

SLIS Faculty News

Web Maps help to Navigate the World of Science



"maps... have enabled the discovery of new worlds..."

Pasadena, California is the location of ***Practical Semantic Astronomy***, a workshop to be held at Caltech from February 18-21, 2008. SLIS faculty member **Katy Börner** will be presenting "**The Science of Science**" on February 20 as a part of the workshop:

Title: The Science of Science

Tags: scientometrics, network science, maps, cyberinfrastructures

Abstract: Cartographic maps of physical places have guided mankind's explorations for centuries. They enabled the discovery of new worlds while also marking territories inhabited by unknown monsters. Domain maps of abstract semantic spaces, see <http://scimaps.org>, aim to serve today's explorers understanding and navigating the world of science. The maps are generated through scientific analysis of large-scale scholarly datasets in an effort to connect and make sense of the bits and pieces of knowledge they contain. They can be used to objectively identify major research areas, experts, institutions, collections, grants, papers, journals, and ideas in a domain of interest. Local maps provide overviews of a specific area: its homogeneity, import-export factors, and relative speed. They allow one to track the emergence, evolution, and disappearance of topics and help to identify the most promising areas of research. Global maps show the overall structure and evolution of our collective scholarly knowledge. This talk will present an overview of the techniques and cyber-technologies used to study science by scientific means together with sample science maps and their interpretations.

The **workshop's website** gives an introduction to "What is Semantic Astronomy?":

There is a sizable international effort working on the Virtual Observatory; there is a considerably larger worldwide effort to make

the Semantic Web a reality and where these two concerns intersect is Semantic Astronomy. As a field, it includes subjects such as:

- *metadata for astronomical databases*
- *semantic queries and data mining*
- *astronomical and solar ontologies*
- *knowledgebases*
- *the application of semantic technologies*

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