

**MEETING NO. 124**  
**AGENDA DRAFT**  
**AEROSPACE CONTROL AND GUIDANCE SYSTEMS COMMITTEE**

The Woodlands Hotel  
105 Visitor Center Way  
Williamsburg, VA

**16-18 October 2019**

**Tuesday**

15 Oct -19

6:30pm

**1.0 PLANNING ADVISORY BOARD MEETING**

Azalea Room

<b>Chairman</b>	Marge Draper-Donley
<b>Vice-Chairman</b>	Piero Miotto
<b>Immediate Past Chairman</b>	Brian Lee
<b>Treasurer</b>	Stan Pszczolkowski
<b>Secretary</b>	Jeb Orr

**Planning Advisory Board Members**

Riccardo Bevilacqua	Irene Gregory	Raman Mehra
Mike Bolender	Phil Hattis	Dave Mitchell
Oliver Brieger	Steve Jacobson	James Paduano
Jan De Luca	Dave Klyde	John Valasek
Dave Doman	Lou Knotts	Kevin Wise
Dale Enns	Xavier Le Tron	Tansel Yucelen

**PAB Emeritus**

Shawn Donley	Ron Hess	Gavin Jenney	Dave Schmidt
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**Wednesday**

16 OCT-19

7:00am – 8:30am

**2.0 REGISTRATION AND BREAKFAST**

Cascade Room 2

8:30am – 9:00am

**3.0 GENERAL BUSINESS MEETING**

Cascade Room 2

Marge Draper-Donley – Chairman

**Wednesday**

16 OCT-19

9:00am – 12:00pm

**4.0 GENERAL COMMITTEE TECHNICAL SESSION**

**Cascade Room 2**

Dale Enns and Tansel Yucelen, Co-Chairs

*NOTE: LISTED GENERAL SESSION BRIEFINGS ARE STILL PLACE HOLDERS*

9:00 am – 9: 50 am

**4.1 Government Agencies Summary Reports**

4.1.1 DLR -

4.1.2 NASA

4.1.2.1 Langley - Carey Buttrill

4.1.2.2 Marshall – John Wall

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

4.2.1 Research Institutions and Companies

4.2.1.1 Systems Technology, Inc. - Dave Klyde

4.2.1.2 Calspan Flight Research Group - Lou Knotts

9:50 am – 10:10 am

**BREAK**

10:10 am – 12:00pm

4.2.1.3 Scientific Systems Company - Raman Mehra

4.2.1.4 Barron & Associates - Alec Bateman

4.2.1.5 Mitchell Aerospace Research - Dave Mitchell

4.2.1.6 Sikorsky Aircraft - Vineet Sahasrabudhe

4.2.1.7 Crew Systems – Dick Newman

4.2.2 Technical Committee Liaison

4.2.2.1 SAE S-7 Committee – Brian Lee

4.2.3 Universities

4.2.3.1 University of Minnesota – Pete Seiler

4.2.3.2 Technical University Munich - Florian Holzapfel

4.2.3.3 Hamburg University of Technology - Frank Thielecke

12:00pm – 1:30pm

**LUNCHEON – Cascade Room 1 (Meet in Subcommittees)**

Subcommittee chairs, members and attendees will meet for lunch and agenda planning for Meeting No. 125.

1:30 pm - 2:10 pm

**5.0 Ward Award Lecture – “Game-Theoretic Control Strategies in Adversarial Environments”**, Alexander Von Moll

2:10 pm – 5:10 pm

**6.0 SUBCOMMITTEE A – Aeronautical and Ground Vehicles**

**Cascades Room 2**

Steve Jacobson, Chair

Oliver Brieger, Xavier Le Tron and Dave Mitchell, Vice Chairs

2:10 pm – 2:50 pm

**6.1 ““DLR Recent Design and Flight Test Experience with Nonlinear Control Methods”**, Gertjan Looye, DLR

**Still Wednesday**  
16 OCT 2019

- 2:50 pm – 3:30 pm **6.2** “Urban Air Mobility Certification Activities Within the FAA”, Dave Sizoo, Federal Aviation Administration
- 3:30 pm – 3:50 pm **BREAK**
- 3:50 pm – 4:30pm **6.3** “Guidance and Control of the Virgin Galactic Space Ship II”, James Flynn and Scott Condie, The Spaceship Company
- 4:30pm – 5:10 pm **6.4** “The Evolution of Flight Testing for PIO at Boeing Commercial Airplanes”, Brian Lee, Boeing Commercial Airplanes
- 6:00pm – 9:00pm **RECEPTION – Cascades Terrace**

**Thursday**  
17 Oct-19

7:00am – 8:00am

**BREAKFAST – Cascades Room 2**

**Thursday**  
17 Oct-19

8:00 am – 11:00 am

**7.0 SUBCOMMITTEE B – MISSILES AND SPACE**  
**Cascade Room 2**

Phil Hattis, Chair  
Riccardo Bevilacqua, Vice Chair; Kevin Wise, Vice Chair

8:00am – 8:40am

**7.1** “The Vulcan Launch System”, John Reed, ULA

8:40am – 9:20am

**7.2** “Lunar Lander Simulator” Kevin Duda, Draper Labs

9:20 am – 10:00am

**7.3** “Development of the Apollo Lunar Module Digital Autopilot”, John Tylko, MIT

10:00 am – 10:20 am

**BREAK**

10:20 am – 11:00 am

**7.4** “Assessing Net Habitable Volume and CO2 Concentrations with the Wearable Kinematic System in the NEEMO Spaceflight Analog”, Tristan Endsley, Draper Labs

11:00am – 12:20 pm

**8.0 SUBCOMMITTEE C – AVIONICS AND SYSTEM INTEGRATION**  
**Cascade Room 2**

Raman Mehra, Chairman  
Jan DeLuca, Vice Chair; James Paduano, Vice Chair

11:00 am – 11:40 am

**8.1** “Failure Detection Isolation and Recovery,” Xavier LeTron, Airbus (or PhD student at Airbus)

11:40 am – 12:20 pm

**8.2** “Shipboard Landing (SALRS) Program,” Peter Arslanian, NAVAIR

12:20 pm – 2:00pm

**LUNCHEON Cascades Room 1**

PAB will meet for lunch and agenda planning for Meeting No. 125 in Oak 1

Other attendees have open seating for lunch in Cascades Room 1

**Thursday**  
OCT 17, 2019  
2:30 pm

**Meet in Visitors' Center for Private Tour** (comfortable shoes recommended)

2:30pm – 4:30 pm

**Guided Tour of Colonial Williamsburg**

**Friday**  
18 Oct -19

7:00am – 8:00am

**BREAKFAST – Cascades Room 2**

**Friday**  
18 Oct 2019

**8.0 SUBCOMMITTEE C – AVIONICS AND SYSTEM INTEGRATION, cont  
Cascades Room 2**

Raman Mehra, Chairman

Jan DeLuca, Vice Chair; James Paduano, Vice Chair

8:00 am – 8:40 am

**8.3** “DARPA Fast Lightweight Autonomy Program Recap – Draper/MIT,” Ted Steiner and Julius Rose, Draper

8:40 am – 9:20 am

**8.4** “Trust, Test, and Evaluation of Autonomous UAS in a MUM-T Configuration” Reed Young, JHU-APL

9:20 am – 12:20 pm

**9.0 SUBCOMMITTEE D – DYNAMICS, COMPUTATIONS, AND ANALYSIS**

Dave Doman, Chair

Dave Klyde, Vice Chair, Mike Bolender, Vice Chair

9:20 am – 10:00 am

**9.1** “ F-35 Control Law Design, Development and Verification”, Jeff Harris, Lockheed

10:00 am – 10:20 am

**BREAK**

10:20 am – 11:00 am

**9.2** “Min/Max Cooperative Pursuit”, David Casbeer, AFRL Applied Research

11:00 am – 11:40 am

**9.3** “DIVE – Dynamic Interface for Virtual Environments”, Zach Smith, NAVAIR

11:40 am – 12:20 pm

**9.4** ““Envelope Expansion for UPRT Using Non-OEM Models”, David Gingras, Bihle

12:20 pm

**ADJOURN**