

SCIENCE at the Edge

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.

MICHIGAN STATE
UNIVERSITY

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*

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