

# SCIENCE at the Edge

*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.*



MICHIGAN STATE  
UNIVERSITY

Fall Semester 2016

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 16

Simon Billinge, Applied Physics and Applied Mathematics at Columbia University and Condensed Matter Physics and Material Science Department at Brookhaven National Laboratory

*Some Recent Developments and Challenges in Nanostructure Determination: Making Nanoscience Great Again*

September 23

Jennifer Reed, Chemical and Biological Engineering, University of Wisconsin

*Systems Approaches for Exploring and Exploiting Microbial Metabolism*

September 30

Nate Lewis, Division of Chemistry and Chemical Engineering, California Institute of Technology

*Sunlight-Driven Hydrogen Formation by Membrane-Supported Photoelectrochemical Water Splitting*

October 7

Yu-Ping Wang, Department of Biomedical Engineering, Tulane University  
TBD

October 21

Erwin Frise, Environmental Genomics & Systems Biology, Lawrence Berkeley National Laboratory

*New Strategies to Identify Transcription Factor Regulatory Relationships for Organ Development*

October 28

Stephano Allesina, Ecology and Evolution, University of Chicago

*Dynamics of Large Biological Systems*

November 4

Sarah-Maria Fendt, Vesalius Research Center, Belgium

*How the Nutrient Microenvironment Supports Metastasis Formation and Progression*

November 11

Huan-Xiang Zhou, Department of Physics and Institute of Molecular Biophysics, Florida State University.

*Electrostatics in Protein Structure and Action*

December 2

Ronald M. Levy, Center for Biophysics & Computational Biology, Temple University

*Exploring Fitness and Free Energy Landscapes of Proteins for Allostery and Ligand Binding*

December 9

Stephen CJ Parker, Department of Computational Medicine & Bioinformatics, University of Michigan

*Computational Medicine & Bioinformatics*

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## Organizers

Carlo Piermarocchi (carlo@pa.msu.edu) & 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

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