

MEETING No. 109
AEROSPACE CONTROL AND GUIDANCE SYSTEMS COMMITTEE

Marriott University Center
480 Wakara Way
Salt Lake City, UT 84108
801.581.1000

March 6 – 9, 2012

Tuesday **1.0 SHORT COURSE: – “Aircraft System Identification – Theory and Practice” by Dr. Gene Morelli**
6-March-12
8:00am-5:00pm Location – Fort Douglas, Breakfast at 7:30 am

Tuesday **2.0 PLANNING ADVISORY BOARD MEETING**
6-March-12
7:00pm Location – Connor

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 **3.0 REGISTRATION AND BREAKFAST**
7-March-12
7:00 am – 8:30 am Location – Ballroom 2

Wednesday **4.0 GENERAL BUSINESS MEETING**
7-March-12
8:30 am – 9:00 am Location – Ballroom 2
David Klyde - Chairman

Wednesday **5.0 GENERAL COMMITTEE TECHNICAL SESSION**
7-March-12
9:00 am – 12:00 pm Marge Draper-Donley and Christine Belcastro Co-Chairs

5.1 Government Agencies Summary Reports

5.1.1 DoD
5.1.1.1 AFDD (Army) – Mark Tischler
5.1.1.2 AFRL – Dave Doman
5.1.2 NASA

- 5.1.2.1 Langley – Carey Buttrill
- 5.1.2.2 Glenn – Sanjay Garg
- 5.1.2.3 Engineering & Safety Center – Ken Lebsack
- 5.1.2.4 Dryden – Steve Jacobson

5.2 Research Institutions, Industry, and University Reports

5.2.1 Universities

- 5.2.1.1 University of Illinois Urbana-Champaign – Soon-Jo Chung
- 5.2.1.2 University of Minnesota – Gary Balas
- 5.2.1.3 Naval Post Graduate School – Isaac Kaminer
- 5.2.1.4 Texas A&M – John Valasek

5.2.2 Research Institutions and Companies

- 5.2.2.1 Calspan – Lou Knotts
- 5.2.2.2 Mitchell Aerospace Research – Dave Mitchell
- 5.2.2.3 Scientific Systems Company – Raman Mehra
- 5.2.2.4 Systems Technology, Inc. – Dave Klyde

Wednesday
7-March-12
12:00 pm – 1:30 pm

LUNCHEON – Ballroom 3 (meet in Subcommittees)
Subcommittee chairs, members and attendees will meet for lunch and agenda planning for Meeting No. 110.

Wednesday
7-March-12
1:30 pm – 3:30 pm

6.0 SUBCOMMITTEE E – FLIGHT, PROPULSION, AND AUTONOMOUS VEHICLE CONTROL SYSTEMS
Sanjay Garg and Irene Gregory, Co-Chairs

6.1 “Mitigating a Potential Hazardous Icing Encounter using ICEPRO,” Borja Martos, UTSI (abstract) (presentation)

6.2 “Improving Quadrotor State Estimation,” Tim McLain, BYU (abstract) (presentation)

6.3 “UAS Target Level of Safety for 3rd Parties,” Roland Cochran, NAVAIR (abstract) (presentation)

Wednesday
7-March-12
3:30 pm – 3:50 pm

Break

Wednesday
7-March-12
3:50 pm – 4:30 pm

6.0 SUBCOMMITTEE E – FLIGHT, PROPULSION, AND AUTONOMOUS VEHICLE CONTROL SYSTEMS (cont)
Sanjay Garg and Irene Gregory, Co-Chairs

6.4 “UAS Motion Video Tracking Challenge,” John Valasek, Texas A&M (abstract) (presentation)

Wednesday
7-March-12
4:30 pm – 5:10 pm

7.0 SUBCOMMITTEE A – AERONAUTIC AND SURFACE VEHICLES
Steve Jacobson, Chair
Brian Lee and Dave Mitchell, Vice Chairs

7.1 “787 from a Pilot’s Perspective,” Mike Bryan, Boeing, (abstract) (presentation)

Wednesday
SOCIAL HOUR – LOCATION – Conference Atrium

7-March-12
6:00 pm – 7:00 pm

Thursday BREAKFAST – LOCATION – Ballroom 2

8-March-12
7:00 am – 8:00 am

Thursday 7.0 SUBCOMMITTEE A – AERONAUTIC AND SURFACE VEHICLES (cont)

8-March-12 Steve Jacobson, Chair
8:00 am – 10:00 am Brian Lee and Dave Mitchell, Vice Chairs

7.2 “History of the NT-33A Variable Stability Aircraft,” Lou Knotts (abstract) (presentation)

7.3 “HTV-2,” Bob Wetherall, Lockheed Martin (abstract) (presentation)

7.4 “Formation Flight,” Joe Pahle, NASA DFRC (abstract) (presentation)

Thursday Break

8-March-12
10:00am – 10:20am

Thursday 8.0 SUBCOMMITTEE B – MISSILES AND SPACE

8-March-12 Phil Hattis, Chair
10:20 am–11:40 pm John Weyrauch & Kevin Wise, Vice Chairs

8.1 “NESC Independent Review of the Constellation Program Ares I Control Sensitivity to Orion Service Module (SM) Tank Slosh Dynamics,” Ken Lebsack, Orbital Sciences (abstract) (presentation)

8.2 “TVC Actuator Development for Antares,” Mike Ruth, Orbital Sciences (abstract) (presentation)

Thursday LUNCHEON – Ballroom 3

8-March-12 PAB will meet for lunch & agenda planning for Meeting No. 110.
12:00 pm – 2:00 pm Meeting attendees have open seating for lunch.

Thursday 8.0 SUBCOMMITTEE B – MISSILES AND SPACE

8-March-12 Phil Hattis, Chair
2:00 pm – 3:20 pm John Weyrauch & Kevin Wise, Vice Chairs

8.3 “The NRC’s Technology Development Prioritization Recommendations for NASA,” Phil Hattis, Draper Lab (abstract) (presentation)

8.4 “Status of Precision Guided Projectiles Programs,” John Weyrauch, ATK (abstract) (presentation)

Thursday Break

8-March-12
3:20 pm – 3:40 pm

Thursday 9.0 SUBCOMMITTEE C – AVIONICS AND SYSTEM INTEGRATION

8-March-12 Raman Mehra and Marty Waszak, Co-Chairs
3:40 pm – 5:00 pm

9.1 “Multi-spacecraft Formation Program,” Fred Hadaegh (abstract) (presentation)

9.2 “Ground Tests of Airport Taxi Operations,” Hamsa Balakrishnan, MIT

(abstract) (presentation)

Friday
9-March-12
7:00 am – 8:00 am

BREAKFAST – LOCATION – Ballroom 2

Friday
9-March-12
8:00 am – 9:20 am

9.0 SUBCOMMITTEE C – AVIONICS AND SYSTEM INTEGRATION (cont)

Raman Mehra and Marty Waszak, Co-Chairs

9.3 “Vision Based Guidance of Small and Miniature Air Vehicles,” Randy Beard, BYU (abstract) (presentation)

9.4 “Control Challenges of Realizing a Soft-Winged Aerial Robot that Can Fly Like a Bat,” Soon-Jo Chung, University of Illinois Urbana-Champaign (abstract) (presentation)

Friday
9-March-12
9:20 am – 12:00 pm

10.0 SUBCOMMITTEE D – DYNAMICS, COMPUTATIONS, AND ANALYSIS (cont)

Ron Hess and Dave Doman, Co-Chairs

Dave Schmidt, Vice Chair

10.1 “Multidisciplinary Aircraft Demonstrator; Control of Flexible Aircraft,” Bryan Holm-Hansen, Lockheed (abstract) (presentation)

10.2 “Autonomy and Control for Aerospace Systems,” Dave Doman, AFRL (abstract) (presentation)

10.3 “Optimized Allocation of Control Effort Among Multiple Effectors,” Marc Bodson, University of Utah (abstract) (presentation)

10.4 “Minimal Modeling Adaptive Control of Aerospace Vehicles,” Dennis Bernstein, University of Michigan (abstract) (presentation)