



Radar Systems Panel (RSP) Technical Operations Panel Report

Eric Mokole, Chair

Brian Rigling, Vice Chair

Laura Anitori, Past Chair

AESSE Board of Governors Meeting – Spring 2026

15-16 May 2026

Atlanta, GA, USA

Mission of RSP: Provide venues and publications for interactions that enhance the quality of radar-related work and that stimulate creativity by sharing ideas and progress across industry, government laboratories, educational institutions, and professional societies. Also, provide fora for introducing and developing young radar practitioners. High-level objectives include:

- Sustain and oversee the program of IEEE Radar Conferences
- Manage nomination and selection of candidates for IEEE Awards in radar
- Promote and support publications on radar
- Promote educational activities on radar
- Encourage submission of nominations for IEEE Fellow and Senior Members
- Periodically revise IEEE Standards pertaining radar
- Interact with related professional organizations (IEEE societies, URSI, etc.)

Awards Committee: Selects nominations for IEEE and AESS Awards based on RSP established standards and procedures

Civilian Radar Committee: Fosters the development of radar technologies and applications in civilian, commercial, and Earth resources-monitoring communities through education and conference initiatives

Conference Committee: Selects venue for annual IEEE Radar Conference, consistent with IEEE guidelines on Conferences

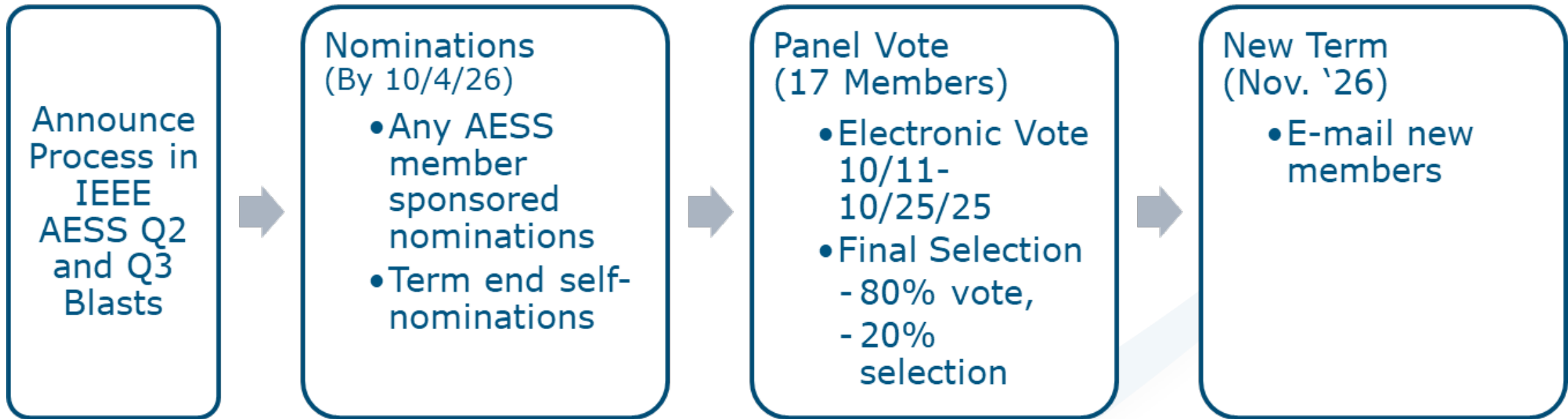
Education Committee: Advances education, publications, and IEEE member levels of students or new members of the radar community

Nomination and Appointments Committee: Nominates Panel Chair and Vice-Chair, Senior Members, and Fellows, and maintains the process for selection of RSP members with concurrence of current RSP Chair

Publications Committee: Promotes AESS technical publications in radar-related fields that are under-represented

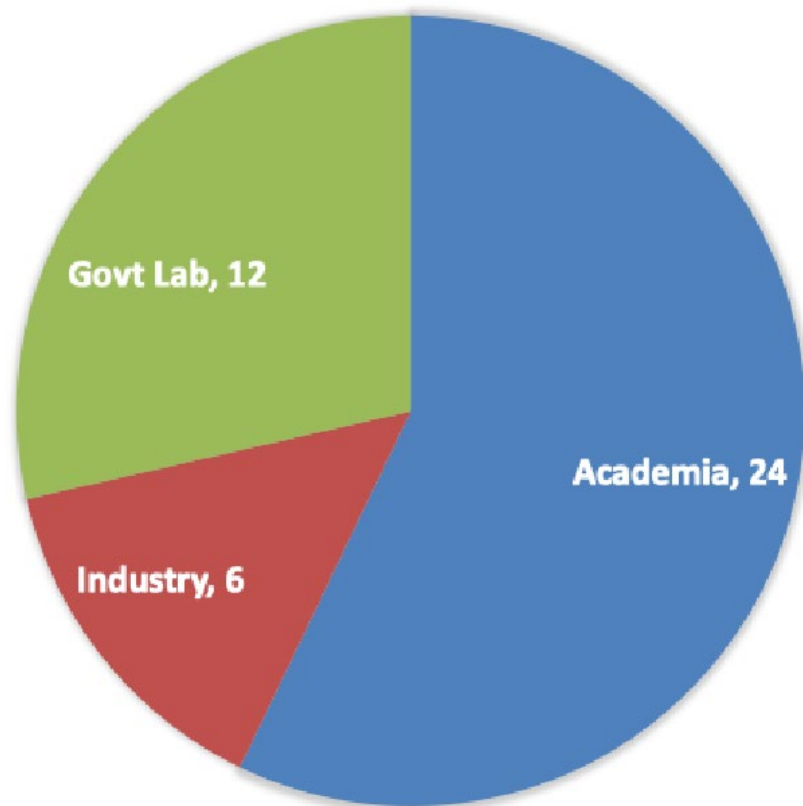
Spectral Innovation Committee: Promotes radar spectrum-sharing technologies for fostering development and advancement of technologies to enable more reliable and efficient radar operation in a congested spectrum, within the Policies and Standards of Worldwide Spectrum Allocations

Standards Committee: Maintains, periodically revises, and Promulgates IEEE Standard 686 “Standard Radar Definitions” and IEEE Standard 521 “IEEE Standard Letter Designations for Radar Frequency Bands” and provides inputs for other IEEE Standards as requested

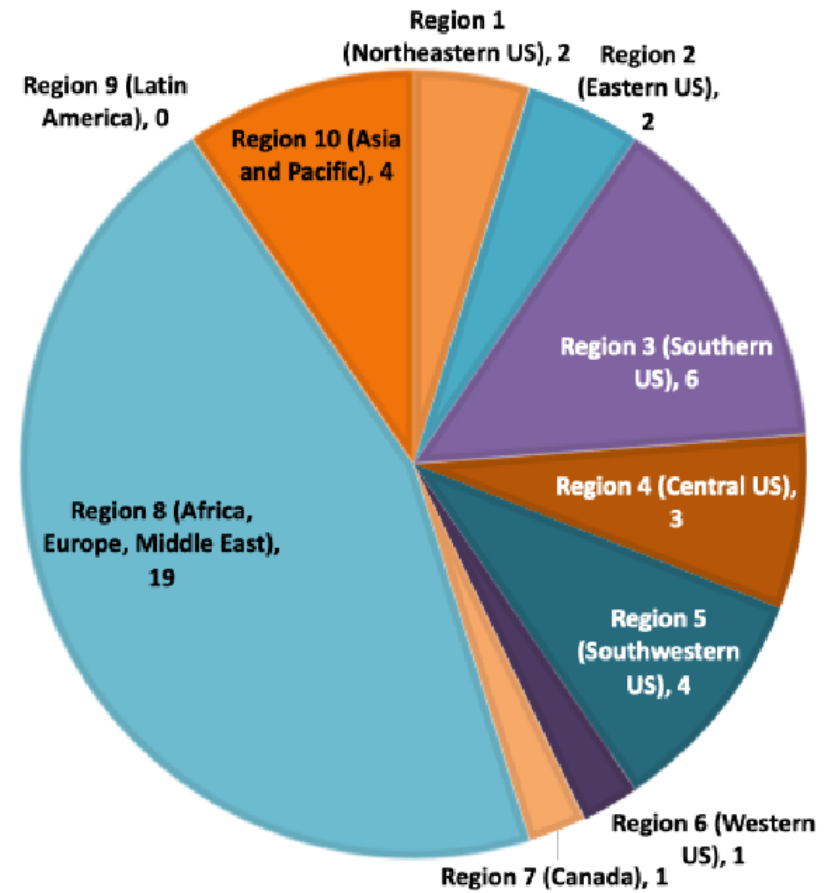


- Elevate Vice Chair (Brian Rigling) to Chair: Term is 2027-2028
- Need to elect 17 new members and Vice Chair
- Self-nomination eligible: Gini, Lombardo, Mokole, Samczynski, Yeary
- Lapse year: Adve, Bilik, Bing, De Maio, Fairley, Goldstein, Gurbuz, Malanowski, Metcalf, Richmond, Ritchie
- Eligible again – coming off lapse year: Correll; Picciolo; Ulander

Organization Type



IEEE Region



- **IEEE Radar Conference 2026: Organized/ran/completed conference in Phoenix AZ USA (9-15 May 2026)**
 - **9-10 May:** Radar Boot Camp (RBC) – 9 lectures by noted experts and 8 hands-on lab demonstrations
 - **11 May:** RSP Radar Challenge
 - **11 May:** Tutorials (10)
 - **12 May:** IEEE AESS RSP Spring Meeting
 - **12-14 May:** Conference Program – 5 plenary talks, Industry Panel (5 panelists), 3 parallel oral sessions (24 sessions), student paper competition, 2 poster sessions, 30 exhibitors, AP-S/MTT-S booth
 - **15 May:** Tutorials (5)

IEEE AESS Challenge Problem I – Radar-Based Heartbeat Monitoring in Dynamic Scenarios

- **Challenge: proposal phase; proposal winner created white paper and generated associated data set; call for solution proposals; reviewed and selected 4 winning teams**
 - No formal ranking of 4 solutions
 - Solution providers were given 24000 USD
- **Procedural Issues: Late funding and late provision of data to solution proposers caused delayed analysis and paper writing**
 - Led to very taxing, expedited peer review (**HUGE THANKS TO ALL REVIEWERS!!!**)
 - Need to work out the kinks
- **Special Session (1530-1700, Thursday, 14 May)**
 - 1 paper on problem statement/background, 4 papers on proposed solutions

- **Yu Rong, Kawon Han, Christos Masouros, Daniel W. Bliss** (Arizona State University, Ulsan National Institute of Science and Technology, University College London)
 - “AESS Challenge Problem I: Radar-Based Heartbeat Monitoring in Dynamic Scenarios”
- **Andrea Gargano, Roberto Garofalo, Alberto Greco, Marida De Maria, Marco Mercuri, Enzo Pasquale Scilingo** (Universita di Pisa and Research Center, Universita di Reggio Calabria)
 - “Radar-Based Heartbeat Monitoring in Dynamic Scenarios through Motion Separation and Heart Sounds Signal Processing”
- **Matteo Pardi, Amir Hosein Oveis, Saba Kharabadze, Ajeet Kumar** (University of Pisa, Radar and Surveillance Systems (RaSS) National Laboratory)
 - “Transformer-Based Heartbeat Monitoring with FMCW Radar Under Random Body Motion”
- **Muhammad Moiz, Sultanus Salehin, Sevgi Z. Gurbuz** (North Carolina State University)
 - “Radar-based Heart Rate Estimation via Skeleton-based Motion Comp”
- **Maowen Yin, Yuyang Miao, Alan Bannon, Charalambos Hadjipanayi, Danilo Mandic, Timothy Constandinou** (Imperial College London)
 - “Motion-Robust Heartbeat Reconstruction from Radar Signals via Transfer Learning”

▪ Conferences Schedule

- **2026 International Radar Conference** (16-18 October, Xi'an, Shaanxi, China)
- **2027 IEEE Radar Conference** (3-7 May, Bengaluru, India)
- **2027: International Conference on Radar Systems** (25-28 October, Glasgow, UK)
- **2028: IEEE Radar Conference** (29 April - 4 May, Oklahoma City, Oklahoma, USA)
- **2029: Rotterdam, Netherlands** (proposed)
- **2030: TBD**
- **2029 IEEE Radar Conference** (Call for proposals issued in June 2025)

2026 CIE International Radar Conference



2026 CIE International Conference on Radar

16-18 October, 2026, Xi'an, Shaanxi, China

<https://www.radarconf.cn/2026>

About the Conference

The 2026 CIE International Conference on Radar (Radar 2026) will be held from October 16-18 in Xi'an, Shaanxi, China. As one of the international radar conference series, which rotates among the USA, China, the UK, Australia, and France, Radar 2026 will highlight cutting-edge advances in radar technologies for diverse applications. Join us in Xi'an, where tradition meets technology progress, to shape the future of radar science. Authors are encouraged to submit a 4-6 page full paper (including figures) using the IEEE format. All accepted papers will be published in the conference proceedings and IEEE Xplore Digital Library. We look forward to welcoming you to Xi'an!

Authors can select from the following Core Sessions/Special Sessions:

- Core Session 1: Radar Systems and Applications
- Core Session 2: Advanced Theories, Methods and Technologies for Radar
Electromagnetic Information Manipulation and Digital Twin
- Core Session 3: Radar Signal and Information Intelligent Learning and Processing
- Core Session 4: Radar Imaging and Processing
- Core Session 5: Understanding and Interpretation of Radar Images
- Core Session 6: Target and Environment Characteristics
- Core Session 7: Integrated Sensing and Communication

- ©SS1: Advanced ISAR Signal Processing Based on Deep Learning
- ©SS2: System Design and Signal Processing for New-Concept Spaceborne SAR
- ©SS3: Radar Techniques for Healthcare
- ©SS4: Advanced Optimization Methodologies for Radar Systems
- ©SS5: Target Detection and Anti-jamming Techniques for Polarimetric Radar
- ©SS6: Multi-Static Radar Systems and Its Application
- ©SS7: Multi-Dimensional and Multi-Mode Radar Imaging and Fine Perception
- ©SS8: Advanced Signal Processing Techniques in Integrated Radar and Communications System
- ©SS9: Multimodal Sensor Data Fusion for Multi-target Tracking
- ©SS10: Radar/Optical Imaging Cross-Disciplinary Integration
- ©SS11: AI Technologies Meets Radar Sensing and Navigation
- ©SS12: Model-Data Joint-Driven Advanced Interpretation Techniques for SAR/PolSAR Imagery
- ©SS13: Advanced Theories and Technologies for Maritime Radar Small Target Detection, Tracking and Recognition
- ©SS14: LLM Empowering Radar Applications
- ©SS15: Advanced Antenna Design and Its Application in Radar Systems
- ©SS16: Advancing Radar with Microwave Photonics: From Devices to Systems and Applications
- ©SS17: Resource-Aware Management and Optimization for Cognitive Radar Systems
- ©SS18: Radar High-speed Target Detection, Tracking and Trajectory Prediction
- ©SS19: Integrated Radio-Frequency System Technology and Applications
- ©SS20: Advances in Radar Array Signal Processing

Important Date

Paper submission deadline: ~~April 30~~ **May 31, 2026** Completed paper submission: August 31, 2026
Paper acceptance notification: July 31, 2026 Conference Date: October 16-18, 2026

Conference Sponsors/Organizers

Sponsored by: Chinese Institute of Electronics (CIE)
Co-Sponsored by: IEEE AESS
Organized by: Radar Society of CIE, National Key Laboratory of Radar Signal Processing, Xidian University

Committees

General Chair: YANG Jianyu
Technical Program Committee Chair: LIU Hongwei

Contacts

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16-18 October, 2026, Xi'an, Shaanxi, China

Hotel: Shaanxi Hotel

<https://www.radarconf.cn/2026>

Paper submission deadline: May 31, 2026

Sponsor: Chinese Institute of Electronics (CIE)

Co-Sponsor: IEEE AESS

Contacts: Prof. Lan Lan, lanlan@xidian.edu.cn

RADAR2026

2026 CIE International Conference on Radar

16-18 October, 2026, Xi'an, Shaanxi, China

- HOME
- What's New
- Important Dates
- Call For Papers
- Paper Submission
- Committee
- Sponsors
- Program
- Keynotes
- Tutorials
- Awards
- Hotel Reservation
- Contacts

Sponsors



previous conference

RADAR 2021

RADAR2016



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more >>

What's New

more >>

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- Sponsored by Chinese Institute of Electronics (CIE)
- Co-Sponsored by IEEE AESS IET/UK SEE/France EA/Australia

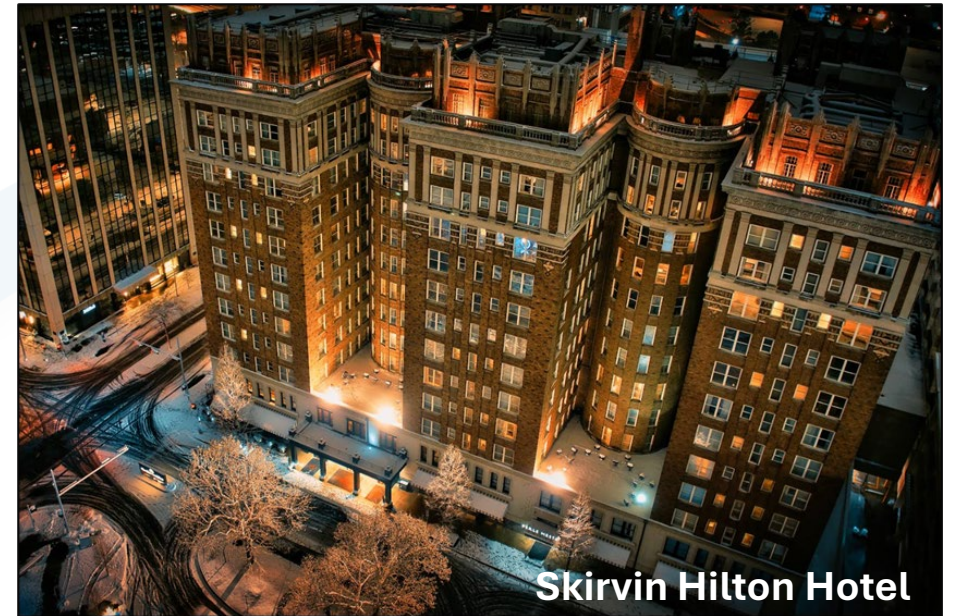
- Organized by Radar Society of CIE National Key Laboratory of Radar Signal Processing Xidian University



Explore Xi'an!



- **29 April – 5 May: Conference**
- **29 – 30 April: Radar Bootcamp**
- **1 May: Tutorials**
- **2 – 4 May: Sessions**
- **May 5: Tutorials**





- **Strong support from the local radar community (industry – automotive & marine & anti-drone, governmental labs like TNO, academia) and European Space Agency**
- **Coordination with other European radar communities**
- **The core of the local organizing committee formed from colleagues at TU Delft, TU Eindhoven, and the TNO**
- **Proposed Dates: 7 – 12 April 2029**

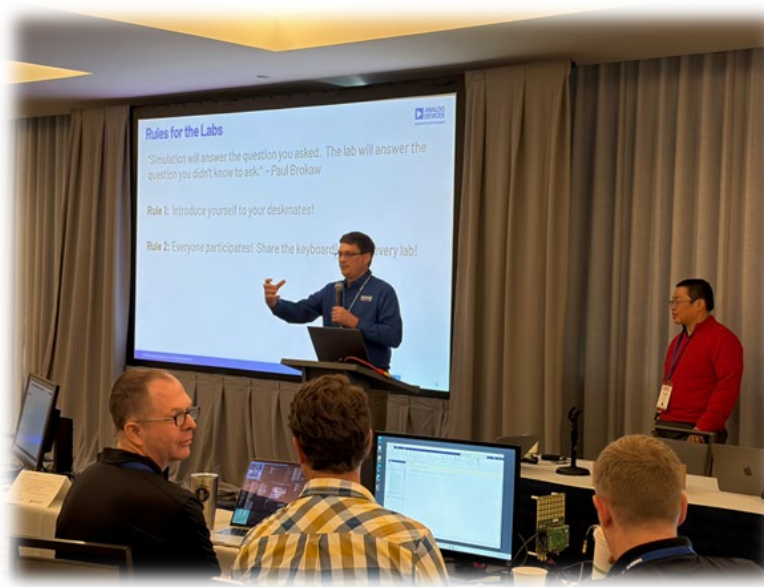
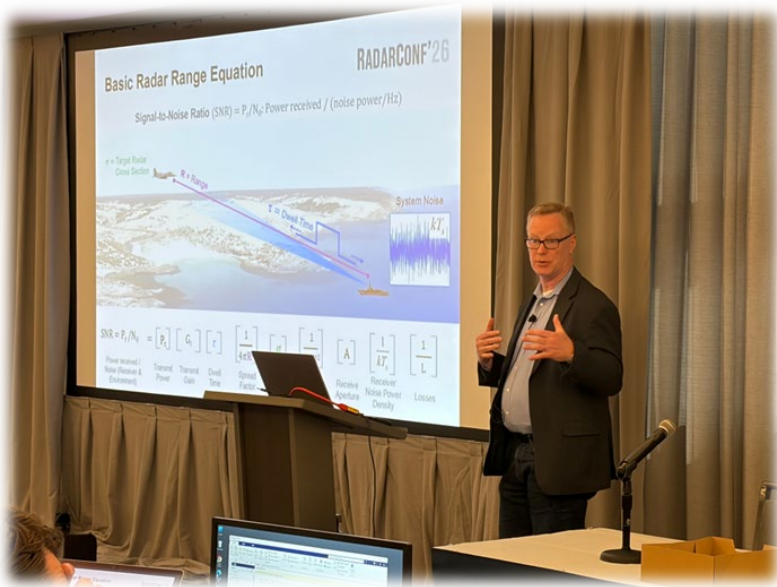
- **White – Maria Sabrina Greco**
- **Nathanson – Xiangrong Wang**
- **Picard – Yoshio Yamaguchi**
- **2026 Fellows – Igal Bilik**
- **Industrial Innovation Award - John Glass, Mark Levadahl**
- **Mike Wicks Recipient – Matteo Pardi**

▪ **2026 RBC at the Sheraton Phoenix Downtown Hotel**

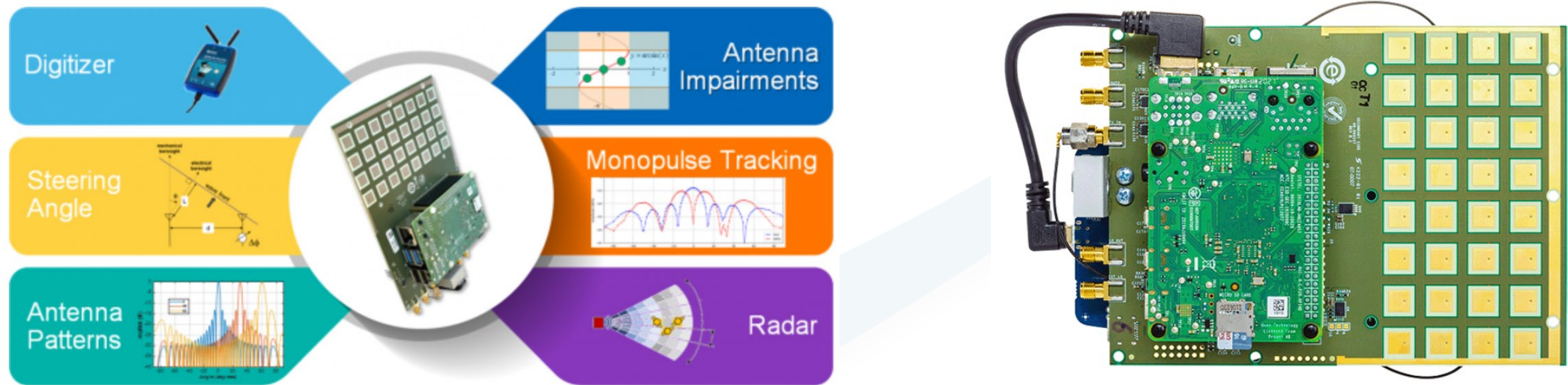
▪ **RBC Agenda**

- 9 lectures by noted experts
- 8 Hands-on LAB demos by Analog Devices, Inc. & Matlab
- Poster session in last hour: 3 posters by experts

▪ **~ 57 students enrolled**

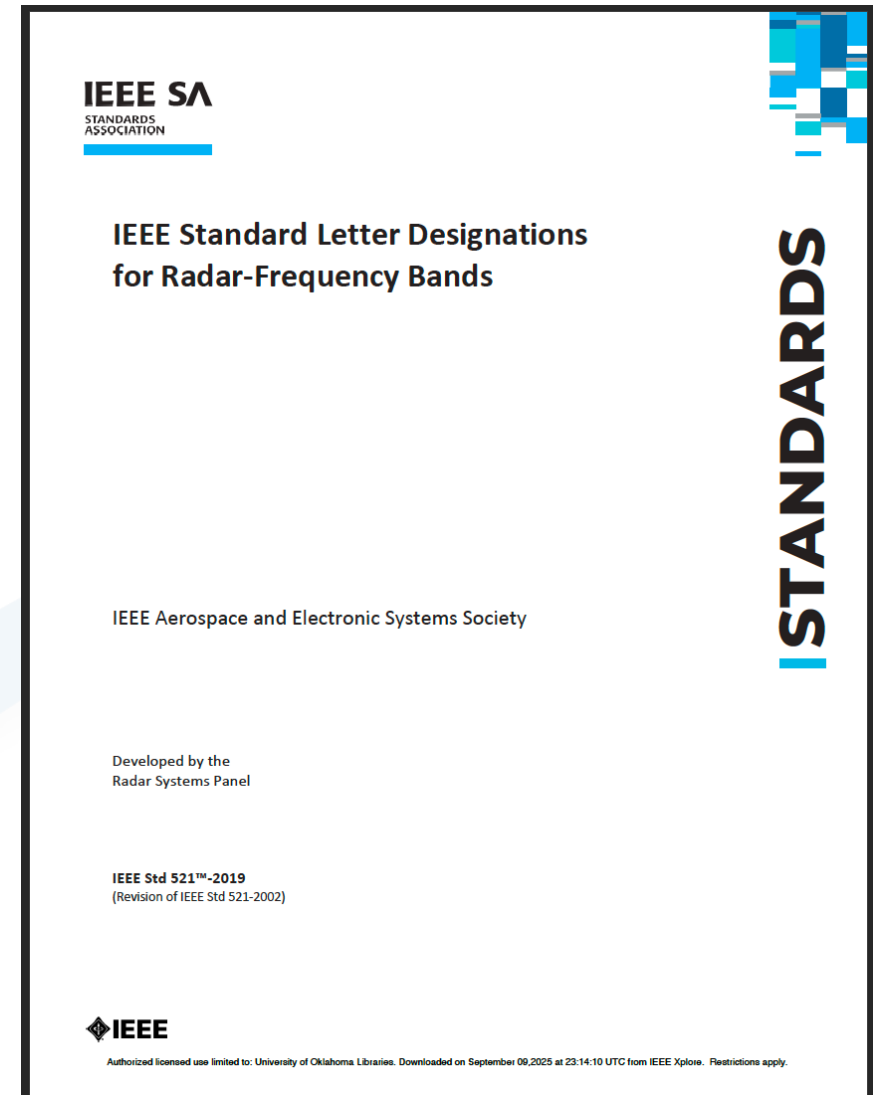


- Focused on a single hardware option (AD Phaser) that was shipped to selected teams
- Same hardware used at RBC for live demo of array concepts



- Out of ~34 proposals received for the Challenge, 11 were selected to accommodate the number of kits and support from ADI and MathWorks

- **Std 521-2019:**
 - **Spring 2024:** Began revisions on 521-2019
 - **Summer of 2025:** PAR in place and committee organized
 - **Fall of 2025:** Approval of Revision PAR P521
 - **Fall of 2025 / Spring 2026:** Balloting, voting, and revisions
 - **4/29/2026:** Tentative approval by the IEEE Standards Review Committee (RevCom)
 - **June 2026:** Full approval from RevCom



▪ **Special Sessions in Conferences:**

- EURAD'26 - Remote Sensing for Medical Applications Workshop
- EURAD'25 - Special session on Machine Learning in mm-Wave Radars
- Intl Conference on Computer Vision (ICCV) Workshop on Multi-Modal Sign Language Recognition (MSLR); 1st ever challenge to include radar datasets
- IEEE BHI Workshop on AI, included RF focus

▪ **Special Issues in AESS Venues**

- Spearheading MAES article on student paper competition papers
- ISAC Working group planning AESS pubs
- Collaborative initiatives with APS, MTTs, and EMCS

- **Synthetic Aperture Radar Summer School at ICASSP (in collaboration with SPS society)**

- **Other Publications:**
 - *Machine Learning for Radar Signal Processing*, edited by Y. Gu and Y. Zhang, IEEE-Wiley Press, in production to be published in 2026
 - *Skolnik Radar Handbook*, 4th Edition, McGraw Hill – expected April 6, 2027 (according to Amazon)
 - *Principles of Modern Radar* new edition in the works

- **(6-9 January 2026) USNC-URSI National Radio Science Meeting – Boulder CO USA**
 - Special session presentations on “Perspectives on RF spectrum: use, interference, R&D, and applications” and “Practical waveform design for embedding communications onto radar emissions”

- **(Monthly Meetings) AESS ISAC Technical Working Group (TWG)**

- **(Ongoing) Organizing and planning 2026 June ISAC Summer School, AESS best readings on ISAC, and M-AES/TAES initiatives**

- **(16-18 November 2026) IEEE Tri-Society Conference on ISAC – Lisbon Portugal**
 - Special sessions chair and AESS steering committee

- **Will take lead in developing AESS-focused standards for ISAC and spectral usage**

- **TAEiC for Radar Systems in IEEE Transactions on Aerospace and Electronic Systems**
- **Senior Editor for ISAC in IEEE Transactions on Aerospace and Electronic Systems**
- **Established a new area on ISAC in TAES**
- **Associate Editors for TRS and TAES**
- **Special Issue on Consumer Radar for IEEE Transactions on Consumer Electronics**
- **K. V. Mishra and M. Thurai (Editors), “Half Century of Polarimetric Weather Radar,” Meteorological Monographs, American Meteorological Society, 2026-2027**
- **Summer School on Synthetic Aperture Radar in 2025, New Delhi India**

Dr. Joseph Raymond Guerci



- **Aggressively pursue conference venues and identify key organizers**
- **Continue to improve inter-societal (IEEE, non-IEEE) and inter-TP interactions**
 - Generated draft MoU for IEEE AP-S
- **Pursue more industry participation**
- **Investigate means for reducing conference registration fees**
- **Investigate having RSP Treasurer not subject to lapse-year constraint**
- **Develop more organized approach for determining candidates for awards (Awards Committee)**
- **Pursue using IEEE Collabratec as vehicle for archiving RSP files (currently have Julia Briggs helping)**

- **Participate in AESS Inter-TP PhD School & Short Course**
 - Target Date: Summer 2027 for 3 days
 - General Idea: Mainly a combination of distinguished lectures and top-level seminars, with emphasis on hot topics for AES-S community.
 - Open to students and professionals (eventual attendance fees for non-AESS participants to be decided)
 - Hybrid format (in person and online)