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 2012**
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)

**September 7 - Interdisciplinary Physics Seminar**
Yukiko Yamashita, Center for Stem Cell Biology, Life Sciences Institute, University of Michigan
Asymmetric Stem Cell Division in *Drosophila*

**September 14 - Interdisciplinary Physics Seminar**
Paul Corkum, JASLAB, University of Ottawa and National Research Council of Canada
*Catching Electrons with Light*

**September 21 - Quantitative Biology/Gene Expression in Development and Disease Seminar**
Richard Scheuermann, J. Craig Venter Institute, San Diego, California
*Comparative Genomics Analysis to Determine the Origin of Pandemic Influenza Viruses*

**September 28 - Interdisciplinary Physics Seminar**
David Luzzi, Northeastern University
*Nanotechnology: From Research Lab to Commercialization*

**October 5 - Interdisciplinary Physics Seminar**
Stephen Hsu, Department of Physics, Michigan State University
*Genetic Architecture of Intelligence*

**October 12 - Quantitative Biology/Gene Expression in Development & Disease Seminar**
Heather Allen, Departments of Chemistry and Biochemistry, The Ohio State University
*Ion, Lipids, and Water Organization at Air-Aqueous Interfaces: From Atmospheric Chemistry of Aerosols to Biophysics of Lung Surfactant*

**October 19 - Quantitative Biology/Gene Expression in Development & Disease Seminar**
Jacob Schaefer, Department of Chemistry, Washington University in St. Louis
*Carbon Partitioning in Soybean Leaves by combined ¹¹CO₂ and ¹³CO₂ Labeling*

**October 26 - Interdisciplinary Physics Seminar**
Paul Schumacker, Departments of Pediatrics, Medicine, and Cell & Molecular Biology, Northwestern University
*Mitochondrial Oxidant Stress/Signaling: Detection, Modification and Consequences in Health and Disease*

**November 2 - Quantitative Biology/Gene Expression in Development & Disease Seminar**
Chris Lee, Department of Biochemistry and Molecular Biology, University of California, Los Angeles
*Turning the Scientific Method into Math: Information Metrics for Experiment Proposal and Optimization*

**November 9 – Engineering Seminar**
Jonathan Dordick, Department of Chemical and Biological Engineering, Rensselaer Polytechnic Institute
*High-Throughput 3D Cell Culture for Drug Discovery and Human Toxicology*

**November 16 - Quantitative Biology/Gene Expression in Development & Disease Seminar**
David Case, BioMaPS Institute and Department of Chemistry and Chemical Biology, Rutgers University
*Bridging the Divide: All Atom Molecular Dynamics Simulations of Biomolecular Crystals*

**November 30 - Quantitative Biology/Gene Expression in Development & Disease Seminar**
Gerry Wright, Department of Biochemistry and Biomedical Sciences, McMaster University
*Resisting Resistance: Overcoming Antibiotic Resistance with Small Molecules*

**December 7 - Interdisciplinary Physics Seminar**
Kenneth Suslick, Department of Chemistry, University of Illinois at Urbana-Champaign
*Inside a Collapsing Bubble: Sonochrome and Sonoluminescence*

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**Organizers**
Ruby Ghosh (ghosh@pa.msu.edu), Interdisciplinary Physics
Christina Chan (krischan@egr.msu.edu), Engineering
David Arnosti (arnosti@msu.edu) & C. Titus Brown (ctb@msu.edu), Quantitative Biology/Gene Expression in Development & Disease