**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 2005 Michigan State 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 9 – Engineering Seminar**
Amy Walker, Washington University, St. Louis, MO
*Towards Molecular Electronic Circuitry: Selective Deposition of Metals on Patterned Self-Assembled Monolayer Surfaces*

**Friday, September 16 – Interdisciplinary Physics Seminar**
Giovanni Paternostro, The Burnham Institute, La Jolla, CA
*Systems Biology of Aging*

**Friday, September 23 – Quantitative Biology and Modeling Seminar**
Matthew Young, University of Michigan, Ann Arbor, MI
*Structure and Computational Investigations of Protein Kinase Regulation and Implications for Drug Therapy Targeting the Bcr-Abl Oncogene*

**Friday, September 30 – Interdisciplinary Physics Seminar**
Simon Billinge, Michigan State University, East Lansing, MI
*The Nanostructure Problem*

**Friday, October 7 – Engineering Seminar**
Christina Chan, Michigan State University, East Lansing, MI
*TIPS© for Reconstructing Signaling Networks from High-Throughput Data*

**Friday, October 14 – Quantitative Biology and Modeling Seminar**
Jeffrey Gray, Johns Hopkins University, Baltimore, MD
*Computational Protein Structure Prediction Applied to Docking, Therapeutic Antibodies, and Allostery*

**Friday, October 21 – Interdisciplinary Physics Seminar**
Amalie Frischknecht, Sandia National Laboratories, Albuquerque, NM
*Molecular Theory of Lipid Bilayers*

**Friday, October 28 – Engineering Seminar**
Matteo Pasquali, Rice University, Houston, TX
*Single-Walled Carbon Nanotubes in Liquids*

**Friday, November 4 – Quantitative Biology and Modeling Seminar**
Ronen Marmorstein, Wistar Institute, University of Pennsylvania, Philadelphia, PA
*Structure and Chemistry of Histone Modification and Targeting in Chromatin Regulation*

**Friday, November 11 – Interdisciplinary Physics Seminar**
Robert Tycko, NIDDK, National Institutes of Health, Bethesda, MD
*Alzheimer's Amyloid Fibrils, Nuclear Magnetic Resonance, and their Connections*

**Friday, November 18 – Engineering Seminar**
Vladimir Tarbara, Michigan State University, East Lansing, MI
*Yin and Yang of Particle Deposition in Membrane-Based Separation Processes*

**Friday, December 2 – Quantitative Biology and Modeling Seminar**
Andrey Rzhetsky, Columbia University, New York, NY
*Of Truth and Pathways*

**Seminar Organizers:**
- Michael E. Mackay, Department of Chemical Engineering and Material Science
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- Michael Feig, Quantitative Biology and Modeling Initiative
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- Marianne Huebner, Quantitative Biology and Modeling Initiative
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- Phillip Duxbury, Department of Physics and Astronomy
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