C-UAS – Center for Unmanned Aircraft Systems
INDUSTRY ADVISORY BOARD MEETING
National Science Foundation (NSF) • Industry / University Cooperative Research Center
8 August - 9 August, 2017 • NOAA, College Park, Maryland

AGENDA

Tuesday, 8 August 2017 – NOAA Auditorium

7:30 AM  Registration
8:00 AM  Welcome and Meeting Objectives, Tim McLain, Director, C-UAS
8:10 AM  Introductions
8:20 AM  Break and Social Time
8:50 AM  C-UAS Overview and Meeting Details, Tim McLain, Director, C-UAS
9:15 AM  LIFE Form Process Review & NSF Questionnaire, Eric Sundstrom, NSF Assessment Coordinator
9:35 AM  CU Project Proposals, Eric Frew, Site Director
9:35 AM  CU 17-01 Robust Communication Services in Complex Environments, Eric Frew
9:40 AM  CU 17-02 sUAS Communications and Navigation in the NASA UTM, Brian Argrow & Dale Lawrence
9:45 AM  CU 17-03 Active Collaborative Sensing, Learning and Planning with Humans in UAS, Nisar Ahmed
9:50 AM  (New) CU 17-05 Small UAS Turbulence and Gust Measurement and Model, Dale Lawrence, John Farnsworth, Brian Argrow, & Sean Humbert
9:55 AM  LIFE Forms
10:00 AM  CU 17-04 User-Adaptive Assurances for Enhancing Trust, Eric Frew, Nisar Ahmed, Dale Lawrence, & Brian Argrow
10:05 AM  (New) CU 17-05 Verification & Validation of Autonomous Systems: Systematic Quantification of Failure Risks, Eric Frew & Sriram Sankaranarayanan
10:10 AM  (New) CU 17-06 Robust Fault Detection and Mitigation for Small UAS, Dale Lawrence, Eric Frew, & Nisar Ahmed
10:15 AM  (New) CU 17-07 Cycloidal Propellers for Seamless Transition Between Vertical and Forward Flight, John Farnsworth
10:20 AM  (New) CU 17-08 Path Following and Advanced Maneuvers for Small Fixed-wing UAS in Wind, Dale Lawrence & Eric Frew
10:25 AM  Interactive Session (Proposal Discussion Time) and LIFE Forms
11:15 AM  UM New Project Proposals, Ella Atkins, Site Director
11:15 AM  (New) UM 17-01 Very Flexible UAS for Aeroelastic Data Collection and Control Development, Carlos Cesnik
11:20 AM  (New) UM 17-02 Emergency Flight Planning with IoT and Onboard Sensor Data used in Decision Making, Ella Atkins
11:25 AM  (New) UM 17-03 Exploring Vulnerabilities in Multi-UAV Systems for Swarm Defence: A Control-Theoretic Approach, Dimitra Panagou
11:30 AM  (New) UM 17-04 Simulation of Individual and Swarms of UAS through Realistic Atmospheric Conditions, Karthik Duraisamy
11:35 AM  (New) UM 17-05 Electronic Geofencing Guidance and Control with UAS Traffic Management (UTM), Ella Atkins
11:40 AM  Interactive Session (Proposal Discussion Time) and LIFE Forms
12:30 PM  LUNCH
1:30 PM  VT Project Proposals, Craig Woolsey and Kevin Kochersberger, Site Directors
1:30 PM  VT17-01 UAV/UGV Cooperative Classification for Online UGV Route Planning and Localization, Kevin Kochersberger
1:35 PM  VT17-02 Agile Control for Inspection, Matt Hebdon, Pratap Tokekar, Mayur Patil, Craig Woolsey
1:40 PM  VT17-03 Security Aware Control Algorithms, Mazen Farhood
1:45 PM  (New) VT17-04 Autonomy Test & Evaluation, Verification & Validation (ATEVV): An Exploratory Case Study of Motion Planning and Control, Mazen Farhood & Craig Woolsey
1:50 PM  (New) VT17-05 Synthesis of Formally Specified, Configurable Hardware Monitors for Flight Control Software, Cameron Patterson & Mazen Farhood
1:55 PM  (New) VT17-06 Intelligent Visual Tracking System for Small UAS, Kevin Kochersberger & Craig Woolsey
2:00 PM  Joint BYU-VT17-01 Small Aircraft Flight Encounters (SAFE) Database and Algorithms, Craig Woolsey, Karl Warnick, & Randy Beard

2:05 PM  Interactive Session (Proposal Discussion Time) and LIFE Forms

2:55 PM  BYU Project Proposals, Randy Beard, Site Director
2:55 PM  BYU17-01 Robust Target Tracking, Randy Beard & Mike Goodrich
3:00 PM  BYU17-02 Navigation in Cluttered Terrain with Intermittent GPS, Tim McLain & Randy Beard
3:05 PM  (New) BYU17-03 Aerodynamic Performance of Multiple Interacting Rotors and Lifting Surfaces, Andrew Ning
3:10 PM  BYU17-04 s-UAV-based Infrastructure Monitoring, John Hedengren & Kevin Franke

3:15 PM  LIFE Forms
3:20 PM  BYU17-05 Robust Moving Target Handoff in GPS Denied Environments, Randy Beard & Mike Jensen
3:25 PM  BYU17-06 Optimization of Heterogeneous Group of Vehicles for Achieving Multiple Mission Level Objectives, Cammy Peterson & Andrew Ning
3:30 PM  (New) BYU17-07 Electronically Steered Arrays (ESAs) for Onboard UAS Satellite Communications, Karl Warnick
3:35 PM  (New) Joint BYU-CU17-02 Multiple Aircraft Sensing System (MASS), Randy Beard & Eric Frew
3:40 PM  BYU17-08 Probabilistic Programming for Perceptually Driven Autonomous Agents, David Wingate
3:45 PM  (New) BYU17-09 Counter UAS-Mitigation of Unauthorized Unmanned Air Systems, Karl Warnick & Randy Beard

3:50 PM  Interactive Session (Proposal Discussion Time) and LIFE Forms

4:40 PM  Initial Project Voting

5:00 PM  Graduate Student Poster Session (breakout room 1602)
Guest & New Member Workshop (auditorium)

6:00 PM  Adjourn
AGENDA

Wednesday, 9 August 2017 – NOAA Auditorium

7:30 AM   Social Time

8:00 AM   Welcome and agenda overview, Tim McLain -- Scheduling of next IAB meeting
8:10 AM   NSF Questionnaires, Eric Sundstrom, NSF Assessment Coordinator
8:30 AM   Georgia Tech/Penn State Discussion, Tim McLain, Director, C-UAS
8:40 AM   Membership, Funding, and Budget Update, Site Directors
9:20 AM   BREAK

9:30 AM   Center Operations Discussion, Derek Kingston, IAB Chair
10:00 AM  Project Reviews (Members and Guests), breakout room 1602
          Faculty Meeting, main auditorium
12:00 PM  BREAK - Grab Box Lunches

12:30 PM  Member Presentations, breakout room 1602 (Lunch Continued)
1:00 PM   BREAK

1:15 PM   IAB Project Final Voting – Qualtrics survey, breakout room 1602
1:40 PM   Final Results Shown
1:50 PM   Closing remarks, Tim McLain
2:00 PM   Adjourn