

2022 Aerospace & Electronics Systems Society Distinguished Lecturers

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All AESS Chapters and IEEE Sections are encouraged to take advantage of the AESS Distinguished Lecturer for their regular or special meetings, allowing them to select from an outstanding list of truly distinguished speakers who are experts in the technical fields of the society. For specifics on how to obtain a speaker, please visit the website.

Thank you to all who attended the 2021 IEEE AESS Virtual Distinguished Lecturer Webinar Series. This initiative allowed us to continue providing AESS members with our respected and reputable Distinguished Lecturer program during these uncertain times. Recordings of all webinars are available on the IEEE Learning Network and on our website.

Yaakov Bar-Shalom, University of Connecticut

- Target Tracking & Data Fusion

W. Dale Blair, Georgia Tech Research Institute

- Tracking Maneuvering Targets in a World of Netted Sensors
- Systematic Filter Design for Tracking Maneuvering Targets

Erik P. Blasch, US Air Force Research Lab

- Overview of High-Level Information Fusion Theory, Models, & Representations
- Multispectral Image Fusion & Night Vision Colorization

Michael S. Braasch, Ohio University

- Characterization & Mitigation of Multipath in GNSS
- Fundamentals of Inertial Navigation
- Fundamentals of Inertial Aiding

Eli Brookner, Raytheon (Retired)

- Radar, Phased-Arrays, Metamaterials (Invisible Man), Stealth, Anti-Stealth, Ultra-Wideband, Cognitive Adaptivity, MIMO, 5G: Advances and Breakthroughs
- MIMO Radar: My Story Taken Out of It
- Metamaterial for Low Cost Electronic Scanning, Wideband Conformal Antennas, Cloaking (The Invisible Man), Stealth and Waim.
- Around the World in 60 Minutes
- Cognitive Adaptive Array Processing for Radar

David Brown, Southwest Research Institute

- Application of SOSA to Airborne EW
- Cognitive DF for Airborne Systems

Frederick E. Daum, Raytheon

- Is There a Royal Road to Robustness?
- MIMO Radar: Snake Oil or Good idea?
- Never Trust a Simulation without a Simple Back-of-the-Envelope Calculation that Explains It
- Nonlinear Filters with Particle Flow
- Real World Data Fusion

Mark E. Davis, Independent Consultant

- Ultra Wideband Surveillance Radar

Antonio De Maio, Università "Federico II" di Napoli

- Radar Detection, Performance, & CFAR Techniques
- Optimization Theory in Radar Signal Processing

Walter D. Downing, Southwest Research Institute

- Space Avionics & Scientific Instruments for Unmanned Space Missions
- Bridging the Valley of Death

Giuseppe Fabrizio, Defence Science & Technology

- Robust Adaptive Array Processing for Radar
- Over-The-Horizon Radar

Alfonso Farina, Selex (Retired)

- Radar Adaptivity: Antenna Based Signal Processing Techniques

Demoz Gebre-Egizabher, University of Minnesota

- Design & Validation of Fault-Tolerant Integrated Navigation Systems for Small UAVs
- Cooperative & Networked Navigation
- Signal of Opportunity Navigation for Small Spacecraft in Deep Space

Felix Govaers, Fraunhofer FKIE

- Multi Sensor Fusion in Distributed Systems

Maria Sabrina Greco, University of Pisa

- Sea & Land Clutter Statistical Analysis & Modeling
- Advanced Techniques of Radar Detection in Non-Gaussian Background
- Sensor Selection for Multistatic Radar Networks

Hugh D. Griffiths, University College London

- The Challenge of Waveform Diversity
- Bistatic & Multistatic Radar

Wolfgang Koch, Fraunhofer FKIE

- Multistatic Exploration: Intro to Modern Passive Radar & Multistatic Tracking & Data Fusion
- Tracking & Sensor Data Fusion

Kathleen Kramer, University of San Diego

- Feature Object Extraction
- Navigation: The Road to GPS & Getting Beyond It

Krzysztof Kulpa, Warsaw University of Technology

- Passive Radar Technology: Ground-based & Moving Platform Challenges
- Noise Radar Technologies
- Radar Technology: New Trends & Frontiers
- Passive & Active Radar

Lorenzo Lo Monte, Telephonics

- Radar Systems Prototyping
- History & Future of Radar & EW

Uttam Kumar, US Air Force Research Lab

- Deep Learning for Radio Frequency Target Classification

Y. Jade Morton, University of Colorado Boulder

- Satellite Navigation & Sensing

Athina Petropulu, Rutgers University

- Optimum Co-Design for Spectrum Sharing Between MIMO Radar & MIMO Communication Systems
- On Radar Privacy in Shared Spectrum Scenarios
- Multidimensional Sparse Fourier Transform & Application to Digital Beamforming Automotive Radar

Robert C. Rassa, Raytheon Company

- Business Case for Systems Engineering

Luke Rosenberg, DST Group

- New Concepts in Maritime Detection
- The Importance of Sea Clutter Modeling

Roberto Sabatini, RMIT University

- Aerospace Cyber-Physical Systems

George T. Schmidt, MIT/Draper Lab (Retired)

- Inertial System & GPS Technology Trends
- Navigation Sensors & Systems in GNSS Degraded & Denied Environments
- Inside Apollo: Heroes, Rules & Lessons Learned in the Guidance, Navigation, & Control (GNC) System Development

Vince Socci, LHP Software

- How it Works: UAV Technology Overview
- How it's Used: UAV Applications & Business Opportunities
- How it's Managed: UAV Policies & Regulations
- A Course for New Drone Operators

Roy Streit, Metron, Inc.

- Analytic Combinatorics for Multi-Object Tracking & Higher-Level Fusion

Hongbo Sun, Nanyang Technological University

- Passive Through-Wall Human Sensing with WiFi
- Countering the Drone's Threat by Radar

Peter Willett, University of Connecticut

- A Primer on Various Approaches to Data Association
- Maximum-Likelihood Methods in Target Tracking & Fundamental Results on Trackability
- Distributed Detection & Data Fusion

Yuanxin Wu, Shanghai Jiao Tong University

- Inertial Navigation: Sensing & Computation into the Future

Birsen Yazici, Rensselaer Polytechnic Institute

- Machine Learning for Radar Sensing & Imaging
- Non-Convex Optimization for Active & Passive Radar

Dated: April 2022