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.

**Fall Semester 2008**

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)

**August 29** - Quantitative Biology/Gene Expression in Development and Disease Seminar
Dongping Zhong, Department of Physics, Chemistry, and Biochemistry, The Ohio State University
*Ultrafast Enzymatic Catalysis: DNA Repair by Photolyase*

**September 5** - Quantitative Biology/Gene Expression in Development and Disease Seminar
Cheng Li, Harvard School of Public Health, Dana-Farber Cancer Institute
*Genomic Alteration Analysis Using SNP Microarrays*

**September 12** - Quantitative Biology/Gene Expression in Development and Disease Seminar
Klaus Schulten, Department of Physics, University of Illinois at Urbana-Champaign
*Molecular Dynamics Simulations Beyond Microsecond, Beyond Million Atoms, Beyond Present Force Fields*

**September 19** - Interdisciplinary Physics Seminar
Sidney Redner, Department of Physics, Boston University
*The Best, the Hottest, and the Luckiest: A Statistical Tale of Extremes*

**September 29** - Interdisciplinary Physics Seminar
Kevin Plaxco, Department of Chemistry and Biochemistry, University of California-Santa Barbara
*Better Living through Biosensors*

**October 3** - Quantitative Biology/Gene Expression in Development & Disease Seminar
Audrey Gasch, Laboratory of Genetics and Genome Center of Wisconsin, University of Wisconsin-Madison
*Functional Genomics of Yeast Stress Defense*

**October 10** - Quantitative Biology/Gene Expression in Development & Disease Seminar
Gary Drobny, Departments of Chemistry and Physics, University of Washington
*Solid State NMR Studies of Proteins at Biomaterial Interfaces*

**October 17** - Interdisciplinary Physics Seminar
Kevin Plaxco, Department of Chemistry and Biochemistry, University of California-Santa Barbara
*Better Living through Biosensors*

**October 31** - Quantitative Biology/Gene Expression in Development & Disease Seminar
Yan Cui, Department of Molecular Sciences, University of Tennessee
*Gene Expression Trait: A Glimpse into the Black Box of Genotype-Phenotype Mapping*

**November 7** - Interdisciplinary Physics Seminar
Kenneth McLaughlin, Department of Mathematics, University of Arizona
*Crazy Limits: Random Matrices, Random Tilings, the Asymptotic Analysis that Relates Them*

**November 14** – Engineering Seminar
Lonnie Shea, Department of Chemical and Biological Engineering, Northwestern University
*Gene Delivery for Regenerative Medicine*

**November 21** - Interdisciplinary Physics Seminar
Yannis Kevrekidis, Department of Chemical Engineering, Princeton University
*Equation-Free Modeling and Computation for Complex Systems*

**December 5** – Engineering Seminar
Stanislav Shvartsman, Department of Chemical Engineering, Princeton University
*Paint by Numbers: Quantitative Biology of Pattern Formation in Embryos*

**Organizers**
Lisa Lapidus (lapidus@pa.msu.edu) & Jeffrey Schenker (jeffrey@math.msu.edu)
Interdisciplinary Physics
Christina Chan (krchan@egr.msu.edu) Engineering
David Arnosti (arnosti@msu.edu), David Weliky (weliky@chemistry.msu.edu), Quantitative Biology/Gene Expression in Development & Disease