

2019 Review of EM Portfolio Subarea Theoretical Nonlinear Optics

Dr. Arje Nachman | March 6, 2018 | Arlington, VA

Basic Research Innovation and Collaboration Center (BRICC)
4100 North Fairfax Drive, Suite 450 I Research Room
Arlington, VA 22203

Agenda | March 6, 2019

Time	Title	Speaker
0800-0830	Welcome/Introduction	Arje Nachman AFOSR
0830-0900	Physics of Ultrashort LWIR pulse Propagation in air – from self-trapped light bullets to multiple filaments	Jerry Moloney University of Arizona
0900-0930	Microscopic modeling of semiconductor systems and their laser applications	Stephan Koch University of Arizona
0930-1000	Non-Hermitian and Open Systems: Fundamentals and Applications	Miroslav Kolesik University of Arizona
1000-1030	BREAK	
1030-1100	Simulating Field Enhanced Barrier Trap Ionization Provides New Theory of GaN HEMT 'Kink' Effect	Matt Grupen AFRL/RV
1100-1130	Relativistic quantum scattering that defies chaos/Q-spoiling and Klein tunneling	Ying-Cheng Lai Arizona State University
1130-1200	Progress of nonlinear optics with PT symmetry	Jianke Yang University of Vermont
1200-1330	LUNCH	
1330-1400	Topological insulators in Lieb/Kagome photonic lattices	Mark Ablowitz University of Colorado
1400-1430	Quantum-kinetic theory for pulsed laser-induced transition & transport of electrons in quantum wires	Danhong Huang AFRL/RV
1430-1500	Dynamics of instabilities in phase space	Jason Fleischer Princeton University
1500-1530	Modeling ultra-short laser filament physics for RF generation	Michael White AFRL/RD
1530-1600	Harmonics generation at the plasmonic interfaces: exciton-plasmon materials go nonlinear	Maxim Sukharev Arizona State University
1600	MEETING ADJOURN	