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 2001  MICHIGAN STATE UNIVERSITY**

**Seminars Begin at 11:30 a.m., Refreshments Served at 11:15 a.m.**

**Friday, September 7** - Room 224 Physics-Astronomy Building  
Juyang Weng, Michigan State University  
Autonomous Mental Development by Robots and Animals

**Friday, September 21** - Room 1208 Engineering Building  
Erdogan Gulnar, University of Michigan  
From Idea to Commercialization Development of a New Biochip  
(Note: This seminar starts at 11:00 a.m.)

**Friday, September 28** - Room 224 Physics-Astronomy Building  
Peter Bates, Michigan State University  
Mathematical Modeling of Phase Transitions in Materials

**Friday, October 5** - Room 224 Physics-Astronomy Building  
Susan Sinnott, North Carolina State University  
Nano-Fluidics and Mechanical Properties of Carbon Nanotube-Based Membranes and New Materials

**Friday, October 12** - Room 224 Physics-Astronomy Building  
Boris Shklovskii, University of Minnesota  
Low Temperature Physics at Room Temperature in Water: Charge Inversion in Chemistry, Biology and Gene Therapy

**Friday, October 19** - Room 208 Biochemistry Building  
Joe Landman, MSC.Software, Supercomputing  
Scalability Matters - Why We Need to Make Bioinformatics Programs Scalable, and Results from Work on Various Programs

**Friday, October 26** - Room 208 Biochemistry Building  
Gerhard Hummer, National Institute of Health  
Computational Analysis of Water and Proton Movements in Proteins

**Friday, November 2** - Room 1208 Engineering Building  
Ramani Narayan, Michigan State University  
Sustainable Bio-Based Materials

**Friday, November 9** - Room 224 Physics-Astronomy Building  
Mark Robbins, Johns Hopkins University  
Where Does Friction Come From?

**Friday, November 16** - Room 1208 Engineering Building  
Christine Schmidt, University of Texas at Austin  
Tissue Engineering Strategies for Nerve Regeneration

**Friday, November 30** - Room 208 Biochemistry Building  
Alexei Stuchebrukhov, University of California-Davis  
Biological Charge Transfer

**Friday, December 7** - Room 224 Physics-Astronomy Building  
Geoffrey West, Los Alamos National Laboratory  
The Tree of Life: Universal Scaling Laws in Biology from Molecules and Cells to Whales and Ecosystems

**Seminar Organizers:**  
Campus Theory Seminar:  
M. F. Thorpe, Physics & Astronomy  
thorpe@pa.msu.edu

Engineering Interdisciplinary Seminar:  
Virginia Ayres, Electrical and Computer Engineering  
ayres@egr.msu.edu  
John McGrath, Mechanical Engineering  
mcgrath@msu.edu

Center for Biological Modeling Seminar:  
Shelagh Ferguson-Miller, Biochemistry & Molecular Biology  
fergus@bch.msu.edu  
Leslie Kuhn, Biochemistry and Molecular Biology  
kuhn@agua.bch.msu.edu

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Seminar details, including links to speaker homepages, are at:  
http://www.pa.msu.edu/seminars/cts/ and http://biomodel.msu.edu/