDD (abstract) (presentation)  
6.2 “Incremental NDI and Global Optimization,” Bob Mulder, TU Delft (abstract) (presentation)

**Wednesday**  
10-Oct-12  
3:30 pm – 3:50 pm  
**Break**

**Wednesday**  
10-Oct-12  
3:50 pm – 5:10 pm  
**6.0 SUBCOMMITTEE D – DYNAMICS, COMPUTATIONS, AND ANALYSIS (cont)**  
Ron Hess and Dave Doman, Co-Chairs  
Dave Schmidt, Vice Chair  
6.3 “Model Validation Using Simulink,” Darren Coffey, Rockwell Collins (abstract) (presentation)  
6.4 “Boeing Phantom Ray Flight Control,” Ian Halley, Boeing (abstract) (presentation)

**Wednesday**  
10-Oct-12  
6:00 pm – 7:00 pm  
**SOCIAL HOUR – LOCATION – TBD**

<p><b>Thursday</b> 11-Oct-12 7:00 am – 8:00 am</p>	<p><b>BREAKFAST – LOCATION – TBD</b></p>
<p><b>Thursday</b> 11-Oct-12 8:00 am – 10:00 am</p>	<p><b>7.0 SUBCOMMITTEE E – FLIGHT, PROPULSION, AND AUTONOMOUS VEHICLE CONTROL SYSTEMS</b> Sanjay Garg and Irene Gregory, Co-Chairs</p> <p>7.1 “Cargo UAS deployed in Afghanistan,” Curt Eshbaugh, Lockheed Martin, and Cliff Gunsallus, Kaman Aerospace, (abstract) (presentation)</p> <p>7.2 “L1 Adaptive Control: Technology Transition in Europe,” Enric Xargay Department of Aerospace Engineering, University of Illinois at Urbana-Champaign (abstract) (presentation)</p> <p>7.3 “Enhanced Engine Control for Emergency Operation,” Jonathan Litt, NASA Glenn Research Center (abstract) (presentation)</p>
<p><b>Thursday</b> 11-Oct-12 10:00am – 10:20am</p>	<p><b>Break</b></p>
<p><b>Thursday</b> 11-Oct-12 10:20am – 11:00am</p>	<p><b>7.0 SUBCOMMITTEE E – FLIGHT, PROPULSION, AND AUTONOMOUS VEHICLE CONTROL SYSTEMS</b> Sanjay Garg and Irene Gregory, Co-Chairs</p> <p>7.4 “Centaur - Pilot Optional Aircraft GNC,” Martin Gomez, Aurora Flight Sciences Corporation (abstract) (presentation)</p>
<p><b>Thursday</b> 11-Oct-12 11:00am – 12:20pm</p>	<p><b>8.0 SUBCOMMITTEE A – AERONAUTIC AND SURFACE VEHICLES</b> Steve Jacobson, Chair Brian Lee and Dave Mitchell, Vice Chairs</p> <p>8.1 “Sikorsky High Speed Helicopter,” Ryan Lefkofski, Sikorsky (abstract) (presentation)</p> <p>8.2 “Underwater Robotics,” Doug Horner, NPGS (abstract) (presentation)</p>
<p><b>Thursday</b> 11-Oct-12 12:30 pm – 2:00 pm</p>	<p><b>LUNCHEON – TBD</b> PAB will meet for lunch &amp; agenda planning for Meeting No. 111. Meeting attendees have open seating for lunch.</p>
<p><b>Thursday</b> 11-Oct-12 2:00pm – 3:20pm</p>	<p><b>8.0 SUBCOMMITTEE A – AERONAUTIC AND SURFACE VEHICLES (cont)</b> Steve Jacobson, Chair Brian Lee and Dave Mitchell, Vice Chairs</p> <p>8.3 “F-111 Adaptive Control System,” Carl Droste, Lockheed Martin (retired) (abstract) (presentation)</p> <p>8.4 “USAF TPS Talk,” Chris Cotting or Bill Gray, USAF (abstract) (presentation)</p>
<p><b>Thursday</b> 11-Oct-12 3:20 pm – 3:40 pm</p>	<p><b>Break</b></p>

**Thursday**  
11-Oct-12  
3:40 pm–5:00 pm

**9.0 SUBCOMMITTEE B – MISSILES AND SPACE**  
Phil Hattis, Chair  
John Weyrauch & Kevin Wise, Vice Chairs

9.1 “NESC Study of the Differing Global Satellite Navigation Satellite Systems,” Neil Dennehy, NESC (abstract) (presentation)

9.2 “Some Recent Developments in Guided Airdrop Capabilities,” Bobby Cohanim, Draper Laboratory (abstract) (presentation)

**Friday**  
12-Oct-12  
7:00 am – 8:00 am

**BREAKFAST – LOCATION – TBD**

**Friday**  
12-Oct-12  
8:00 am – 9:20 am

**9.0 SUBCOMMITTEE B – MISSILES AND SPACE (cont)**  
Phil Hattis, Chair  
John Weyrauch & Kevin Wise, Vice Chairs

9.3 “The Texas A&M Visually Guided Mortar System,” John Valasek POC (abstract) (presentation)

9.4 “Status of the SLS program at NASA/Marshall,” Jeb Orr POC (abstract) (presentation)

**Friday**  
12-Oct-12  
9:20 pm – 12:00 pm

**10.0 SUBCOMMITTEE C – AVIONICS AND SYSTEM INTEGRATION**  
Raman Mehra and Marty Waszak, Co-Chairs

10.1 “Modular Avionics Optimization for Boeing 787” Pete Manolios, Northeastern Univ. (abstract) (presentation)

10.2 “TBD,” Frank Thielecke, U. of Hamburg, Germany (abstract) (presentation)

10.3 “Image-based GPS Denied Navigation,” Tim McLain, BYU (abstract) (presentation)

10.4 “Sense and Avoid,” TBD (abstract) (presentation)