



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

Agenda Day 1 | Tuesday, October 25, 2022

| Time | Topic | Speaker |
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| | | |
| 0800-0830 | The Adaptive Auditory Mind: Plasticity and Temporal Coherence in Scene Analysis | Shihab Shamma |
| 0830-0900 | VOC Biomarker Sensing: Understanding Ultrasensitive Bio Olfactory System | Steve Kim |
| 0900-0930 | Optically Controlled, Genetically targeted Chemical Assembly of Electric neuromodulation | Jia Liu |
| 0930-1000 | BREAK | |
| 1000-1030 | Neural and Behavioral Basis of Sensory Integration in the Mosquito | Jeffrey Riffell |
| 1030-1045 | Gravity Dependent Cortical Control of Sensation | Oded ghitza |
| 1045-1130 | Implications of CISS in Bio systems | Moh El-Naggar |
| 1130-1300 | LUNCH | |
| 1300-1330 | Universal Theory of Multi-Sensory integration | Floris Van Breugel |
| 1330-1400 | Energy, Information and Power in Cells | Rahul Sarpeshkar |
| 1400-1430 | Molecular Alignment at functional Biotic/Abiotic interfaces for biosensing | Nicholas Bedford |
| 1430-1500 | Adaptive inertial Sensing in a complex behavioral repertoire | Jess Fox (remote) |
| 1500-1530 | De Novo Biomachines | David Beratan (Remote) |
| 1530-1600 | Polarization and Multispectral Vision in Mantis Shrimp: A Model for Information Processing and Biomimetic Imaging | Viktor Gruev |
| | MEETING ADJOURN FOR THE DAY | |

| Agenda Day 2 Wednesday, October 26, 2022 | | |
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| Time | Topic | Speaker |
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| 0800-0830 | Modulating Cellular Performance w Nanoscale Biocircuits | Dan Nocera (remote) |
| 0830-0900 | Cephalopod Inspired Adaptive Invisibility in Living Systems | Alon Gorodetsky |
| 0900-0930 | Bioelectric Atlas of Organelle | Bozhi Tian |
| 0930-1000 | Magnetoreception in Marine Animals, Bio-inspired algorithms for long range GPS free navigation | Ken Lohmann |
| 1000-1030 | BREAK | |
| 1030-1100 | Spike-Based Learning and Control for Multimodal Agile Sensory Integration and Behavior | Silvia Ferrari/Simon Sponberg |
| 1100-1130 | Microfluidic Photobiology Microscopy of Light Harvesting Bacteria at the Single Cell Limit | Nathaniel Gabor |
| 1130-1200 | Neurobiological Effects of the Vagus Nerve Stimulation | Candice Hatcher |
| 1200-1330 | LUNCH | |
| 1330-1400 | Operationally Relevant Molecular Biosignature Discovery and Evaluation for Sensing Platforms: Identification of operational stress signatures in in vitro ocular surface | Saber Hussain |
| 1400-1430 | Modeling in-vivo Validation of Analyte Pathway for Biochem Monitoring | Jason Heikenfeld |
| 1430-1500 | Flying in an Uncertain World: Decoding Rules of Neural Control in Insect Flight | Jean-Michel Mongeau |
| 1500-1530 | Nanoelectropulse-induced Changes in Cell Excitability – a new approach for neuromodulation | Josette Zaklit |
| 1530-1600 | Interferometric imaging of the intrinsic neural signaling, Photovoltaic restoration of sight to the blind | Daniel Palanker (remote) |
| | MEETING ADJOURN FOR THE DAY | |

| Agenda Day 3 Thursday, October 27, 2022 | | |
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| Time | Topic | Speaker |
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| 0800-0830 | | |
| 0830-0900 | Decision making underlying successful aerial contact in predatory flights: take-off, steering and thrust control | Paloma Bellido Gonzalez (remote) |
| 0900-0930 | Target Tracking in the Natural World: Nueurons and Behavior to Modeling | Karin Nordstrom (remote) |
| 0930-1000 | Overcoming distractions and coping with stress: How attention drives information flow in the fly brain | Dhruv Grover |
| 1000-1030 | BREAK | |
| 1030-1100 | EET in Human and Environmental Systems | Steve Finkel |
| 1100-1130 | Developing Bioenergetics Framework for Understanding Stimulated Electron Flow | Annett Rowe |
| 1130-1200 | Directed Energy Evoked Fast Thermal Gradient Impacts Synaptic mechanisms at Dendrite Spine | Bryan Gamboa |
| 1200-1230 | Impedence Spectroscopy of Neuron Excitability under Electromagnetic Stimulation | Yevgeny Berdichevsky |
| 1230-1330 | LUNCH | |
| 1330-1400 | A Biophysical Approach to Uncover the Role of Cell Membrane Mechanics in Sensing Mechanical Force | Neha Kamat (remote) |
| 1400-1430 | Neuroplasmonics for Selective and Remote Control of Neural Activity | Singameni Srikanth |
| 1430-1500 | Sigma-1 Receptor Agonist as a Novel Therapeutic for Circadian Rhythm Disruption-Induced Fatigue | Kai Shen (remote) |
| 1500-1530 | Multiscale analysis of bioinspired low energy information processing: from organelles to organisms (MURI) | Shelley Halpain (remote) |
| 1530-1600 | | |
| | MEETING ADJOURN | |