Traditionally distinct scientific disciplines are merging to create new opportunities. Share the excitement and challenge through seminars and discussions with nationally recognized pioneers in science at the edge.

Spring Semester 2010

Seminars are on Fridays at 11:30 a.m. with refreshments served at 11:15 a.m.
1400 Biomedical and Physical Sciences Building (unless noted otherwise)

January 15 - Quantitative Biology and Modeling Seminar
Claus Wilke, Dept. of Integrative Biology, University of Texas at Austin
Selection for Accurate and Efficient Gene Expression

January 22 - Interdisciplinary Physics Seminar
Steven Cundiff, JILA/University of Colorado-Boulder
Optical Two-Dimensional Spectroscopy of Semiconductor Nanostructures

January 29 – Engineering Seminar
Kelvin Lee, Dept. of Chemical Engineering, University of Delaware
Enhancing Protein Secretion: the Old, the New, and the Unexpected

February 12 - Interdisciplinary Physics Seminar
Sunney Xie, Dept. of Chemistry & Chemical Biology, Harvard University
Life at the Single Molecule Level

February 19 – Engineering Seminar
Scott Banta, Department of Chemical Engineering, Columbia University
Protein Engineering for Biosensors and Biofuel Cells

March 5 - Interdisciplinary Physics Seminar
Angel Garcia, Dept. of Physics, Applied Physics, and Astronomy, Rensselaer Polytechnic Institute
Simulations of the Folding/Unfolding Thermodynamics of Proteins

March 19 - Quantitative Biology and Modeling Seminar
Martha Bulyk, Health Sciences & Technology, Harvard Medical School
Transcription Factor-DNA Interactions: cis Regulatory Codes in the Genome

March 26 - Quantitative Biology and Modeling Seminar
Tamar Schlick, Dept. of Chemistry & Courant Institute of Mathematical Sciences, New York University
Adventures in Computational Biology

April 2 - Quantitative Biology and Modeling Seminar
Karl Broman, Dept. of Biostatistics & Medical Informatics, University of Wisconsin-Madison
Mapping QTL to a Phylogenetic Tree

April 9 – Engineering Seminar
Kyoungbum Lee, Department of Chemical and Biological Engineering, Tufts Univ., Medford, MA
Metabolic Engineering of Cellular Energy (In)efficiency

April 16 – Engineering Seminar
John Pierce, DuPont Applied BioSciences Technology, Delaware
Theory and Empiricism in Metabolic Engineering for Renewable Fuels and Chemicals

April 23 - Interdisciplinary Physics Seminar
Tatyana Sharpee, Computational Neurobiology Laboratory, Salk Institute for Biological Studies
Maximally Informative Input/Output Functions in Biological Networks

April 30 - Interdisciplinary Physics Seminar
Carl Frieden, Dept. of Biochemistry & Molecular Biophysics, Washington Univ.
Differenitizing the Isoforms of the Apolipoprotein E Family of Proteins

May 7 - Interdisciplinary Physics Seminar
Devarajan Thirumalai, Institute of Physical Science & Technology, Univ. of Maryland
Global Simplicity and Hidden Complexity in the Functions of Biological Machines

May 14 - Quantitative Biology and Modeling Seminar
Raymond Carroll, Department of Statistics, Texas A&M University
Robust Powerful Methods for Understanding Gene-Gene and Gene-Environment Interactions

May 21 - Interdisciplinary Physics Seminar
Jose Onuchic, Department of Physics, University of California at San Diego
The Energy Landscape for Folding and Molecular Machines

May 28 - Quantitative Biology and Modeling Seminar
Ronald Johnson, Department of Biochemistry & Molecular Biology, Brody School of Medicine, East Carolina University, NC
Rapid Kinetic Analysis of Transcription Elongation as Catalyzed by RNA Polymerase

Organizers
Lisa Lapidus (lapidus@pa.msu.edu) & Jeffrey Schenker (Jeffrey@math.msu.edu), Interdisciplinary Physics
Christina Chan (krischan@egr.msu.edu), Engineering
David Amosti (amosti@msu.edu) & David Weliky (weliky@chemistry.msu.edu), Quantitative Biology/Gene Expression in Development & Disease