



# SCIENCE at the Edge

Traditionally distinct science disciplines are merging to create new opportunities. Share the excitement and challenge each week through seminars and discussions with nationally recognized pioneers in science at the edge.

FALL SEMESTER 2003

MICHIGAN STATE UNIVERSITY

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UNIVERSITY

Seminars Begin at 11:30 a.m.,  
Refreshments Served at 11:15 a.m.  
All Seminars are in Room 1400 Biomedical and Physical Sciences Building

**Friday, September 5 – Campus Theory Seminar**

Stefan Boettcher, Emory University, Physics  
*Using Extremal Dynamics to Optimize Large Disordered Systems*

**Friday, September 12 – Center for Biological Modeling Seminar**

Ioan Andricioaei, University of Michigan, Chemistry  
*Changes in the Energy Landscape: From Simple Peptides to a DNA Polymerase Complex*

**Friday, September 19 – Engineering Seminar**

Paula Hammond, Massachusetts Institute of Technology, Chemical Engineering  
*Polymer Multilayer Assembly and Chemically Directed Surface Patterning*

**Friday, September 26 – Campus Theory Seminar**

Anil Jain, Michigan State University, Computer Science and Engineering  
*Biometric Authentication: How Do I Know Who You Are?*

**Friday, October 3 – Engineering Seminar**

Paul West, Pacific Nanotechnology  
*Nanotechnology and the Atomic Force Microscope*

**Friday, October 10 – Center for Biological Modeling Seminar**

Lydia Kavradi, Rice University, Computer Science and Bioengineering  
*Modeling the Conformational Flexibility of Proteins*

**Friday, October 17 – Campus Theory Seminar**

1:00 p.m. Joint with CBM Symposium on Biological Networks  
Mark Newman, University of Michigan, Physics  
*The Structure of Social and Biological Networks*

**Friday, October 24 – Center for Biological Modeling Seminar**

C. Titus Brown, California Institute of Technology, Davidson Laboratory  
*Towards an Understanding of Development: Gene Regulatory Networks and cis-Regulation*

**Friday, October 31 – Engineering Seminar**

Kenneth Carter, IBM-Almaden  
*Surface Reactions from Patterned Crosslinked Networks*

**Wednesday, November 5 – Joint Mathematics/Center for Biological Modeling Seminar**

John Schotland, University of Pennsylvania, Bioengineering  
*Optical Tomography at the Nanoscale*

**Friday, November 7 – Center for Biological Modeling Seminar**

Teresa Head-Gordon, University of California-Berkeley, Bioengineering  
*Computational and Experimental Methods Applied to Protein Structure and Function*

**Friday, November 14 – Campus Theory Seminar**

Vijay Pande, Stanford University, Chemistry  
*Folding@Home: Using Worldwide Grid Computing to Tackle Fundamental Barriers in Biomolecular Simulation*

**Friday, November 21 – Engineering Seminar**

Stuart Rowan, Case Western Reserve University, Macromolecular Science and Engineering  
*Supramolecular Polymerization, A Route to Responsive Materials*

SEMINAR ORGANIZERS:

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