Modeling and Visualizing Science and Technology Developments

December 4-5, 2017; Irvine, CA
Registration will open August 2017

Session I - Rankings and the Efficiency of Institutions

Moderator: H. Eugene Stanley, Boston University

Albert-László Barabási, Center of Complex Networks Research, Northeastern University and Division of Network Medicine, Harvard University, Science of Science: From Credit Sharing to Careers in Science

Lada Adamic, Facebook Inc., How Cascades Grow

Marta González, Massachusetts Institute of Technology, Urban Computing: Mobility and Migration

Kaye Husbands Fealing, Georgia Institute of Technology, Assessing the Return on Investment from Federal Funding of Food Safety Research: A new Bibliometric Approach

Brian Uzzi, Northwestern University, Bloodlines in Science: The Link between an Academic Advisor’s Scholar Pursuits and their Students’ Pursuits and Performance

John V. Lombardi, The Center for Measuring University Performance, America’s Research Universities: Is the Enterprise Model Sustainable?

Session II - Higher Education and the S&T Job Market

Moderator: Katy Börner, Indiana University, Modelling and Visualizing the Interplay of (Higher) Education, Jobs, and S&T Progress


Michael Richey, The Boeing Company, Learning in Professional Networks: Effect of Social Capital on Knowledge Artefact Creation

William Rouse, Stevens Institute of Technology, Computational Modeling of Research Universities: Explorations of Alternative Futures, Possible Bubbles & Strategic Scenarios

Stasa Milojevic, Indiana University, Dynamics of Academic Workforce: Production and Attrition of Researchers and Outcomes for Science as a Whole

Rob Rubin, Executive Director, Internet of Learning Consortium; Director Learning Sciences, Microsoft’s Learning Experience Team (LeX)

David Krakauer, Santa Fe Institute, Modeling the Evolution of Institutional Change

For more information, visit nasonline.org/Sackler-Visualizing-Science. Videos of presentations are at bit.ly/2HgH7mn. Special PNAS issue forthcoming.
Session III - Innovation Diffusion and Technology Adoption

Moderator: William Rouse, Stevens Institute of Technology

Jeff Alstott, Massachusetts Institute of Technology, Modeling New Technological Capabilities with Large-Scale Data

Ben Shneiderman, University of Maryland, Human-Centered Models of Twin-Win Research Successes

Rahul C. Basole, Georgia Institute of Technology, From What-Is to What-if: Visualizing the Complex Structures of Converging Business Ecosystems

Scott Stern, Massachusetts Institute of Technology, Innovation-Driven Entrepreneurial Ecosystems: A New Agenda for Measurement, Policy and Action

Cesar Hidalgo, Massachusetts Institute of Technology, Collective Learning in Society and the Economy

Session IV - Modeling Needs, Infrastructures, Standards

Moderator: Paul Trunfio, Boston University

Sallie Keller, Professor of Statistics and Director, Social and Decision Analytics Laboratory, Biocomplexity Institute of Virginia Tech, New Opportunities to Observe and Measure Innovation

Andrew L. Russell, The State University of New York Polytechnic Institute, Visions of the Future & Models from the Past

Guru Madhavan, National Academy of Sciences, Systems Architecture to Support Planning and Preparedness in Public Health

Azer Bestavros, Boston University, Sharing Knowledge without Sharing Data: On the False Choice Between the Privacy and Utility of Information

Jason Owen-Smith, Institute for Research on Innovation & Science, University of Michigan, Measuring & Visualizing the Collaborative Infrastructure of University Science

For more information, visit nasonline.org/Sackler-Visualizing-Science. Videos of presentations are at bit.ly/2HgH7mn. Special PNAS issue forthcoming.