

# Modeling and Visualizing Science and Technology Developments

December 4-5, 2017; Irvine, CA

Organized by Katy Börner, William Rouse, H. Eugene Stanley, and Paul Trunfio

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*

**Wendy L. Martinez**, U.S. Bureau of Labor Statistics, *Modeling Employment Projections at the Bureau of Labor Statistics*

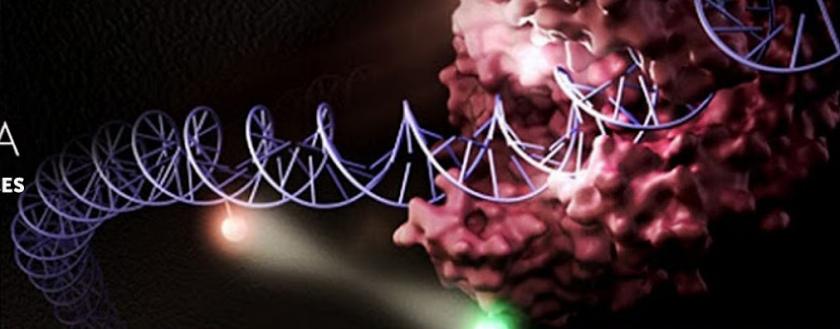
**Michael Richey**, The Boeing Company, *Learning in Professional Networks: Effect of Social Capital on Knowledge Artefact Creation*

**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*



## Session III - Innovation Diffusion and Technology Adoption

**Moderator: William Rouse**, Stevens Institute of Technology

**Donna Cox**, University of Illinois, *Visualization of Big Data Computational Models: Connecting People to Science*

**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*