



Young Investigators Research Program (YIP) 2015

Ms. Ellen Montgomery | June 15-18, 2015 | Arlington, VA

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

Agenda Day 1 – June 15, 2015

Time	Topic	Speaker
7:45	Registration	
8:15	Welcome	Ellen D. Montgomery , YIP Program Coordinator
8:20	Welcome	Thomas F. Christian, Jr. AFOSR Director
8:30	Building Careers with AFOSR Support	Col Andrew G. Szmerekovsky , AFOSR Deputy Director
8:45	AFOSR Business Operations	Col Robert J. Kraus , AFOSR Chief, Basic Research Division
PHYSICAL SCIENCES		
9:15	Parity-Time Symmetry in Organic Thin Films and Waveguides	Chris Giebink , Pennsylvania State University
9:45	Table-Top Measurement of Local Magnetization Dynamics Using Picosecond Thermal Gradients: Toward Nanoscale Magnetic Imaging	Greg Fuchs , Cornell University
10:15	BREAK	
10:45	Satellites as Space Environment Sensors	Kerri Cahoy , MIT
11:15	Geometric Integrators for Advanced Plasma Physics Algorithms	Stephen Webb , RadiaSoft, LLC
11:45	Spatial Processing of Emerging Electronic Threats using Photonics	Chris Schuetz , University of Delaware
12:15	LUNCH	
1:30	Fabricating Multi-Functional Protein Biomaterials	Jin Montclare , NYU Polytechnic
2:00	From Simulations to Proofs of Networked Cyberphysical Systems	Sayan Mitra , University of Illinois at Urbana Champaign
2:30	Poster Session I - Physical Sciences Chemistry & Biological Sciences	Can Bayram , UIUC Alper Bozkurt , NCSU Kenneth Graham , University of Kentucky Boubacar Kante , USC San Diego Stephanie Lee , Stevens Institute of Technology SungWoo Nam , UIUC Andre Schleife , UIUC Jie Yao , UC Berkeley Fuzhong Zhang , Washington University
4:00	MEETING ADJOURNED FOR THE DAY	



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Agenda Day 2 – June 16, 2015

Time	Topic	Speaker
8:00	Registration	
PHYSICAL SCIENCES		
8:30	Radiative Decay Engineering using Plasmonic Nanostructures	Maiken Mikkelsen, Duke University
CHEMISTRY & BIOLOGICAL SCIENCES		
9:00	Organic Electrodes for Structural Energy and Power	Jodie Lutkenhaus, Texas A&M University
9:30	Designing Silicon Nanostructures for Interfacing with Biological Components	Bozhi Tian, University of Chicago
10:00	BREAK	
10:30		
INFORMATION AND NETWORK SYSTEMS		
11:00	Systems-Theoretic Analysis and Optimization of Biophysical Neuronal Networks	ShiNung Ching, Washington University in St. Louis
11:30	LUNCH	
12:45	DURIP Overview	Katie Wisecarver, Air Force Office of Scientific Research
1:00	Panel Discussion <ul style="list-style-type: none">Successful YIP experiencesOther AFOSR Funding OpportunitiesCultivating Long Term Relationships with AFOSROther AFOSR Funding OpportunitiesYIP Application Process	YIP Community Members AFOSR Program Officers: Jason Marshall Riq Parra Doug Smith Tatjana Curcic Mike Berman Pat Bradshaw (a few others TBD)
4:00	MEETING ADJOURNED FOR THE DAY	



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Agenda Day 3 – June 17, 2015

Time	Topic	Speaker
7:45	Registration	
INFORMATION AND NETWORK SYSTEMS		
8:30	Algebraic Techniques for Optimization and Control of Complex Dynamical Systems	Amir Ali Ahmadi, Princeton University
ENGINEERING & COMPLEX SYSTEMS		
9:00	Gortler Detuned Mack-modes on a Hypersonic Flared Cone	Joseph Kuehl, Baylor University
9:30	Probing the Graphene Bridge	Xu Du, Stony Brook University
10:00	III-Nitrides Transistors Enabling High Frequency, High Power and High Efficiency Electronics	Srabanti Chowdhury, Arizona State University
10:30	Reliable Multi Agent Control	Alex Olshevsky, University of Illinois at Urbana Champaign
CHEMISTRY & BIOLOGICAL SCIENCES		
11:00	Temporal Pattern Recognition using Spike Timing-Dependent Learning Circuits	Kurtis Cantley, Boise State University
11:30	LUNCH	
1:00	Poster Session II – Chemistry & Biological Sciences Engineering & Complex Systems Information & Networking Systems Physical Sciences	Anima Anandkumar , UC Irvine Stephen Anton , Tennessee Tech University Yongcan Cao , UT San Antonio Debashis Chanda , University of Central Florida Raghvendra Cowlagi , Worcester Polytechnic Institute Pinshane Huang , University of Illinois at Urbana Champaign Sumit Jha , University of Central Florida Landon Grace , University of Miami Li Na , Harvard University Sophie Wang , Clemson University Xiaoja Wang , University of Minnesota
3:00	Day Three Wrap Up	

3:00

MEETING ADJOURNED FOR THE DAY



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Agenda Day 4 – June 18, 2015

Time	Topic	Speaker
7:45	Registration	
8:15	Planning, Programming, Budgeting and Execution (PPBE) Discussion	John Luginsland, Air Force Office of Scientific Research
9:15	Frontiers of Engineering Symposium Overview	Janet Hunziker, National Academy of Engineering
PHYSICAL SCIENCES		
9:30	Light-Matter-Interaction for Advanced Opto-Electronic Devices: Graphene and ITO-Based Electro-Optic Modulation and Switching	Volker Sorger, George Washington University
10:00	Laser-Refrigeration of Hydrothermal Nanocrystals in Physiological Media	Peter Pauzauskie, University of Washington
10:30	BREAK	
ENGINEERING & COMPLEX SYSTEMS		
10:45	Lift Production on Models of Flapping Wings	Anya Jones, University of Maryland
11:15	Active Flow Control of Separated Flow: From Traditional to Network-Based Analyses	Sam Taira, Florida State University
11:45	Closing Remarks	
12:00	MEETING ADJOURNED	

SAVE THE DATE:

2016 Young Investigators Research Program Review
June 20-23, 2016
Arlington, VA

Title presentations and abstracts will be due by April 29, 2016.