

2019 Aerospace & Electronics Systems Society Distinguished Lecturers

Contact: Lorenzo Lo Monte, Vice President – Education

All AESS Chapters and IEEE Sections are encouraged to take advantage of the AESS Distinguished Lecturer and Tutorial Program 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. The AES Society will pay reasonable speaker's expenses for economy-class travel, lodging, and meals, with the inviting IEEE AES chapter expected to cover 50% of the speaker's expenses. Speaker's expenses involving travel wholly within North America or within the European Union can generally be approved to be covered up to \$1000 USD. Expenses involving extensive international travel can be approved to be covered up to \$2000 USD. The Society encourages arrangements whereby more than one lecture is presented in a single trip, and costs in such situations will be considered on a case by case basis. Non-IEEE entities (such as universities, research organizations, and companies) are certainly eligible to contact speakers directly. If a speaker agrees to give the non-IEEE lecture, the AESS has no responsibilities for any arrangements or costs regarding the lecture, and the inviting organization is required to pay all of the speaker's expenses as mutually agreed between the speaker and the organization. Speakers are advised to keep the VP Education apprised of all their Distinguished Lectures, whether or not financial support from the Society is involved. The procedure for obtaining a speaker is as follows: If a Chapter or Section has an interest in inviting one of the speakers, it should first contact the speaker directly in order to obtain his or her agreement to give the lecture. After this is accomplished, the Chapter or Section must notify the AESS VP for Education, Lorenzo Lo Monte, lorenzo.lomonte.us@ieee.org, by sending in a DL Request Form. If financial support from the AESS is required for the speaker's expenses, he or she must submit an estimate to the AESS VP for Education before incurring any expenses. This estimate must be provided at least 45 days before the planned meeting to provide time for feedback from the VP for Education and for changes if needed. The VP for Education must provide written authorization to proceed.

Onboard Adjustable Learning Rates for Autonomous Space Vehicle Proximity Operations

*Maruthi R. Akella, University of Texas at Austin
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Target Tracking and Data Fusion: How to Get the Most out of Your Sensors

*Yaakov Bar-Shalom, University of Connecticut
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High-Level Information Fusion Theory, Models and Representations

*Erik P. Blasch, US Air Force Research Lab
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Characterization and Mitigation of Multipath in GNSS

Fundamentals of Inertial Navigation Fundamentals of Inertial Aiding

*Michael S. Braasch
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Phased-Arrays and Radar MIMO Demystified and Its Conventional Equivalents

Metamaterial Advances for Radar and Communications

Around the World in 60 Minutes

*Eli Brookner, Raytheon Company (Retired)
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National Missile Defense

*Larry Chasteen, University of Texas – Dallas
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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

*Frederick E. Daum, Raytheon Company
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Ultra Wideband Surveillance Radar

*Mark E. Davis, Independent Consultant
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Space Avionics and Scientific Instruments for Unmanned Space Missions

*Walter D. Downing, Southwest Research Institute
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Radar Adaptivity: Antenna Based Signal Processing Techniques

*Alfonso Farina
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Robust Adaptive Array Processing for Radar

Over-The-Horizon Radar: Fundamental Principles, Signal Processing and Emerging Applications

*Giuseppe Fabrizio, Defence Science & Technology Organisation
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Sea and Land Clutter Statistical Analysis and Modeling

Advanced Techniques of Radar Detection in Non-Gaussian Background

Sensor selection for Multistatic Radar Networks

*Maria Sabrina Greco, University of Pisa
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The Challenge of Waveform Diversity Bistatic & Multistatic Radar

*Hugh D. Griffiths, University College London
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Multistatic Exploration: Introduction to Modern Passive Radar and Multistatic Tracking & Data Fusion

Tracking and Sensor Data Fusion: Methodological Framework and Selected Applications

*Wolfgang Koch, Fraunhofer FKIE
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Feature Object Extraction: Evidence Accrual Applied to Information Assurance and Other Problems

Navigation: The Road to GPS and Getting Beyond It

*Kathleen Kramer, University of San Diego
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Radar Systems Prototyping

History and Future of Radar and EW

*Lorenzo Lo Monte, Telephonics
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Satellite Navigation and Sensing: A Match Made in Heaven

*Y. Jade Morton, University of Colorado, Boulder
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Business Case for Systems Engineering: Is Systems Engineering Effective?

*Robert C. Rassa, Raytheon Company
rcrassa@raytheon.com*

Optimum Co-Design for Spectrum Sharing Between MIMO Radar and MIMO Communication Systems

On Radar Privacy in Shared Spectrum Scenarios

Multidimensional Sparse Fourier Transform and Application to Digital Beamforming Automotive Radar

*Athina Petropulu, Rutgers University
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Cooperative Control and Resilient Operations of Unmanned Vehicles

Distributed Kalman Filter Design and Applications

*Cooperative and Distributed Guidance
Zhihua Qu, University of Central Florida
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Inertial System and GPS Technology Trends Navigation Sensors and Systems in GNSS

Degraded and Denied Environments (Or How I Learned to Stop Worrying About GPS)

*George T. Schmidt
gtschmidt@alum.mit.edu*

How it Works – UAV Technology Overview

How it's Used – UAV Applications and Business Opportunities

How it's Managed – UAV Policies and Regulations

A Course for New Drone Operators

Vince Socci socci@ieee.org

A Primer on Various Approaches to Data Association

Maximum-Likelihood Methods in Target Tracking and Fundamental Results on Trackability

Distributed Detection and Data Fusion

*Peter Willett, University of Connecticut
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Knowledge Based Radar Signal and Data Processing

Radio Frequency Tomography Space Time Adaptive Processing

*Michael C. Wicks, University of Dayton
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