

SLIS Faculty News

Börner and her students are off to Madrid, Amsterdam, & Zürich



SLIS faculty member [Katy Börner](#) and her students are scheduled to give a series of related talks in Madrid, Amsterdam, and Zürich at the end of June and in early July. The talks are related to their cyberinfrastructure design efforts and ambitions to map science on a large scale. See details on the [Places & Spaces: Mapping Science](#) exhibition which uses maps, diagrams, and globes to create a navigable landscape tracing and charting developments in science.

Madrid:

Börner will be presenting two papers at the [11th International Conference of the International Society for Scientometrics and Informetrics](#) (ISSI) meeting in Madrid, Spain, June 25-27, 2007. The paper [Mapping the Structure and Evolution of Chemistry Research](#) [see abstract below] is a collaborative effort with Kevin W. Boyack and Richard Klavans. The second paper reflects collaborative research with SLIS students Sumeet Ambre (MIS), John Burgoon (MIS), Weimao Ke (Ph.D.), and Gavin LaRowe (MIS graduate), and describes the Scholarly Database at <https://sdb.slis.indiana.edu/> and Its Utility for Scientometrics. Peter Hook (SLIS Ph.D. student) will be presenting his paper "Visualizing the Topic Space of the United States Supreme Court."

Amsterdam:

After the ISSI conference, Börner will travel to Amsterdam to give an invited keynote at the New Network Theory Conference. The conference will be held from June 28-30, 2007. New Network <http://www.networkcultures.org/networktheory/>

Zürich:

On July 3, the second [InfoVis Software Infrastructures Workshop at the Visualization Summit](#) will take place at the [11th International Conference for Information Visualization](#) (IV 2007) in Zürich, Switzerland. The Workshop was organized by Börner and Bruce Herr (software developer, [InfoVis Lab](#)), in collaboration with Jean-Daniel Fekete.

In addition, Börner co-organized the [Symposium on Knowledge Domain Visualizations](#) (also at IV 2007) where Börner and her team will present 4 papers [listed below]. In addition to the

names listed above, other SLIS connections include: Thomas Neiryneck (MIS student), and Elisha Hardy (graphic designer, InfoVis Lab).

Madrid - Abstract:

Mapping the Structure and Evolution of Chemistry Research

How does our collective scholarly knowledge grow over time? What major areas of science exist and how are they interlinked? Which areas are major knowledge producers; which ones are consumers? Computational scientometrics – the application of bibliometric/scientometric methods to large-scale scholarly datasets – and the communication of results via maps of science might help us answer these questions. This paper represents the results of a prototype study that aims to map the structure and evolution of chemistry research over a 30 year time frame. Information from the combined Science (SCIE) and Social Science (SSCI) Citations Indexes from 2002 was used to generate a disciplinary map of 7,227 journals and 671 journal clusters. Clusters relevant to study the structure and evolution of chemistry were identified using JCR categories and were further clustered into 14 disciplines. The changing scientific composition of these 14 disciplines and their knowledge exchange via citation linkages was computed. Major changes on the dominance, influence, and role of Chemistry, Biology, Biochemistry, and Bioengineering over these 30 years are discussed. The paper concludes with suggestions for future work.

Boyack, Kevin W., Börner, Katy and Klavans, Richard. (2007) Mapping the Structure and Evolution of Chemistry Research, Accepted for 11th International Conference on Scientometrics and Informetrics, Madrid, Spain, June 25-27, 2007.

Papers presented in Zürich:

Herr, Bruce W., Ke, Weimao, Hardy, Elisha, and Börner, Katy. (2007). Movies and Actors.

LaRowe, Gavin, Ichise, Ryutaro and Börner, Katy. (2007). Analysis of Japanese Information Systems Co-authorship Data.

Neiryneck, Thomas and Börner, Katy. (2007) Representing, Analyzing, and Visualizing Scholarly Data in Support of Research Management.

Mane, Ketan K. and Börner, Katy. (2007) Computational Diagnostics: A Novel Approach to View Biomedical Data.

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