

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.

Spring Semester 2015

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)



MICHIGAN STATE
UNIVERSITY

January 16 - Quantitative Biology/Gene Expression in Development & Disease Seminar

Gregory Voth, Department of Chemistry, University of Chicago
Theory and Simulation of Biomolecular Systems: Surmounting the Challenge of Bridging the Scales

January 23 – Engineering Seminar

John Rogers, Department of Materials Science and Engineering, and Department of Chemistry, University of Illinois
Stretchy and Dissolvable Electronics for the Human Body

January 30 - Quantitative Biology/Gene Expression in Development & Disease Seminar

Justin Lorieau, Department of Chemistry, University of Illinois at Chicago
Grapnels of the Influenza Virus: The Hemagglutinin Fusion Domain's Structure and Function in Curving and Fusing Membranes on Infection

February 6 - Interdisciplinary Physics Seminar

Marija Vucelja, The Rockefeller University, Center for Studies in Physics and Biology
Emergence and Interference of Clones in Populations, Glassy Aspects of Evolution

February 13 – Engineering Seminar

C. Daniel Frisbie, Chemical Engineering and Materials Science, University of Minnesota
New Materials & Printing Processes for Flexible Electronics

February 20 – Engineering Seminar

Sue Carter, Physics Department, University of California at Santa Cruz
The Future of Solar Energy after the Big Crash

February 27 – Quantitative Biology/Gene Expression in Development & Disease Seminar

George Mias, Biochemistry & Molecular Biology, Michigan State University
Dynamic Omics Integration: a First Step Towards Personalized Medicine

March 6 - Engineering Seminar

Mercouri Kanatzidis, Department of Chemistry, Northwestern University
From Heat to Electricity with Thermoelectric Materials: The Story of Nanostructuring

March 20 - Interdisciplinary Physics Seminar

Adilson E. Motter, Department of Physics and Astronomy, Northwestern University
To What Extent Can Networks be Controlled? And What For?

March 27 - Interdisciplinary Physics Seminar

Stuart Kauffman, Institute for Systems Biology, Seattle, WA
The Genetic Regulatory System: Attractors as Cell Types and Criticality

April 3 - Quantitative Biology/Gene Expression in Development & Disease Seminar

Blanton Tolbert, Department of Chemistry, Case Western Reserve University
Using Biophysics to Understand Mechanisms of HIV Replication

April 10 - Quantitative Biology/Gene Expression in Development & Disease Seminar

Matthew Bennett, BioSciences, Rice University
Designing Synthetic Multicellular Systems

April 17 - Quantitative Biology/Gene Expression in Development & Disease Seminar

Steve Henikoff, Division of Basic Sciences at Fred Hutchinson Cancer Research Center, and an Investigator with the Howard Hughes Medical Institute
Chromatin Dynamics from an Epigenomic Perspective

April 24 - Interdisciplinary Physics Seminar

Radu Cojocaru, Enterprise Genomics Solutions, Life Sciences Solutions, Thermo Fisher Scientific, CA
Complex Biological Network Reconstruction using Natural Language Processing

May 1 - Interdisciplinary Physics Seminar

Eric Betzig, Janelia Research Campus, Howard Hughes Medical Institute
Imaging Life at High Spatiotemporal Resolution

Organizers

Carlo Piermarocchi (carlo@pa.msu.edu) & Ruby Ghosh (ghosh@pa.msu.edu)
Interdisciplinary Physics

Richard Lunt (rlunt@egr.msu.edu), Engineering

David Arnosti (arnosti@msu.edu), & George Mias (gmias@msu.edu)
Quantitative Biology/Gene Expression in Development & Disease