



# Annual EM and SSN Contractors Review 2016

Dr. Arje Nachman | January 5-7, 2016 | Arlington, VA

Basic Research Innovation Collaboration Center (BRICC)  
4075 Wilson Blvd, Suite 350 | Liberty Room  
Arlington, VA 22203

## Agenda Day 1 Tuesday, January 5, 2016

Time	Title	Speaker
0730-0755	Registration	
0755-0800	Welcome, etc	<b>Arje Nachman</b> AFOSR/RTB
0800-0830	Formation and Evolution of Pulsed Beams in Turbulent and Discrete-scatterer Media	<b>Elizabeth Bleszynski</b> Monopole Research
0830-0900	Active Field Manipulation: Results, Challenges and Perspectives	<b>Daniel Onofrei</b> University of Houston
0900-0930	The Role of Stekloff Eigenvalues in Inverse Scattering Theory	<b>David Colton</b> University of Delaware
0930-1000	A Variational Approach to Signal Fragmentation	<b>Russel Caflisch</b> UCLA
1000-1030	<b>BREAK</b>	
1030-1100	Power and Energy Relations for Macroscopic Dipolar Continua Derived from the Microscopic Maxwell Equations	<b>Arthur Yaghjian</b> S4, Inc
1100-1130	Optical Limiters Based on Nonlinear Localized Modes	<b>Ilya Vitebskiy</b> AFRL/RV
1130-1300	<b>LUNCH</b>	
1300-1330	Array Realization of an Electromagnetic Complex-source Beam	<b>Thorkild Hansen</b> S4, Inc
1330-1400	Control of Guided and Radiated Electromagnetic Waves Using Metasurfaces	<b>Anthony Grbic</b> University of Michigan
1400-1430	<b>BREAK</b>	
1430-1500	Interaction of Radiation and Objective Structures for Radar, Photonics, and Structure Determination	<b>Richard James</b> University of Minnesota
1500-1530	Non-Hermitian designs for giant non-reciprocity and antenna protection in the Microwave domain	<b>Tsampikos Kottos</b> Wesleyan University
1530	<b>ADJOURN FOR THE DAY</b>	

**Agenda Day 2**  
**Wednesday, January 6, 2016**

<b>Time</b>	<b>Title</b>	<b>Speaker</b>
<b>0730-0755</b>	<b>Registration</b>	
<b>0755-0800</b>	Welcome, etc	<b>Arje Nachman</b> AFOSR/RTB
<b>0800-0830</b>	Enhanced and Unusual Nonlinear Interactions in Metamaterials	<b>Andrea Alu</b> University of Texas
<b>0830-0900</b>	Patterning and Validation of Arbitrary Anisotropic Impedance Surface Profiles	<b>Dan Sievenpiper</b> UCSD
<b>0900-0930</b>	Phase Shifts and Scintillations in Propagation through Random Ionospheric Media: Effects of Inhomogeneities and Time Delay	<b>Alex Mahalov</b> Arizona State University
<b>0930-1000</b>	Polarization Effects for EM Wave Propagation Random Media	<b>Liliana Borcea</b> University of Michigan
<b>1000-1030</b>	<b>BREAK</b>	
<b>1030-1100</b>	Novel High-order Methods for Computational Electromagnetism	<b>Oscar Bruno</b> Caltech
<b>1100-1130</b>	Toward a Theory of Broadband Absorption Suppression in Magnetic Composites	<b>Aaron Welters</b> Florida Institute of Technology
<b>1130-1300</b>	<b>LUNCH</b>	
<b>1300-1330</b>	The Doppler Effect for SAR	<b>Semyon Tsynkov</b> NCSU
<b>1330-1400</b>	Wave Focusing Through Complex Media	<b>Knut Solna</b> University of California @ Irvine
<b>1400-1430</b>	<b>BREAK</b>	
<b>1430-1500</b>	Hyperspectral SAR	<b>Matthew Ferrara</b> Matrix Research, Inc
<b>1500-1530</b>	Imaging Without a Synthetic Aperture	<b>Richard Albanese</b> ADED, LLC
<b>1530-1600</b>	Partially Coherent Vortex Beams and Other Optical Vortex Phenomena	<b>Greg Gbur</b> UNCC
<b>1600</b>	<b>ADJOURN FOR THE DAY</b>	

**Agenda Day 3**  
**Thursday, January 7, 2016**

<b>Time</b>	<b>Title</b>	<b>Speaker</b>
<b>0730-0755</b>	<b>Registration</b>	
<b>0755-0800</b>	Welcome, etc	<b>Arje Nachman</b> AFOSR/RTB
<b>0800-0830</b>	Super-resolution Geolocation	<b>Laurent Demanet</b> MIT
<b>0830-0900</b>	Passive SAR Imaging of Satellites	<b>George Papanicolaou</b> Stanford
<b>0900-0930</b>	Weighted Wavelet Burst Accumulation for Turbulence Mitigation	<b>Jerome Gilles</b> San Diego State University
<b>0930-1000</b>	Sparse Measurements and Optimal Sensor Placement for Classification and State Estimation of Complex Systems	<b>Nathan Kutz</b> University of Washington
<b>1000-1030</b>	<b>BREAK</b>	
<b>1030-1100</b>	Gauge-invariant Registration in Networks	<b>Douglas Cochran</b> Arizona State University
<b>1100-1130</b>	Two High-resolution Algorithms to Extract Important Information from Fourier Data	<b>Ann Gelb</b> Arizona State University
<b>1130-1300</b>	<b>LUNCH</b>	
<b>1300-1330</b>	Geometry of Optimal Mass Transport and Applications to Problems in Signal Processing and Tracking	<b>Allen Tannenbaum</b> SUNY/Stony Brook
<b>1330-1400</b>	Computable Performance Analysis of Sparse Recovery	<b>Arye Nehorai</b> Washington University
<b>1400-1430</b>	<b>BREAK</b>	
<b>1430-1500</b>	SAR Correlation Imaging and Bias in SAR Images	<b>Kaitlyn Voccola</b> Colorado State University
<b>1500-1530</b>	Analysis of Geometric Distortions due to Phase Mismatch in SAR Imagery	<b>Birsen Yazici</b> RPI
<b>1530-1600</b>	Passive Source Geolocation	<b>Margaret Cheney</b> Colorado State University
<b>1600-1630</b>	Graphical Models for Scalable Processing and Learning of Behavioral Models from Complex Sensor Data	<b>Alan Willsky</b> MIT
<b>1630-1700</b>	Quantum Operations on Entangled Photons Using Lyot Filters	<b>David Hughes</b> AFRL/RI
<b>1700</b>	<b>MEETING ADJOURN</b>	