

Brief Bio and (PR)²: Problems & Pitches – Rants & Raves by *Katy Börner*



Katy Börner is the Victor H. Yngve Associate Professor of Information Science at the School of Library and Information Science, Adjunct Associate Professor in the School of Informatics, Core Faculty of Cognitive Science, Research Affiliate of the Biocomplexity Institute, Fellow of the Center for Research on Learning and Technology, Member of the Advanced Visualization Laboratory, and Founding Director of the Cyberinfrastructure for Network Science Center at Indiana University.

She is a curator of the Places & Spaces: Mapping Science exhibit, <http://scimaps.org/>.

Her research focuses on the development of data analysis and visualization techniques for information access, understanding, and management. She is particularly interested in the study of the structure and evolution of scientific disciplines; the analysis and visualization of online activity; and the development of cyberinfrastructures for large scale scientific collaboration and computation.

She is the co-editor of the Springer book on 'Visual Interfaces to Digital Libraries' and of a special issue of PNAS 101 (Suppl. 1) on 'Mapping Knowledge Domains' published in April 2004. She also co-edited a special issue on 'Collaborative Information Visualization Environments' in PRESENCE: Teleoperators and Virtual Environments, MIT Press (Feb. 2005), 'Information Visualization Interfaces for Retrieval and Analysis' in the Journal of Digital Libraries (March 2005), 'Mapping Humanity's Knowledge' in Environment and Planning B (Sept 2007), and 'Science of Science: Conceptualizations and Models of Science' in Journal of Informetrics (2009). Her new book 'Atlas of Science' published by MIT Press will become available in 2010.

She and her colleagues at the Cyberinfrastructure for Network Science Center serve the

- Scholarly Database of 23 million scholarly records, <https://sdb.slis.indiana.edu>
- Information Visualization Cyberinfrastructure, <http://iv.slis.indiana.edu>
- Network Workbench Tool and Community Wiki, <http://nwb.slis.indiana.edu>
- Epidemics Cyberinfrastructure, <http://epic.slis.indiana.edu>

For more information on her research agenda, teaching, and other activities, visit:

<http://info.slis.indiana.edu/~katy/>.

General Questions

1) What is (are) your main interest(s) in attending the workshop?

Today's maps of science show the science of the last 100 years, many show much fewer years. However, some areas of science are thousands of years old. When trying to model science, attempting to understand the structure and dynamics of science it is beneficial to go as much back in time as possible.

Historians of science might be interested and able to help interpret science maps to increase our understanding of why a certain person or technology had a specific trajectory or a why a given field of science has a certain structure or evolution.

Philosophers of science might like to understand the interplay of philosophy and science and arts and humanities.

2) What would you like to learn / achieve at the workshop?

I think philosophers of science, science historians, and science map makers have much to learn from each other. I believe there are major opportunities in using HPS knowledge for interpreting large scale maps of science. Science map makers might open HPS eyes and minds to advanced data analysis and visualization techniques. It will be beneficial to explore the sharing of datasets, algorithms, and approaches and the merging of ideas and scientific collaborations.

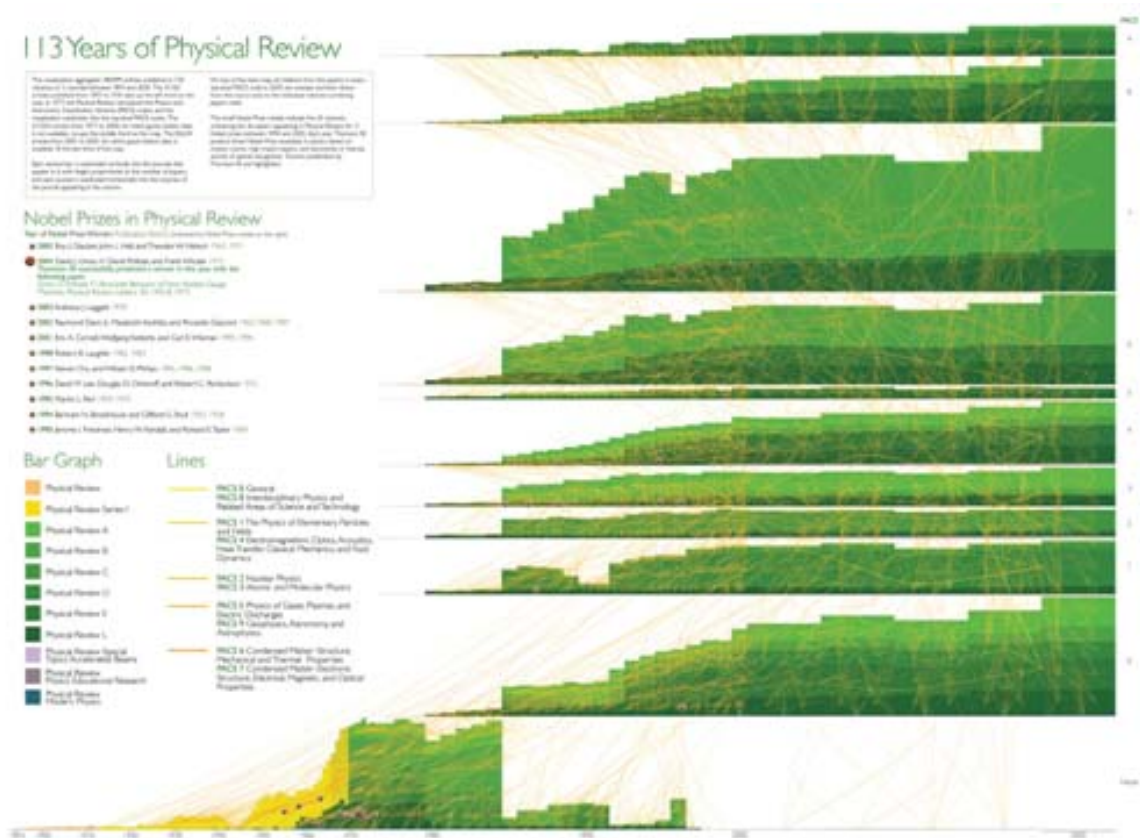
3) *If you are a scientometrician/science map maker:* In what ways might philosophers or historians of science benefit from your work?

They might like to use the Scholarly Database to study the recent history of biomedical research funding, publications, patenting activity.

They might employ the Network Workbench Tool to analyze bursts of activity, networks of people or concepts, groupings, and their visual depictions.

The many maps now available via the Mapping Science Exhibit (web page) might provide guidance when rendering the history and philosophy of science in a visual format.

Image I identify with:



114 Years of Physical Review - Bruce W. Herr II, Russell Duhon, Katy Borner, Elisha Hardy, Shashikant Penumarthy - 2007