

# 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 2017**

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 20

James Bardwell, Biological Chemistry; Molecular, Cellular and Developmental Biology,  
University of Michigan  
*Watching a Chaperone Fold a Protein at High Resolution*

January 27

Mason Porter, Department of Mathematics, UCLA  
*Collective Behavior in Online Social Networks, Politicians, and Cows*

February 3

Jennifer Marsman, Developer, Microsoft  
*Intro to Machine Learning: Predict Who Survives the Titanic*

February 10

Jiali Gao, CSENG Chemistry, University of Minnesota  
*Combined Quantum Mechanical and Molecular Mechanical (QM/MM) Methods*

February 17

Ursula Whitcher, Math Reviews, American Mathematical Society and  
Department of Mathematics, University of Wisconsin-Eau Claire  
*Mirror, Mirror: String Theory and Pairs of Polyhedra*

February 24

Paul Jardine, Department of Diagnostic and Biological Sciences, University of Minnesota  
*Bacteriophage DNA Packaging as a Model for Ring Motors and Polymer Dynamics*

March 3

John Stiller, Department of Biology, Eastern Carolina University  
*RNA Polymerase and the Evolution of Eukaryotes:  
Comparative Genomics Shakes the Tree-of-Life*

March 17

Marilyn Gunner, Physics Department, City College of New York  
*Electron Transfer & Proton Transfer Reactions*

March 24

Karen Davies, Lawrence Berkeley National Laboratory  
*Electron Cryo-Tomography of Mitochondria: The Role of ATP Synthase in Shaping Cristae*

March 31

James Noonan, Department of Genetics, Yale University  
*Genetic Models of Human Evolution*

April 7

Wenyng Shou, Molecular and Cellular Biology, University of Washington  
*The Survival of the Most Cooperative: Insights from Biological and Mathematical Systems*

April 14

Michael Chabynic, Materials Department, University of California, Santa Barbara  
*Energy Conversion with Organic Semiconductors*

April 21

Rongling Wu, Department of Public Health Sciences and Director of Center for  
Statistical Genetics, Pennsylvania State University  
*Statistical Genetics and Genomics*

April 28

Sunduz Keles, Department of Biostatistics & Medical Informatics and  
Department of Statistics, University of Wisconsin, Madison  
*Statistical Analysis of Global Gene Expression Information*

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## Organizers

Carlo Piermarocchi (carlo@pa.msu.edu)  
Richard Lunt (rlunt@egr.msu.edu), Engineering  
David Arnosti (arnosti@msu.edu), & George Mias (gmias@msu.edu)  
Quantitative Biology/Gene Expression in Development & Disease

Web streaming of Science at the Edge Seminars is available upon request.  
Please contact the organizers in advance.