



Agenda Day 1 | Tuesday, October 26, 2021

Time	Topic	Speaker
0815-0845	Zoom Login	
0845-0900	Opening Remarks	Patrick Bradshaw, AFOSR
0900-0915	Introduction	Patrick Roach, AFOSR
0915-1000	Optophysiology: Interferometric Imaging of the Intrinsic Neuronal Signal High Resolution 3D Optoelectronic Neural Interface	Daniel Palanker, Stanford
1000-1030	Neural Computation Underlying Central Control over Aerial Navigation in Bats	Michael Yartsev – UC Berkeley
1030-1100	Impedance Spectroscopy of Neuron Excitability under Electromagnetic Stimulation	Yevgeny Berdichevsky – Lehigh Univ
1100-1130	Nanoelectropulse Induced Changes in Cell Excitability, Neuromodulation Approach	Gale Craviso – U Nevada
1130-1200	Coping with Environmental Stress...Interface between Neuronal Proteostasis and Brain Physiology	Claudio Hetz – Chile
1200-1300	LUNCH	
1300-1330	The Adaptive Auditory Mind Role of Plasticity and Temporal Coherence in Auditory Scene Analysis	Shihab Shamma – U Maryland
1330-1400	Neuroplasmonics for Selective and Remote Control of Neural Activity	Srikanth Singamaneni – The Univ Wash St Louis
1400-1430	Polarization Vision: Searching for Structure	Ric Wehling – AFRL/RWW Eglin AFB
1430-1500	Decision making Underlying Successful Aerial Contact in Predatory Flights: Take-off, Steering and Thrust Control	Paloma Gonzalez Bellido – U Minnesota
1500-1530	Adaptive Inertial Sensing in a Complex Behavior	Jess Fox - Case Western Reserve
1530-1600	Neural and Behavioral Bases of Sensory Integration in the Mosquito	Jeff Riffel – U Washington
1600-1630	How Attention Drives Information Flow in the Fly Brain	Dhruv Grover - UCSD
1630-1700	Target Tracking in the Natural World	Karin Nordstrom – Flinders Univ
1700	MEETING ADJOURN FOR THE DAY	



Agenda Day 2 | Wednesday, October 27, 2021

Time	Topic	Speaker
0830-0900	Zoom Login	
0900-0930	Universal Theory of Multisensory Integration	Floris Van Breugel – U Nevada Reno
0930-1000	Flying in an Uncertain World: Decoding Rules	Jean-Michel Mongeau – Penn State
1000-1030	VOC Identification	Steve Kim– AFRL/RH
1030-1100	EET in Human and Environment	Steve Finkel - USC
1100-1200	The Mechanisms and Implications of Chiral Induced Spin Selectivity in Bio Systems	Moh El Naggar – USC Ron Naaman - Weizmann Institute
1200-1300	LUNCH	
1300-1330	Developing a Bioenergetics Framework for Understanding Stimulated Electron flow	Annette Rowe – U Cincinnati
1330-1400	Spike Based Learning and Control for Multimodal Agile Sensory Integration	Silvia Ferrari – Cornell Simon Sponberg – Ga Tech
1400-1430	Energy, Information and Power in Cells	Rahul Sarpeshkar - Dartmouth
1430-1445	BREAK	
1445-1515	Polarization and Multispectral Vision in Mantis Shrimp: A Model for Information Processing and Biomimetic Imaging	Viktor Gruev – U Illinois
1515-1545	Microfluidic Photobiology Microscopy of Light Harvesting Bacteria	Nathan Gabor – UC Riverside
1545-1615	De Novo Biomachines	David Beratan – Duke
1615-1645	Understanding Structure Function in Cephalopod Optical Materials	Alon Gorodetsky – UC Irvine
1645	MEETING ADJOURN FOR THE DAY	



Agenda Day 3 | Thursday, October 28, 2021

Time	Topic	Speaker
0830-0900	Zoom Login	
0900-0930	Operationally Relevant Molecular Biosignature Discovery and Evaluation: Identification of Operational Stress Signatures in <i>In Vitro</i> Ocular Surface Models	Saber Hussain- AFRL/RH
0930-1000	Fundamental Effects of Light Absorption on Mitochondrial Function	Michael Denton AFRL/RH
1000-1030	Neurobiological effects of Vagus Nerve Stimulation	Candice Hatcher-Solis AFRL/RH
1030-1100	Radiofrequency Wave Modulation of Neuronal Activity	Ibtissam Echchgadda AFRL/RH
1100-1130		
1130-1230	LUNCH	
1230-1300	A Biophysical Approach to Study the Role of Cell Membrane Mechanics in Sensing Mechanical Force	Neha Kemat – Northwestern Univ
1300-1330	Molecular Alignment at Functional Biotic/Abiotic Interfaces for Biosensing	Nicholas Bedford- U New South Wales
1330-1400	Synthetically Tuned Gut Brain Axis Communication	Warren Ruder - Pitt Phil LeDuc – Carneige Mellon
1400-1415	BREAK	
1415-1445	Modulating Cellular Performance with Nanoscale Biocircuits	Dan Nocera - Harvard
1445-1515	Mechanistic Modeling and In-vivo Validation of Analyte Pathways for Peripheral Biochemical Monitoring	Jason Heikenfeld – U Cincinnati
1515-1545	Bioelectric Atlas of Organelle	Bozhi Tian – U Chicago
1545-1615	Magnetoreception in Marine Animals, Bioinspired Algorithms for Long Range GPS Free Navigation	Ken Lohmann – U North Carolina
1615	MEETING ADJOURN	