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
makella@mail.utexas.edu

Target Tracking and Data Fusion: How to Get the Most out of Your Sensors
Yaakov Bar-Shalom, University of Connecticut
ybs@engr.uconn.edu

High-Level Information Fusion Theory, Models and Representations
Erik P. Blasch, US Air Force Research Lab
erik.blasch@gmail.com

Characterization and Mitigation of Multipath in GNSS
Fundamentals of Inertial Navigation
Fundamentals of Inertial Aiding
Michael S. Braasch
braaschm@ohio.edu

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)
eli.brookner@gmail.com

National Missile Defense
Larry Chasteen, University of Texas – Dallas
chasteen@utdallas.edu

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
frederick_e_daum@raytheon.com

Ultra Wideband Surveillance Radar
Mark E. Davis, Independent Consultant
medavis@ieee.org

Space Avionics and Scientific Instruments for Unmanned Space Missions
Walter D. Downing, Southwest Research Institute
walt.downing@swri.org

Radar Adaptivity: Antenna Based Signal Processing Techniques
Alfonso Farina
alfonso.farina@outlook.it

Robust Adaptive Array Processing for Radar
Over-The-Horizon Radar: Fundamental Principles, Signal Processing and Emerging Applications
Giuseppe Fabrizio, Defence Science & Technology Organisation
joe.fabrizio@dsto.defence.gov.au

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
lorenzo.lomonte.us@ieee.org

Satellite Navigation and Sensing: A Match Made in Heaven
Y. Jade Morton, University of Colorado, Boulder
jade.morton@colorado.edu

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
qu@ucf.edu

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
willett@engr.uconn.edu

Knowledge Based Radar Signal and Data Processing
Radio Frequency Tomography
Space Time Adaptive Processing
Michael C. Wicks, University of Dayton
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