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.

**Fall Semester 2013**

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)**

**September 6 - Interdisciplinary Physics Seminar**

Ilya Nemenman, Department of Physics, Emory University
*Information Processing in Cellular Signaling*

**September 13 - Quantitative Biology/Gene Expression in Development and Disease Seminar**

Mark Neff, Center for Cancer Genomics and Quantitative Biology, Van Andel Institute
*Genetics, Genomics, and Dog Biology*

**September 20 - Quantitative Biology/Gene Expression in Development and Disease Seminar**

Jianpeng Ma, Department of Biochemistry and Molecular Biology, Baylor College of Medicine
*Multiscale Approach for Simulating, Refining and Modeling Supramolecular Complexes*

**September 27 - Interdisciplinary Physics Seminar**

Heather Allen, Department of Chemistry, The Ohio State University
*Ions, Lipids, and Water at the Air-Aqueous Interface: Organization and Electric Fields*

**October 4 - Quantitative Biology/Gene Expression in Development & Disease Seminar**

Ian Korf, Genome Center, University of California-Davis
*Genomics and Bioinformatics to the Rescue: Solving Complex Problems with Simple Models and Loads of Data*

**October 11 – Engineering Seminar**

Michael Snyder, Department of Genetics, Stanford University
*Personalized Medicine: Personal Omics Profiles of Healthy and Disease States*

**October 18 - Quantitative Biology/Gene Expression in Development & Disease Seminar**

Rafael Casellas, Genomics and Immunity, National Institute of Health
*The NIH Mouse Regulome Project*

**October 25 – Engineering Seminar – Room 3450 Engineering Building**

Mark Saltzman, Biomedical Engineering, Yale School of Engineering & Applied Science
*Polymer Nanoparticles for Delivery of Agents for Gene Silencing and Gene Editing*

**November 1 - Quantitative Biology/Gene Expression in Development & Disease Seminar**

Fei Zou, Department of Biostatistics, University of North Carolina at Chapel Hill
*Integrated Statistical Analysis of Genome-wide Association Data*

**November 8 - Quantitative Biology/Gene Expression in Development & Disease Seminar**

Stephanie Hampton, National Center for Ecological Analysis and Synthesis, University of California-Santa Barbara
*Deciphering Sixty Years of Environmental Data to Understand Recent Change in the World’s Largest Lake – Lake Baikal, Siberia*

**November 15 - Quantitative Biology/Gene Expression in Development & Disease Seminar**

David Searls, Department of Genetics, Perelman School of Medicine, University of Pennsylvania
*Genome as Literature*

**November 22 - Quantitative Biology/Gene Expression in Development & Disease Seminar**

Boris Shraiman, Department of Physics, University of California-Santa Barbara
*A Physicist’s Take On Natural Selection and Development: Statistical Genetics Theory, and Revisiting Growth and Form*

**December 6 - Interdisciplinary Physics Seminar**

James Chelikowsky, Institute for Computational Engineering & Sciences, University of Texas
*Addressing Dirac’s Challenge: Practical Approaches for the Quantum Theory of Materials*

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Organizers

Ruby Ghosh (ghosh@pa.msu.edu), Interdisciplinary Physics
Tim Whitehead (taw@msu.edu) & Richard Lunt (rlunt@msu.edu), Engineering
C. Titus Brown (ctb@msu.edu), & David Arnosti (arnosti@msu.edu)

Quantitative Biology/Gene Expression in Development & Disease