

Technical Operations

AESS Board of Governors Meeting

October 7-8, 2016

Edinburgh, Scotland

Walt Downing

VP Technical Operations, AESS



Objectives

(Cross-Committee Collaborations Highlighted in Red)

- 1 - Develop and implement a technical panel review process
- 2 - Expand technical panel participation in all AES-sponsored conferences
- 3 - Promote collaboration between technical panels and chapters
- 4 - Promote collaboration with AES Educational Activities to expand distinguished lecturer coverage and develop continuing professional development activities for all AES technical fields of interest
- 5 - Prepare technical panel guidance in the form of best practices, techniques, and tools
- 6 - Increase AESS member participation in technical panels

Initiatives

- Gap Analysis (Objective 1)
 - Develop matrices identifying alignment of technical panels with AESS conferences, distinguished lecturers, IEEE standards, etc.
 - Perform gap analysis on these matrices to identify opportunities to increase alignment
 - Review and evaluate technical panels (Blue/Green/Yellow/Red) on alignment metrics and work to continually improve scores

- Conferences (Objective 2)
 - Review attendance at AESS-sponsored conferences to identify AESS members for possible leadership roles
 - Identify cognizant technical panel for each conference and encourage participation in at least one AESS conference per year

Initiatives (Continued)

■ Chapters (Objective 3)

- Identify technical panel members and their local IEEE sections
- Develop matrix of technical panel membership vs. IEEE sections for regional coverage
- Analyze matrix to identify regions that have critical mass and ensure that there are local AES chapters in these regions to promote further collaboration
- Survey local AES chapters to identify which AES fields of interest, if any, are predominant among their members
- Use this information to inform and encourage member participation in relevant technical panels

■ Educational Activities (Objective 4)

- Utilize gap analysis to identify needs for distinguished lecturers in specific fields of interest
- Utilize AES chapter fields of interest and local experts to identify new distinguished lecturer candidates
- Explore concept of short courses proposed by educational activities to increase collaboration

Initiatives (Continued)

- Share Best Practices (Objective 5)
 - Collect charters, strategic plans, and other relevant documents for each technical panel
 - Identify best practices, techniques and tools used by most successful technical panels
 - Prepare a technical panel handbook of these best practices, techniques and tools
 - Share technical panel handbook with all technical panels
 - Revise and update as necessary

- Increase AESS Member Engagement (Objective 6)
 - Inform and invite AESS members to participate in AESS activities through improved communication efforts including letters, email, AESS website, QEB and social media

Technical Operations Coordinators

- AESS BoG Members serve on technical operations committee and assist with initiatives

- **Leo Ligthart**

- **Chapter Coordinator**
- **Objectives 3 & 6**



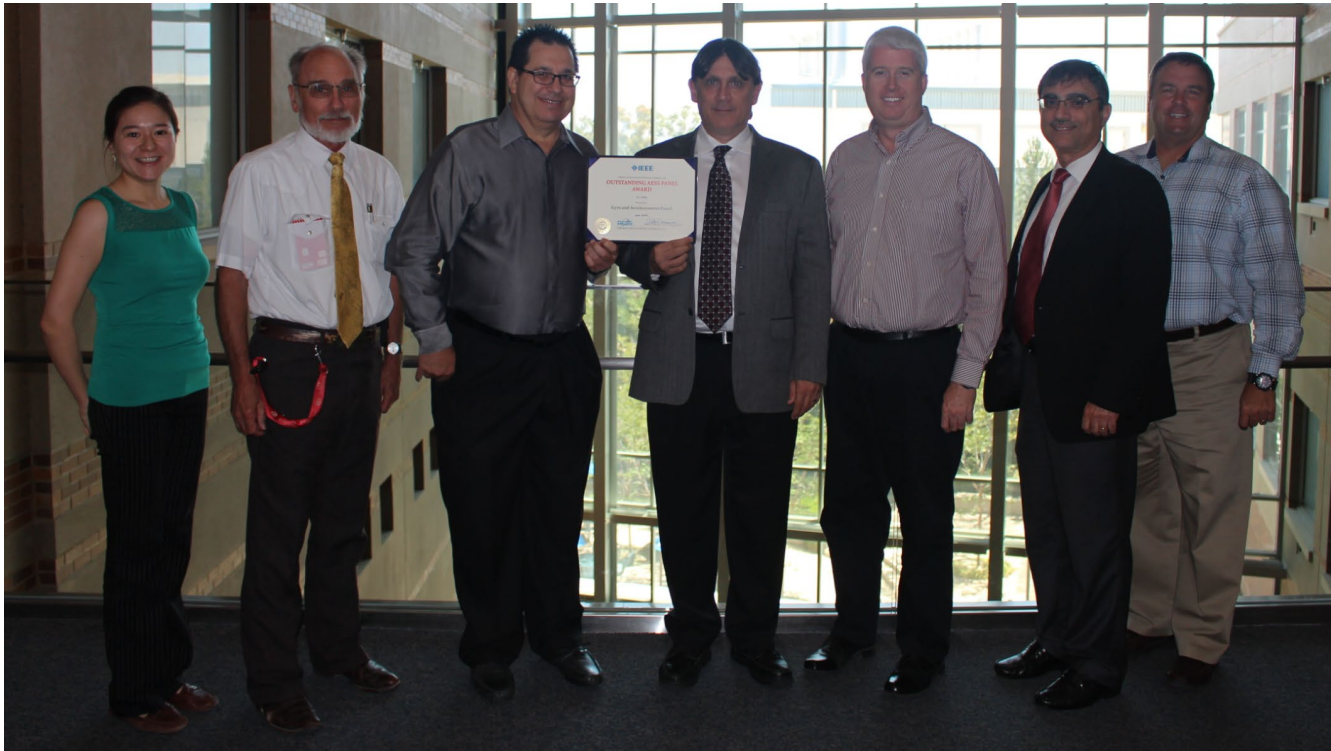
- **Alfonso Farina**

- **Education Coordinator**
- **Objectives 4 & 6**



Highlights

- Recognized Gyro and Accelerometer Panel with 2015 Outstanding Technical Panel Award for their extraordinary efforts in standards development and regular bimonthly meetings



Highlights (Continued)

- Technical Panel meetings at DASC
 - Avionics Systems
 - Cyber

- IEEE Central Texas Section joint SMC-AES Chapter Activities
 - 2015 U.S. AESS Chapter of the Year Award
 - 7 technical meetings YTD, including DL and student presentation
 - Participation at UTSA Technology Symposium
 - Trinity University student project award
 - Next meeting on October 14, 2016 at the University of the Incarnate Word featuring Autonomous Systems Lab
 - November meeting at UTSA Unmanned Systems Lab
 - March 2017 Gyro and Accelerometer Panel meeting

Highlights (Continued)

- UTSA Technology Symposium, April 26, 2016
 - Senior design project “Vehicular Awareness System”
 - Special recognition certificates to Patrick Stockton, Vishal Sonthalia, Abel Miguel, and Paul Avila



Highlights (Continued)

- Radar Systems – No Update
 - 39 active members, elections held, July 2016
 - New Civilian Radars Committee Chair approved, January 2016
 - Next meeting at RadarConf 2016 in Philadelphia, PA
 - 2016 Warren White Award: Dr. Jim Day, LMCO
 - 2016 Nathanson Award: Dr. Ryan Hersey, GTRI
 - RadarConf 2017: Seattle, WA
 - RadarConf 2018: Oklahoma City, OK
 - RadarConf 2019: Boston, MA
 - Special double issue on Waveform Diversity in SYSTEMS magazine in October and December 2016
 - Special issue on Passive Radars for Civilian Applications in SYSTEMS magazine in February 2017

Highlights (Continued)

- Aerospace Control and Guidance Systems
 - Last meeting March 15-18, 2016, Napa, CA
 - One-day short course on “Modeling the Human Pilot”
 - Next meeting October 19-21, Minneapolis, MN
 - Tansel Yucelen, University of South Florida, selected for young professional lecture competition award

- Aerospace Systems Integration Engineering – No Update
 - Koteswara Tatipamula, Chair; Dante Bolati, Vice-Chair; Giambattista Gruosso, Secretary; Roger Oliva, Past Chair
 - Three additional members (LaMont McAliley, Ritesh Keshri, and Friday Lawrence Ogboi)
 - Challenge remains building core group of volunteers and establishing goals and objectives

Highlights (Continued)

■ Gyro and Accelerometer

– Past meetings:

- May 16-17, 2016, Charlottesville, VA – 5 attendees
- July 7-8, 2016, Irvine, CA – 7 attendees
- September 22-23, 2016, Boulogne-Billancourt, France – 10 attendees

– Future meetings:

- November 10-11, 2016, Anaheim, CA
- January 23-24, 2017, Clearwater, FL
- March 2-3, 2017, San Antonio, TX

- Continued development and revisions of multiple IEEE standards for inertial sensors and system
- Officers: Randy Curey, Chair; Reese Sturdevant, Vice Chair and Systems Committee Chair; Jason Bingham, Sensors Committee Chair
- Seeking to expand membership with emphasis on IMU community
- Developing tri-fold brochure

Highlights (Continued)

■ Cyber Security

- Panel meeting at 25th DASC – Good Attendance
- Future panel meeting at Carnahan, October 25th
- SYSTEMS special issue Call for Papers Issued
- Planning Cyber tracks at DASC and Carnahan
 - Roy Alope, DASC
 - William Claycomb, Carnahan

■ Avionics Systems

- Panel meeting at 35th DASC
- Added four new members
- Future meetings at 2017 ICNS and 36th DASC
- Future activities: New Avionics Tutorials for DASC

Highlights (Continued)

- Target Tracking
 - New Panel Chair, David F. Crouse, NRL
 - Met July 8, 2016 at 2016 FUSION conference – 12 attendees
 - Created e-mail list with 48 names
 - Communicating regularly via e-mail
 - Need to modify the bylaws to reconstitute the panel
 - Selecting four committee chairs
 - Reworking draft IEEE track-to-truth standard dated 2007
 - Updating IEEE online dictionary for sensor data
 - Planning to meet during the 2017 IEEE Radar Conference
 - Planning to organize conferences and meet regularly

- Space Systems – No Update
- Unmanned Systems – No Update

IEEE Systems Council

- Spring 2016 AdCom meeting
 - April 21, 2016
 - 10th Annual IEEE International Systems Conference
- Fall 2016 AdCom meeting
 - October 3, 2016
 - 2nd IEEE International Symposium on Systems Engineering
- 11th Annual IEEE International Systems Conference
 - Conference Dates: April 24-27, 2017
 - Marriott Chateau Champlain, Montreal, Canada
 - Call for Papers Deadline: October 14, 2016