

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

Self Introduction



http://info.slis.indiana.edu/~katy/images/katy_photos/campus.jpg

Katy Börner holds a MS in Electrical Engineering from the University of Technology in Leipzig, 1991 and a Ph.D. in Computer Science from the University of Kaiserslautern, 1997. She is the Victor H. Yngve Professor of Information Science at the School of Library and Information Science, Adjunct 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 (<http://cns.iu.edu>) 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 books ‘Visual Interfaces to Digital Libraries’ (2003) and ‘Modeling Science Dynamics’ (2012), ‘VIVO: A Semantic Approach to Scholarly Networking and Discovery’ (2012), and of a special PNAS issue on ‘Mapping Knowledge Domains’ (2004). Her book ‘Atlas of Science: Visualizing What We Know’ by MIT Press was published in 2010.

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

- Scholarly Database of 27 million scholarly records, <http://sdb.cns.iu.edu>
- Information Visualization Cyberinfrastructure, <http://iv.cns.iu.edu>
- Network Workbench Tool and Community Wiki, <http://nwb.cns.iu.edu>
- Science of Science Cyberinfrastructure Portal, <http://sci.cns.iu.edu>
- Epidemics Marketplace, <http://epic.cns.iu.edu>

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

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

General Questions

1) What are your main interests in attending the workshop?

I would like to understand how the OSGi/CIShell architecture that our tools use relates to other efforts that aim to support the plug-and-play of algorithms by non-computer scientists. Ideally, the workshop provides a means to identify system architectures that support modular software development and scale to BIG data. I am also interested to identify synergies among existing tool and service development efforts—the more teams agree on basic standards the easier the exchange of know-how and plugins. Identification of joint funding opportunities would be a plus.

2) What are the tools or services you would like to share at the workshop?

The Cyberinfrastructure Shell (CIShell.org) supports the plug-and-play of datasets and algorithms and their bundling into custom tools that serve the specific needs of a user group or research community. It has been applied to develop diverse custom tools such as NWB and Sci2, see <http://cishell.org/home.html>.

3) Please list three features or functions of your tools or services that are most important for the users.

Ease of use—installation and workflow design
Plug-and-play of algorithms by non-computer scientists.
Workflow and error logs.

4) What are the major concerns for the architect design of the tools and services?

Plug-and-play of algorithms by non-computer scientists.
Documentation of 180+ plugins and the many workflows that can be constructed from those.

5) Are you aware of especially innovative approaches to plug-and-play feature where algorithms and plugins can be shared between different tools? If yes, please list down the approaches.

<http://www.scivee.tv/node/27704>

6) What are the challenges in developing the tools and services?

Plug-and-play of algorithms by non-computer scientists.

7) Are you or your group working on any of these challenges? If yes, please explain.

See above.

8) Does your development team contain volunteer developers? If yes, please explain how they are involved.

No.

9) What would you like to learn and achieve at the workshop?

I would like to understand how the OSGi/CIShell architecture that our tools use relates to other efforts that aim to support the plug-and-play of algorithms by non-computer scientists.