2025 Electromagnetics Portfolio Review

Dr. Arje Nachman | January 7-9, 2025 | Arlington, VA - hybrid

Basic Research Innovation Center (BRICC)
4100 N Fairfax Drive | Suite 450 | Arlington, VA 22203

Agenda Day 1
Tuesday, January 7, 2025

Time	Title	Speaker
0800-0830	**Zoom Login**	
0830-0900	A Novel Approach to Imaging Moving Targets in Complex Stationary Scenes	**Liliana Borcea** University of Michigan
0900-0930	Stereo Tomography of Optical Turbulence	**Jason Fleischer** Princeton
0930-1000	Evaluation of Resonances via Adaptivity and Rational Approximation, and Other Frequency- and Time-Domain Scattering Problems	**Oscar Bruno** Caltech
1000-1030	**BREAK**	
1030-1100	A Case Study of Magnetic Navigation	**Ying-Cheng Lai** Arizona State
1100-1130	Random Magnets as Microwave Absorbers: Dynamical Scaling and Coherent Anisotropy	**Eugene Chudnovsky** CUNY Lehman College
1130-1230	**LUNCH**	
1230-1300	Time Metamaterials	**Andrea Alu** CUNY
1300-1330	Aspects of Off-Axis Laser Radiation Detection: Investigating Effects of Atmospheric Turbulence	**Elizabeth Bleszynski** Monopole Research
1330-1400	Wave propagation in 1D and 2D periodic arrays with spectral singularities	**Ilya Vitebskiy** AFRL/RY
1400-1430	**BREAK**	
1430-1500	Entropy Stable Conservative Flux Form Neural Networks	**Anne Gelb** Dartmouth College
1500-1530	Bounds and Optimal Performance in Linear Electromagnetic Systems	**Owen Miller** Yale
1530-1600	Nonlocal Metasurfaces for Control of Light Beyond the Generalized Snell's Law	**Adam Overvig** Stevens Institute
1600	**ADJOURN FOR THE DAY**	

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Agenda Day 2
Wednesday, January 8, 2025

Time	Title	Speaker
0800-0830	**Zoom Login**	
0830-0900	Deterministic Singularities in Partially Coherent Vortex Beams	**Greg Gbur** UNCC
0900-0930	Site-Specific Imaging and Spectral Classification of Subsurface Targets	**Arnold Kim** UC/Merced
0930-1000	Comparative Analysis of Performance for Optimization-Based Transionospheric SAR Autofocus	**Semyon Tsynkov** NCSU
1000-1030	**BREAK**	
1030-1100	Super-Resolution SAR Ground Moving Target Imaging	**Birsen Yazici** RPI
1100-1130	Further Advances of the Lippmann-Schwinger-Lanczos Algorithm for SAR Imaging in Presence of Multiple Scattering and Losses	**Vladimir Druskin** WPI
1130-1230	**LUNCH**	
1230-1300	Fast Solvers and Inverse Design Algorithms for Nanophotonic and Radio-Frequency Devices	**Constantine Sideris** USC
1300-1330	Fundamental Analyses and Discovery of Topological EM Materials	**Daniel Sievenpiper** UCSD
1330-1400	Synthetic-Aperture Passive Source Localization	**Margaret Cheney** Colorado State University
1400-1430	**BREAK**	
1430-1500	Subspace Version of Wilks'-Lambda Test and Application to Space-Time Adaptive Processing	**Ram Raghavan** AFRL/RY
1500-1530	Computing Topological Invariants for 3D Photonic Crystals	**Barry Bradlyn** University of Illinois
1530	**ADJOURN FOR THE DAY**	

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Agenda Day 3
Thursday, January 9, 2025

Time	Title	Speaker
0800-0830	**Registration**	
0830-0900	Free Standing Bilayer Metasurfaces: A New Approach to Structured Light	**Frederico Capasso** Harvard
0900-0930	Nonlocal and Time-Varying Metasurfaces	**Francesco Monticone** Cornell
0930-1000	Discrete Huygens Representations Using Electric and Magnetic Dipoles with Application to 2D Grating Problems	**Thorkild Hansen** S4, Inc
1000-1030	**BREAK**	
1030-1100	Macroscopic Emitters on Deployable Structures: A Group Theoretic Approach	**Richard James** University of Minnesota
1100-1130	Perfectly-Matched Metamaterials	**Anthony Grbic** University of Michigan
1130-1230	**LUNCH**	
1230-1300	Efficient Implementation of Discrete Linear Unitary Operations with Photonic Circuits	**Mohammad-Ali Miri** Queens College/CUNY
1300-1330	Effective Linear Regimes in Plasmonic 3-Wave Mixing	**Alessandro Salandrino** University of Kansas
1330-1400	Shallow Recurrent Decoder (SHRED) for Sensing, Wavefield Reconstruction, Model Reduction and Physics Discovery	**Nathan Kutz** University of Washington
1400	**MEETING ADJOURNED**	