From the Dean’s office

› On behalf of the Division of Science, thank you for attending The 3rd Annual Sharon Cosloy-Edward Blank Family Distinguished Scientist Lecture. The lecture “A Brief View of Environmental Successes” given by the distinguished speaker Dr. Susan Solomon was a very successful event. Dr. Solomon’s talk about smog, lead, ozone depletion and climate change was fascinating and insightful. A special thank you to the Cosloy-Blank family for sponsoring the lecture.

Biography News

› Biology Colloquium
    Monday, October 23, 2017, 1:00 p.m., MR-801
    Speaker: Dr. Jairo Patiño, Island Ecology and Evolution Research Group. Instituto de Productos Naturales y Agrobiología (IPNA-CSI), La Laguna, Tenerife, Canary Island, Spain & Department of Environmental Science, Policy and Management, University of California
    Title: Ecological barriers and dispersal: using insular systems to transcend microevolutionary and macroevolutionary process

› Andrey Rudenko, Assistant Professor of Biology in the Division of Science, is the recipient of a $225,000 three years research grant/award from the Whitehall Foundation. The Whitehall Foundation is a not-for-profit corporation which is focused exclusively on assisting basic research in vertebrate (excluding clinical) and invertebrate neurobiology in the United States. Investigations should specifically concern neural mechanisms involved in sensory, motor, and other complex functions of the whole organism as these relate to behavior. The overall goal should be to better understand behavioral output or brain mechanisms of behavior.

Guest Title: Mechanistic Analysis of Traumatic Memory Traces.

Summary: Remembering traumatic/fearful events is critical for evolutionary adaptation and survival. Unfortunately, impairments in these forms of memory can have severe neuropathic and behavioral consequences. Increased fear retention in post-traumatic stress disorder (PTSD) can cause a person to persistently re-experience traumatic event. Neurobiological mechanisms underlying traumatic memory and trauma-related behavior remain poorly understood. Very recently, several research teams demonstrated that sparse populations of “memory engram neurons” can encode and store individual memories, thus representing traces of those memories in the brain. I propose to identify neurons encoding traumatic memories, perform their detailed molecular and structural characterization, and attempt to regulate their functions. This project should help to answer a number of fundamentally important questions, including: 1. Where are traumatic memories located in the brain? 2. What features allow specific neurons to encode and store such memories? 3. What makes old trauma memories so stable? 4. Could we directly manipulate traumatic memory traces to weaken or erase such memories and modify trauma/fear related behavior? I believe that this study should significantly improve our understanding of the basic mechanisms of traumatic memory and its behavioral consequences and facilitate development of novel therapeutic approaches for disorders, such as PTSD.

Chemistry and Biochemistry News

› Salzberg Chemistry Seminar
    Monday, October 23, 2017, 12:00 p.m., MR-1027
    Speaker: Alan Hyde, Merck and Co.
    Title: Synthetic Work of Environmental Agonist MK-8666: Discovery of a Kinetic/Dynamic Enzymatic Ketone Reduction

› Seminar in Biochemistry, Biophysics & Biodesign
    Wednesday, October 25, 2017, 12:00 p.m.
    ASRC Auditorium
    Speaker: Prof. Thomas A. Steitz, Mol Biophys & Biochemistry and Chemistry. Yale University
    Title: How Protein Factors Facilitate Protein Synthesis by the Ribosome

EAS News

› Earth and Environmental Science Seminar
    Friday, October 27, 2017, 12:45 p.m., MR-107
    Speaker: Kevin Kroeger, USGS (Louisiana), Research Scientist
    Title: Tidally-restricted coastal wetlands as a hotspot for carbon dioxide and methane emissions, and as a potent and untapped opportunity for anthropogenic emissions reductions

Mathematics News

› Mathematics Colloquium
    Thursday, October 26, 2017, 12:30 p.m., NAC 6/111
    Speaker: John Goodrick, Los Andes University, Colombia
    Title: Counting integer points in polytopes with an extension of Frosbiger arithmetic

Physics News

› Physics Colloquium
    Wednesday, October 25, 4:00 p.m. – 5:00 p.m.
    MR-418N
    Speaker: Prof. Klaus Gerwert, University of Bochum, Germany
    Title: Protein Nano-Machines at Work
    Abstract: In this talk I ask why, after more than ninety years, the formulation of quantum mechanics is still a matter of controversy. My aim is to provide a minimal formulation of nonrelativistic quantum mechanics that is clear and unambiguous. It will be based on the formulation of classical mechanics which is noncontroversial. The essential difference between classical and quantum mechanics is that in the latter the Euclidean space phase of states and properties is replaced by Hilbert space. The full content of quantum mechanics follows inevitably from this one assumption, including quantum incompatibility, entanglement and an understanding of the so-called measurement problem

› Karen Wu of Brooklyn Technical High School and Matthew Shao Chen of Great Neck South High School have been selected as semifinalists in the 2017 Siemens Competition, Math : Science : Technology, for their project (Title: Orbital and Spin Angular momentum relaxation in GaAs using by Streak Camera) which they completed during the 2017 Summer Photonics at CUNY Ultrafast Spectroscopy and Lasers at CCNY, under the daily research mentorship of Dr. Jeff Sercor and Dr. Stewart Russell, Research Associates.

    Both RAs were critical to advance the 9 HS and Ug research this summer.

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