

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 2014

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

Amy Pasquinelli, Division of Biological Sciences, University of California, San Diego
Pinning Down MicroRNA Targets in Vivo

January 24 – Engineering Seminar

Norm Wagner, Department of Chemical Engineering, University of Delaware
Shear Thickening Fluids and Their Applications

January 31 - 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

February 7 - Quantitative Biology/Gene Expression in Development & Disease Seminar

David Bortz, Department of Applied Mathematics, University of Colorado at Boulder
Biomechanics and Population Dynamics of Microbial Communities

February 14 - Interdisciplinary Physics Seminar

Leonid I. Perlovsky, Harvard University and the Air Force Research Laboratory
Towards Physics of the Mind

February 21 – Engineering Seminar

Enrique Gomez, Department of Chemical Engineering, Pennsylvania State
From Molecules to Devices: Self-Assembled Organic Photovoltaics

February 28 – Engineering Seminar

Vikas Nanda, Department of Biochemistry, Rutgers University
Pushing on a String - the Design of Protein Fibers

March 14 - Quantitative Biology/Gene Expression in Development & Disease Seminar

Amy Schmid, Department of Biology, Duke University
Surviving the Outer Limits: Gene Regulatory Network Dynamics in Archaeal Extremophiles

March 21 - Quantitative Biology/Gene Expression in Development & Disease Seminar

Michael Gilson, Computer-Aided Drug Design, University of California, San Diego
Plumbing the Depths of Entropy and Enthalpy in Molecular Recognition

March 28 - Quantitative Biology/Gene Expression in Development & Disease Seminar

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

April 4 - Interdisciplinary Physics Seminar

James Trosko, Pediatrics and Human Development, Michigan State University
Evolution, Gap Junctions, Stem Cells, Multi-Cellularity and the Universe Becoming Conscious of Itself: A 'Biological Rosetta Stone' View of Human Health and Disease

April 11 - Quantitative Biology/Gene Expression in Development & Disease Seminar

Angela Gronenborn, Department of Structural Biology, University of Pittsburgh
Synergy between NMR, cryo-EM and Large Scale MD Simulations – Novel Findings for HIV Capsid Function

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

Lynette Cegelski, Department of Chemistry, Stanford University
Structure, Function, and Inhibition of Bacterial Biofilms: Lessons from Small Molecules and a Big Magent

April 25 - Quantitative Biology/Gene Expression in Development & Disease Seminar

L. Aravind, National Center for Biotechnology, National Institute of Health
The Natural History of Nucleic Acid Polymerases

Organizers

Ruby Ghosh (ghosh@pa.msu.edu) Interdisciplinary Physics
Tim Whitehead (taw@msu.edu) & Richard Lunt (rlunt@egr.msu.edu), Engineering
C. Titus Brown (ctb@msu.edu) & David Arnosti (arnosti@msu.edu)
Quantitative Biology/Gene Expression in Development & Disease