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.

**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 & Disease Seminar*
Mark Rebeiz, Department of Biological Sciences, University of Pittsburgh
**Morphological Evolution: The Modification and Origination of Nodes and Networks in Development**

*September 5 - Interdisciplinary Physics Seminar*
Hiroshi Yamaguchi, NTT Basic Research Laboratories, NTT Corporation
**Nonlinear Interaction and Coherent Phonon Dynamics in Electromechanical Resonators**

*September 12 - Interdisciplinary Physics Seminar*
Michael C. Tringides, Department of Physics and Astronomy, Iowa State University and Ames Laboratory, USDOE
**Epitaxial Growth and Control of Metal Nanostructures on Graphene**

*September 19 - Interdisciplinary Physics Seminar*
Benjamin de Bivort, Department of Organismic and Evolutionary Biology, Harvard University
**The Neurobiology of Individuality**

*September 26 - Quantitative Biology/Gene Expression in Development & Disease Seminar*
Patrick van der Wel, Department of Structural Biology, University of Pittsburgh
**Solid-state NMR Studies of Amyloid Formation by Polyglutamine and Huntingtin Fragments**

*October 3 - Quantitative Biology/Gene Expression in Development & Disease Seminar*
Lauren McIntyre, Center for NeuroGenetics, University of Florida
**Allele Specific Expression in Drosophila**

*October 10 - Interdisciplinary Physics Seminar*
Predrag Cvitanovic, Center for Nonlinear Science, School of Physics, Georgia Institute of Technology
**Noise is Your Friend, or: How Well Can We Resolve State Space?**

*October 17 – Interdisciplinary Physics Seminar*
Anne Andrews, Department of Psychiatry and
Paul Weiss, Department of Chemistry and Biochemistry,
California NanoSystems Institute, University of California, Los Angeles
**Developing Nanoscale Measurements for the Brain**

*October 24 – Engineering Seminar*
Richard Register, Department of Chemical and Biological Engineering, Princeton University
**Block Copolymer Thin Films: Structure, Shear Alignment, and Applications in Nanofabrication**

*October 31 - Interdisciplinary Physics Seminar*
Mark Dykman, Department of Physics and Astronomy, Michigan State University
**Fluctuating Nonlinear Oscillators: From Nanodynamics to Quantum Superconducting Circuits**

*November 7 - Quantitative Biology/Gene Expression in Development & Disease Seminar*
Hunter Fraser, Department of Biology, Stanford University
**Adaptive Evolution of Gene Expression**

*November 14 - Quantitative Biology/Gene Expression in Development & Disease Seminar*
Sushmita Roy, Department of Biostatistics & Medical Informatics, University of Wisconsin-Madison
**Next Generation Regulatory Network Reconstruction: From Yeast to Mammals**

*November 21 - Interdisciplinary Physics Seminar*
John A. Woollam, Department of Electrical Engineering, University of Nebraska-Lincoln
**TBA**

*December 5 – Engineering Seminar*
Darrel Schlom, Department of Materials Science and Engineering, Cornell University
**Playing the “Strain Game” to Enhance the Properties of Oxides**

**Organizers**
Ruby Ghosh (ghosh@pa.msu.edu), Interdisciplinary Physics
Richard Lunt (rlunt@egr.msu.edu), Engineering
David Arnosti (arnosti@msu.edu) & George Mias (gmias@msu.edu), Quantitative Biology/Gene Expression in Development & Disease