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

Agenda Day 1 | Thursday, October 5, 2017

Time	Topic	Speaker
8:00-8:30	**Registration**	
8:30-8:35	Welcome/Logistics	Dr. Stacie Williams (AFOSR/RT)
8:35-9:05	*SSA, The State of National Security Space, and the Associated Role of National Intelligence*	Mr. Jeff Gossel (NASIC)
9:05-9:35	*Imaging theory and mitigation in extreme turbulence-induced anisoplanatism*	Dr. Jeremy Bos (MTU)
9:35-10:05	*Effects of non-Kolmogorov turbulence and aerosols on long-range, optical propagation*	Dr. Andreas Muschinski (NRA)
10:05-10:15	**BREAK**	
10:15-10:45	*Developing new metrics for deep turbulence effects on laser propagation through long path*	Dr. Vinod Kumar (UT)
10:45-11:15	*Study and optimization of atmospheric propagation of partially coherent vortex beams*	Dr. Greg Gbur (UNC)
11:15-11:45	*Investigation of Adaptive Optic Performance in the Distributed Volume Atmosphere*	Dr. Daryl Sanchez (AFRL/RD)
11:45-12:45	**LUNCH OUT**	
12:45-1:15	*Controlling Polarization Artifacts and Bandwidth in Polarimetric Sensors and Imagers*	Dr. Steve Fiorino (AFIT)
1:15-1:45	*Measuring and Understanding Polarization of the Atmosphere and Clouds*	Dr. Joseph Shaw (MSU)
1:45-2:15	*Twenty-four hour, horizon-to-horizon imaging with the AEOS and SOR Telescopes*	Dr. Stuart Jeffries (GSU)
2:15-2:30	**BREAK**	
2:30-3:00	*Innovations in Statistical Image Analysis*	Dr. Sudhakar Prasad (UNM)
3:00-3:30	*Super Resolution Remote Imaging Using Time Encoded Remote Apertures*	Dr. Andreas Velten (UW)
3:30-4:00	*Compressive Quantum and Remote Sensing*	Dr. John Howell (UR)
4:00-4:30	*Improved Resident Space Object Detection via Atmospheric Scintillation Effects*	Dr. Stephen Cain (AFIT)

	MEETING ADJOURN

Agenda Day 2 | Friday, October 6, 2017		
Time	**Topic**	**Speaker**
	Registration	
8:30-9:00	*Space Traffic Management*	Dr. Jeff DeTroye (FAA)
9:00-9:30	*Estimation of Shape and Relative Motion for Partially Resolved Objects*	Dr. John Christian (WVU)
9:30-10:00	*On Solving the Perturbed Multi-Revolution Lambert Problem: Applications in Enhanced SSA*	Dr. John Junkins (TAM)
10:00-10:30	*Dynamical Issues in Space Situational Awareness*	Dr. Daniel Scheeres (UC)
10:30-10:45	**BREAK**	
10:45-11:15	*Advanced Orbit Prediction for Resident Space Objects Through Physics-based Learning*	Dr. Xiaoli Bai (Rutgers University)
11:15-11:45	*Optimal Sensor Tasking for Enhanced Space Situational Awareness*	Dr. Puneet Singla (SUNY)
11:45-12:15	*Faster-than-Real-time Electrostatic Force and Torque Modeling for SSA Applications*	Dr. Hanspeter Schaub (University of Colorado)
12:15-1:15	**LUNCH OUT**	
1:15-1:45	*Passive Snapshot Remote Imaging of Object Velocity*	Dr. Michael Kudenov (NCU)
1:45:2:15	*Research pertaining to shadow imaging of geosynchronous satellites*	Dr. Denis Douglas (IAI)
2:15-3:45	*Optical Characterization of Spacecraft Materials Damaged in A Simulated GEO Environment*	Dr. Ryan Hoffman (AFRL/RV)
3:45-4:15	*Atmospheric MURI*	Dr. Mikhail Voronstov (UDRI)
4:15-4:30	*Closing Remarks*	Dr. Stacie Williams (AFOSR)
4:30	*Optional Happy Hour*	Rustico Restaurant and Bar 4075 Wilson Blvd., Arlington VA (Just outside BRICC)

Review Objectives:

1. Provide a forum for AFOSR PIs to highlight research accomplishments and share future plans.
2. Provide AFOSR Principal Investigators with the top level AF and broader DoD mission needs in SSA as outlined by government senior technical leaders. This exchange is expected to enable basic researchers to get relevant context to guide their research efforts for current and future pursuits.
3. Highlight basic research advances in SSA to government senior technical leaders communicating the art of the possible in basic SSA research to meet future needs.
4. Cultivate future collaborations between academia, AFRL, and the operational community.
5. Provide a top level technical review of AFOSR's research investment in SSA.

Guidelines to Basic Research Briefers:

1. Participants possess a diverse technical background and while they are deep subject matter experts in their research area no one in attendance is an expert in all areas presented. This should be considered in presentation preparation and the review objectives should be used in content development. This workshop is not designed for rigorous proof of concepts.
2. The research objectives should be clearly stated, technical barriers to the work should be articulated, and research accomplishments highlighted. Journal articles and conference proceedings resulting from this work should be listed and number of citations included (number of citations may be included as a backup slide).
3. Presentations should be concise, to the point, and targeted on message. This is your opportunity to share your worthy effort with AFOSR and senior leaders in a coherent fashion and potentially garner support for current and future efforts.
4. Presentations to include questions will be limited to 30 minutes to include questions for each presenter with no exceptions. Anticipated number of slides for a 50 minute briefing should be around 15.

Logistics:

1. The dress code is business attire.
2. The meeting will break for lunch and there are several restaurant choices within walking distance to the BRICC and recommendations are available at the BRICC. The meeting schedule will be strictly followed.
3. Presentations need to be emailed or sent via AMRDEC no later than 4 October by noon to stacie.williams.1@us.af.mil.