

MEETING NO. 121

Draft AGENDA OUTLINE

AEROSPACE CONTROL AND GUIDANCE SYSTEMS COMMITTEE

DoubleTree Suites
Williams Center
5335 East Broadway Blvd.
Tucson, AZ 85711
10-13 April, 2018

Tuesday **Short Course: Flight Control Design: Tony Lambregts**
10-April-18 Katchina/Saguaro
8:00am

Tuesday
10-April-18
7:00pm **1.0 PLANNING ADVISORY BOARD MEETING**
Katchina/Saguaro

Chairman	Brian Lee
Vice-Chairman	Marge Draper-Donley
Immediate Past Chairman	Phil Hattis
Treasurer	Stan Pszczolkowski
Secretary	Jeb Orr

Board Members

Christine Belcastro	Sanjay Garg	Piero Miotto
Riccardo Bevilacqua	Irene Gregory	Dave Mitchell
Oliver Brieger	Steve Jacobson	James Paduano
Jan De Luca	Gavin Jenney	Mark Tischler
Dave Doman	Dave Klyde	Kevin Wise
Shawn Donley	Raman Mehra	Lou Knotts
Dale Enns	Niara Hovakimyan	Tansel Yucelen

Wednesday 11 April, 2018 7:00am – 8:00am	2.0 REGISTRATION AND BREAKFAST Katchina/Saguaro/Catalina
8:00am – 8:30am	3.0 GENERAL BUSINESS MEETING Katchina/Saguaro/Catalina Brian Lee – Chairman

<p>Wednesday 11 April, 2018 8:30am – 12:00pm</p>	<p>4.0 GENERAL COMMITTEE TECHNICAL SESSION Dale Enns and Tansel Yucelen Co-Chairs Katchina/Saguaro/Catalina</p>
	<p>(This is the list from a previous Meeting as a placeholder)</p> <p>4.1 Government Agencies Summary Reports</p> <ul style="list-style-type: none"> 4.1.1 AFRL – Dave Doman 4.1.2 DLR - Dominik Niedermeier 4.1.3 NASA <ul style="list-style-type: none"> 4.1.3.1 Armstrong – Steve Jacobson 4.1.3.2 Glenn – Sanjay Garg 4.1.3.3 Langley – Irene Gregory 4.1.3.4 Marshall – John Ottander <p>4.2 Research Institutions, Industry, and University Reports</p> <ul style="list-style-type: none"> 4.2.1 Research Institutions and Companies <ul style="list-style-type: none"> 4.2.1.1 Systems Technology, Inc. - Dave Klyde 4.2.1.2 Calspan Flight Research Group - Lou Knotts 4.2.1.3 Scientific Systems Company - Raman Mehra 4.2.1.4 Barron & Associates – Nate Richards 4.2.1.5 Mitchell Aerospace Research - Dave Mitchell 4.2.1.6 Aurora Flight Sciences – Jim Paduano 4.2.1.7 Crew Systems – Dick Newman 4.2.2 Technical Committee Liaison <ul style="list-style-type: none"> 4.2.2.1 SAE S-7 Committee – Brian Lee
<p>12:00pm – 1:30pm</p>	<p>LUNCHEON – Los Arboles (Meet in Subcommittees) Subcommittee chairs, members and attendees will meet for lunch and agenda planning for Meeting No. 122.</p>
<p>1:30pm – 2:10 pm</p>	<p>5.0 SUBCOMMITTEE C – Avionics and System Integration Katchina/Saguaro/Catalina Raman Mehra, Chair Jan De Luca and Jim Paduano, Vice Chairs</p> <p>5.1 “Recent Advances in Relative Navigation of Aerospace Systems,” Manoranjan Majji, Texas A&M University</p>
<p>2:10pm – 2:50pm</p>	<p>5.2 “Machine Learning in Aerospace,” Kendel McCarley and Matt Young, Raytheon</p>
<p>2:50pm – 3:30pm</p>	<p>5.3 “Investigation of Formal Methods as Applied to Cooperative UAV Systems”, Derek Kingston, AFRL</p>

<p>Wednesday 11 April, 2018 3:30pm – 3:50pm</p>	<p>BREAK</p>
<p>3:50pm – 4:30pm</p>	<p>6.0 SUBCOMMITTEE D – Dynamics, Computations, and Analysis Dave Doman and Dave Klyde, Co-Chairs Katchina/Saguaro/Catalina 6.1 “UAS Shipboard Landing Flight Test Results”, Buddy Denham, NAVAIR</p>
<p>4:30pm – 5:10pm</p>	<p>6.2 “Recent NASA Research on Multi-Rotor Vehicle Dynamics in Off-Nominal Conditions”, John Foster, NASA LaRC</p>
<p>5:30</p>	<p>Reception Los Arboles / Back Patio</p>
<p>Thursday 12 April, 2018 7:00am – 8:00am</p>	<p>BREAKFAST – Hotel restaurant</p>
<p>8:00am – 8:40am</p>	<p>6.0 SUBCOMMITTEE D - Dynamics, Computations, and Analysis Dave Doman and Dave Klyde, Co-Chairs Katchina/Saguaro/Catalina 6.3 “Flight Testing Active Flutter Suppression Control on a Small Flexible UAV”, Brian Danowsky, STI</p>
<p>8:40am – 9:20am</p>	<p>7.0 SUBCOMMITTEE E – Flight, Propulsion, and Autonomous Vehicle Control Systems Katchina/Saguaro/Catalina Sanjay Garg, Chair Irene Gregory and Lou Knotts, Vice Chairs 7.1 “The Pitfalls of Autonomy – Current State of Science in Autonomy”, Mark Balas, Embry Riddle Aeronautical University</p>
<p>9:20am – 10:00am</p>	<p>7.2 “Piloted Flight Test Evaluation of Robust Upset-Recovery Guidance”, Nathan Richards, Barron Associates</p>
<p>10:00am – 10:20am</p>	<p>Break</p>
<p>10:20am – 11:00am</p>	<p>7.0 SUBCOMMITTEE E– Flight, Propulsion, and Autonomous Vehicle Control Systems Sanjay Garg, Chair Irene Gregory and Lou Knotts, Vice Chairs Katchina/Saguaro/Catalina 7.3 “UAV Situational Awareness for Off-Nominal Events (USA1)”, George Hunter, Mosaic ATM</p>
<p>11:00am – 11:40am</p>	<p>8.0 SUBCOMMITTEE A – Aeronautic and Surface Vehicles Steven Jacobson, Chair Dave Mitchell and Oliver Brieger, Vice Chairs Katchina/Saguaro/Catalina 8.1 “Control of Flexible Structures Flight Research on X56”, Steve Jacobson</p>
<p>11:40-1:00</p>	<p>Luncheon –Back Patio</p>

	PAB Luncheon – Los Arboles
1:00pm	Depart for Pima County Aviation Museum – tour and dinner
~7:30pm	Return to hotel
Friday 13 April, 2018 7:00am – 8:00am	BREAKFAST – Hotel Restaurant
8:00am – 8:40am	8.0 SUBCOMMITTEE A– Aeronautic and Surface Vehicles Steven Jacobson, Chair Dave Mitchell and Oliver Brieger, Vice Chairs Katchina/Saguaro/Catalina 8.2 “Flutter Prediction on a G550”, Oliver Brieger, DLR
8:40am – 9:20am	8.3 “Tuning of Fly-by-Wire Feel Systems for Aircraft”, Ruben deValloi
9:20am – 10:00am	9.0 SUBCOMMITTEE B – Missiles and Space Piero Miotto, Chair Riccardo Bevilacqua and Kevin Wise, Vice Chairs Katchina/Saguaro/Catalina 9.1 “Cost effective V&V for guidance using enhanced ground testing (EGT)”, Peter Castelli, Draper
10:00am – 10:20am	Break
10:20am – 11:00am	9.0 SUBCOMMITTEE – Missiles and Space Piero Miotto, Chair Riccardo Bevilacqua and Kevin Wise, Vice Chairs Katchina/Saguaro/Catalina 9.2 “Deep and Shallow Learning Models for Space Guidance”, Roberto Furfaro, The University of Arizona
11:00am – 11:40am	9.3 “Dream Chaser ETA Test Flight”, Ian, Mitchel, Sierra Nevada
11:40am Adjourn	