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

Agenda Day 1 | Tuesday, July 23, 2019

Time	Topic	Speaker
8:00	**Registration**	
8:25	Welcome & logistics	Ken Goretta, AFOSR
8:30	Center for physically reconfigurable and deployable multifunctional antennas	Stavros Georgakopoulos, Florida International U
9:00	Carrier doping and dynamics in correlated oxides	Sriram Ramanathan, Purdue U
9:45	Room-temperature quantum ballistic transport in strain-controlled nanowire devices	Ashwani Sharma, AFRL/Space Vehicles
10:15	**BREAK**	
10:30	Investigation of transition metal nitrides for electronics and sensing	John Cetnar / Amber Reed, AFRL/Sensors / Materials and Manufacturing
11:00	Defects in ultrawide bandgap semiconductors	Art Edwards, AFRL/Space Vehicles
11:30	Ultra-wide-bandgap III-nitride alloys for high-power RF electronics	Shin Mou / Kent Averett, AFRL/Materials and Manufacturing
12:00	**LUNCH**	
13:10	Overcoming the DX doping challenge in ultra wide bandgap semiconductors	Zlatko Sitar, North Carolina State U
13:40	Epitaxial growth and characterization of cubic BN	David Storm, Naval Research Laboratory
14:10	AlGaN & AlGaN-based quantum wells: towards high-power high-frequency electronics	Berardi Sensale-Rodrigue, U Utah
14:40	Role of alloy disorder in the physical properties of group III nitrides	Jim Speck, U Californoia Santa Barbar
15:10	**BREAK**	
15:25	Light-mass-atom semiconductor materials and devices	Grace Xing / DJ Jena, Cornell U

15:55	Heat & carrier transport in wide-bandgap heterostructure devices by proper treatment of boundary effects	Mitra Dutta / Mike Stroscio, U Illinois at Chicago
16:25	Thermal/mechanical investigation of ultra-wide-bandgap materials & devices	Sukwon Choi, Pennsylvania State U
	MEETING ADJOURN	

Agenda Day 2 | Wednesday, July 24, 2019		
Time	**Topic**	**Speaker**
8:00	**Registration**	
8:10	2D and 3D membranes for flexible RF electronic devices	Nick Glavin / Mike Snur, AFRL/Materials and Manufacturing / Sensors
8:40	Planar 2D heterojunctions between atomically thin dissimilar materials	Mauricio Terrones, Pennsylvania State U
9:10	Scalability & reliability of contacts to 2-D layered semiconductors	Saptarshi Das, Pennsylvania State U
9:40	Exploiting ultrafast carrier transfer in van der Waals heterostructures	Sufei Shi, Rensselaer Polytechnic Institute
10:10	**BREAK**	
10:25	Probing fundamental interactions of electrons & quasiparticles from optical to THz frequencies	Yohannes Abate, U Georgia
10:55	Hybrid graphene/semiconductor plasmonic nano-transceiver & nano-antenna for THz communications	Josep Jornet / Erik Einarsson, University at Buffalo
11:25	Tuning metal-insulator transitions in ultra-thin correlated materials	Yuri Suzuki, Stanford U
11:55	**LUNCH**	
12:55	Realizing the potential of BaSnO3—path to transparent transistors with record performance	Darrell Schlom, Cornell U
13:10	Dynamics of mesoscopic structures	Ivan Schuller, U California San Diego
13:40	Inversion symmetry breaking cobaltates and vanadates for orbital FETs	Charles Ahn, Yale U

14:10	Tunable oxide power electronics with 2-D electron gas interface	Chang-Beom Eom, U Wisconsin
15:10	**BREAK**	
15:25	Towards ballistic transport in complex oxides	Jayakanth Ravichandran, U Southern California
15:55	Enhancing superconductivity at atomically precise interfaces	Kyle Shen, Cornell U
16:25	Study and engineer polarization properties of 2-D materials.	Li Yang, Washington U
	MEETING ADJOURN	

Agenda Day 3 | Thursday, July 25, 2019		
Time	**Topic**	**Speaker**
8:00	**Registration**	
8:25	Welcome & logistics	Ken Goretta, AFOSR
8:30	Direct-write nano Josephson superconducting tunnel junctions	Shane Cybart, U California Riverside
9:00	Compact sub-mm wave oscillator for THz receive	Igor Vernick, Hypres Inc
9:25	Superconducting THz emitters and receivers in YBCO	Kevin Pratt, Tristan Technologies
9:50	Low cost high sensitivity superconducting magnetometers and gradiometers	Shozo Yoshizumi, Quantum Design
10:15	**BREAK**	
10:30	Broadband scanning microwave microscopy	Jim Hwang, Lehigh U
11:00	**Poster Session**	
12:00	**LUNCH**	

13:00	Theoretical/computational studies of high-temperature superconductivity from quantum magnetism	Jose Rodriguez, Cal State Los Angeles
13:30	Exploration and development of advanced superconducting materials	J.P. Paglione U Maryland
14:00	Search for novel superconductors, thermoelectrics, and super-thermal-conductors	Paul Chu, U Houston
14:30	New superconductors near broken rotational symmetry instabilities	Jiun-Haw Chu, U Washington
15:00	**BREAK**	
15:15	Search for superconductivity in complex layered chalcogenide & topological systems	Bing Lv, U Texas at Dallas
15:45	Electrically detected electron nuclear double resonance in solid state electronics	Pat Lenahan, Pennsylvania State U
16:15	Hybrid SThM-SEM system with high spatiotemporal resolutin for transient thermal characterization	Yanbao Ma, U California Merced
16:45	Wrap-up	Ken Goretta, AFOSR
	MEETING ADJOURN	

Posters (as of 17 June 19)
Xuejun Lu, U Massachusetts- Lowell: Electrically switchable plasmonic polarizers with high extinction ratio
Ramesh Budhani, Morgan State U: Nanostructures of magnetic Dirac metals for RF electronics
Luqiao Liu, MIT: Harnessing magnons for hybrid quantum information systems