

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.

Spring Semester 2018

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)



MICHIGAN STATE
UNIVERSITY

January 19

Raluca Gordan, Biostatistics & Bioinformatics, Duke University
Sibling Rivalry in Transcription Factor Families

January 26

Brian Gulbransen, Department of Physiology, Michigan State University
Intercellular Communication as a Basis for Understanding Complex Organ Functions

February 2

Eugene Koonin, National Center for Biotechnology Information,
National Library of Medicine, and National Institutes of Health
Understanding Evolution in the Postgenomic Era: are there Tectonic Shifts?

February 9

Simon Kuhn, Department of Chemical Engineering, University of Leuven
*Electrification of Chemical Industry: Novel Photochemical Reactors for the
Synthesis of Fine Chemicals and Pharmaceuticals*

February 16

Aaditya Rangan, Courant Institute of Mathematical Sciences, New York University
Applications of Numerical-Analysis and Scientific-Computing to the Biological Sciences

February 23

Amit Singer, Department of Mathematics, Princeton University
Mathematics for Cryo-Electron Microscopy

March 2

Karen Guillemin, Department of Biology, Institute of Molecular Biology, University of Oregon
Molecular Dialogues with the Microbiota: Insights from the Zebrafish Intestine

March 16

Richard Bonneau, Director, NYU Center for Data Science;
Biology and Computer Science, New York University
Modeling Protein Structure and Biological Networks

March 23

Jef Boeke, Director, Institute for Systems Genetics,
Department of Biochemistry and Molecular Pharmacology, New York University
Designing a Eukaryotic Genome from the Bottom Up

April 6

Sangbae Kim, Mechanical Engineering, Massachusetts Institute of Technology
Bio Inspired Robotics

April 13

Yuanfang Guan, Department of Computational Medicine & Bioinformatics,
University of Michigan
*Generalizing Right-Censored Data into Standard Regression Problem through
Complete Ranking*

April 20

Jay Narayan, Department of Materials Science and Engineering,
North Carolina State University
Q-Carbon Discovery and High-Temperature Superconductivity in B-Doped Q-Carbon

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

Web streaming of Science at the Edge Seminars is available upon request.
Please contact the organizers in advance.