

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

7:00 PM

1.0 PLANNING ADVISORY BOARD MEETING

Azalea Room

Chairman	Marge Draper-Donley
Vice-Chairman	Piero Miotto
Immediate Past Chairman	Brian Lee
Treasurer	Stan Pszczolkowski
Secretary	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

4.1.3 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**“Guidance and Control of the Virgin Galactic Space Ship II”, James Flynn and Scott Condie, The Spaceship Company
- 3:30 pm – 3:50 pm **BREAK**
- 3:50 pm – 4:30pm **6.3** “The Evolution of Flight Testing for PIO at Boeing Commercial Airplanes”, Brian Lee, Boeing Commercial Airplanes
- 4:30 pm – 5:10 pm **7.0 SUBCOMMITTEE B – MISSILES AND SPACE**
Cascade Room 2
Phil Hattis, Chair
Riccardo Bevilacqua, Vice Chair; Kevin Wise, Vice Chair
- 4:30pm – 5:10 pm **7.1** “Space Launch System Thrust Vector Servoelasticity”, Jeb Orr, McLaurin Aerospace
- 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

7.2 “The Vulcan Launch System”, John Reed, ULA

8:40am – 9:20am

7.3 “Lunar Lander Simulator” Kevin Duda, Draper Labs

9:20 am – 10:00am

7.4 ” Development of the Apollo Lunar Module Digital Autopilot”, John Tylko, MIT

10:00 am – 10:20 am

BREAK

10:20 am – 11:00 am

7.5 “Assessing the Wearable Kinematic System for the Measure of Localized CO2 in the NASA Extreme Environment Mission Operations (NEEMO) spaceflight analog”, Tristan Endsley, Draper Labs

Thursday

OCT 17, 2019

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

2:30 pm **Meet at Visitors' Center for Tour** (comfortable shoes recommended)

2:30pm – 4:30 pm **Guided Tour of Colonial Williamsburg** (Note- you must have signed up or see Chair for available space)

Friday
18 Oct -19

7:00am – 8:00am **BREAKFAST – Cascades Room 2**

Friday
18 Oct 2019

8:00 am – 9:20 am **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”**
Chris Eaton, 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”**, Jack Ralston, Bihrl Applied Research

12:20 pm **ADJOURN**