

## Grants & Awards

**SEAD Sustainable Environment Through Actionable Data.** NSF OCI-0940824 DataNet award (Margaret Hedstrom, Myron P. Gutmann, Praveen Kumar, Jim Myers, and Beth Plale, \$188,432) 2011.10.01 - 2016.09.30.

**Monitoring, Modeling, and Forecasting Tools for Fostering an Innovative S&T Workforce.** NIH U01 GM098959-01 award (Katy Börner and James P. Crutchfield, \$746,758) 2011.09.01 - 2015.08.31.

**Pathways: Sense-Making of Big Data.** NSF ISE DRL-1223698 award (Katy Börner, Adam V. Maltese, Joe E. Heimlich, Stephen Miles Uzzo, Paul Martin, and Sasha Palmquist, \$250,000) 2012.07.01 - 2014.06.30.

**Informatics Infrastructure for Vector-Based Neuroanatomical Atlases.** NIH 5R01MH079068-02 award (Gully APC Burns, Richard Thompson, Larry Swanson, David Newman, Seth Ruffins, and Katy Börner, \$250,000) 2009.06.01 - 2014.01.31.

**Mapping the Emergence and Development of Scientific Disciplines.** James S. McDonnell Foundation grant in area 21st Century Science—Special Initiative/Studying Complex Systems (Katy Börner, \$364,787) 2009.01.01 - 2014.01.01.

**Digging by Debating: Linking Massive Datasets to Specific Arguments.** Digging Into Data—NSF, NEH, JISC Award (Colin Allen, Katy Börner, Chris Reed, Andrew Ravenscroft, and David Bourget, \$62,500) 2012.04.01 - 2014.01.31.

**Increasing SBIR Commercial Success: Actively Embedding SBIR/STTR Commercialization Processes into Indiana's Innovation Network.** Indiana Economic Development Corporation IEDC FAST-10-R-0004 award. IEDC's Indiana 21st Century Research and Technology Fund (Aditya P. Mathur and Katy Börner, \$71,776) 2012.01.01 - 2013.12.31.

**Scaling Philanthropy: Providing New Insight About Million Dollar Gifts.** Bill & Melinda Gates Foundation (Una O Osili, Patrick Rooney, and Katy Börner, \$147,790) 2010.08.01 - 2013.09.30.

**A Journal-Driven Bibliography of Digital Humanities.** NEH Award Subcontract to Brown University (Katy Börner, \$15,000) 2011.01.01 - 2013.06.30.

**MOOC Extension in Support of Student-Client Projects.** Google Inc. (Katy Börner, \$50,000) 2013.01.01.

**Innovation in an Aging Society.** Econ P01 NBER/NIH (Bruce Weinberg, Gerald Marschke, and Katy Börner, \$650,000) 2013.09.01 - 2018.08.31.

**Visualizing Biomedical Research Characteristics.** NIH/SBIR (NETE and Katy Börner, \$400,282) 2013.09.01 - 2015.08.31

## Contracts

**Army Research Lab:** Introducing the Science of Science (Sci2) Tool

**Biotechnology and Biological Sciences Research Council, UK:** Introducing the Science of Science (Sci2) Tool, Topic Modeling, Data Visualization

**Cummins, Inc.:** Mobile App Development

**Fundação de Apoio á Universidade Federal de São Paulo, Brazil:** Analysis and Visualization of SciELO Data

**National Academy of Sciences:** AcademyScope Visual Interface to NAP Reports

**TD Ameritrade:** Introducing the Science of Science (Sci2) Tool



James S. McDonnell Foundation



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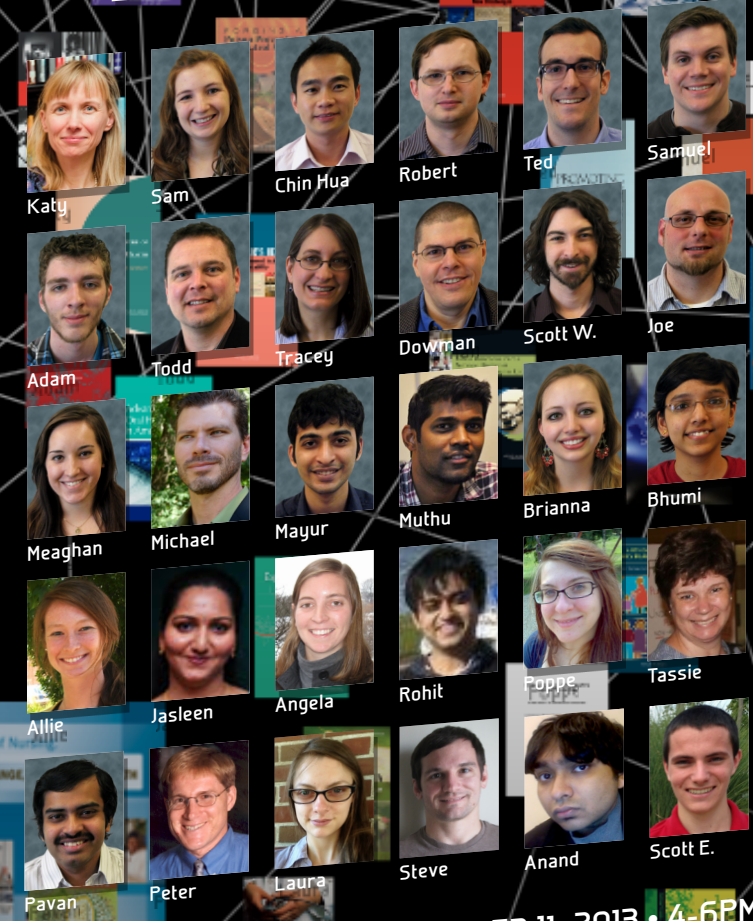


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## Publications (cns.iu.edu/publications)

### Book Chapter

Börner, Katy. "Plug-and Play Macroscopes: Network Workbench (NWB), Science of Science Tool (Sci2), and Epidemiology Tool (Epic)." Forthcoming. In *Encyclopedia of Social Network Analysis and Mining (ESNAM)*. New York: Springer-Verlag.

### Journal Articles

Skupin, André, Joseph R. Biberstine, and Katy Börner. 2013. "Visualizing the Topical Structure of the Medical Sciences: A Self-Organizing Map Approach." *PLoS One* 8 (3): e58779.

Chen, Yunwei, Katy Börner, and Shu Fang. 2013 "Evolving Collaboration Networks in Scientometrics in 1978-2010: A Micro-Macro Analysis." *Scientometrics* 95 (3): 1051-1070.

Mazloumian, Amin, Dirk Helbing, Sergi Lozano, Robert Light, and Katy Börner. 2013. "Global Multi-Level Analysis of the 'Scientific Food Web.'" *Scientific Reports* 3:1167. DOI:10.1038/srep01167.

Bollen, Johan, David Crandall, Damion Junk, Ying Ding, and Katy Börner. 2013. "Collective Allocation of Science Funding: From Funding Agencies to Scientific Agency." Accessed September 5, 2013. <http://arxiv.org/abs/1304.1067>.

### Conference Proceedings

Light, Robert, Ted Polley, and Katy Börner. 2013. "Open Data and Open Code for Big Science of Science Studies." In *Proceedings of ISSI 2013*, Vienna, Austria, July 15-20, 2:1342-1356.

Reijnhoudt, Linda, Rodrigo Costas, Ed Noyons, Katy Börner, and Andrea Scharnhorst. 2013. "Seed+Expand: A Validated Methodology for Creating High-Quality Publications Oeuvres of Individual Researchers." In *Proceedings of ISSI 2013*, Vienna, Austria, July 15-20, 2:1587-1600.

Light, Robert, Chin Hua Kong, and Katy Börner. 2013. "An Automated System for Tracking the Growth of Expert Profiling Systems." Paper presented at Joint Conference on Digital Libraries (JCDL), Indianapolis, IN, July 22-26.

Murdock, Jamie, Robert Light, Colin Allen, and Katy Börner. 2013. "Mapping the Intersection of Science and Philosophy." Paper presented at Joint Conference on Digital Libraries (JCDL), Indianapolis, IN, July 22-26.

### Ph.D. Thesis

Cottam, Joseph. 2012. "Design and Implementation of a Stream-Based Visualization Language." Thesis, Doctor of Philosophy in Computer Science: Andrew Lumsdaine (Chair), Amr Sabry, Katy Börner, Indiana University, Bloomington, and Chris Weaver, University of Oklahoma.

## Events (cns.iu.edu/events\_calendar)

### Workshops

Plug-and-Play Macroscope Workshop. November 5-6, 2013. Bloomington, IN.

Science Mapping Standards Workshop. November 4-5, 2013. Bloomington, IN.

Standards for Science Mapping and Classifications. July 15, 2013. Vienna, Austria

JSMF Workshop on Exploiting Big Data Semantics for Translational Medicine. March 25-26, 2013. Bloomington, IN.

JSMF Workshop on Plug-and-Play Macroscopes. November 16-17, 2012. Bloomington, IN.

### Sci2 Tutorials

VIVO Data and Visualizations. St. Louis, MO. Presenters: Chin Hua Kong and Robert Light. August 14, 2013.

Sci2: A Tool for Science of Science Research and Practice Workshop. Vienna, Austria. Presenter: Katy Börner. July 15, 2013.

Sci2: A Tool for Science of Science Research and Practice Workshop. Evanston, IL. Presenters: Katy Börner and Monika Herzig. June 27, 2013.








Visualizing Networks with the Science of Science (Sci2) Tool. Bloomington, IN. Presenter: Ted Polley. June 27, 2013.

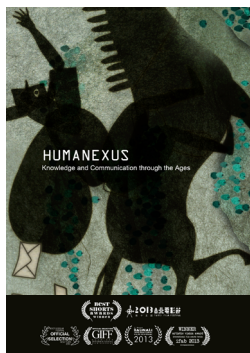
Hierarchical Networks using Sci2 and OSLOM. Bloomington, IN. Presenter: Ted Polley. February 18, 2013.

Topical Analysis and Visualization of (Network) Data Using Sci2. Bloomington, IN. Presenter: Ted Polley. February 4, 2013.

Sci2: A Tool for Science of Science Research and Practice Tutorial. Tokyo, Japan. Presenter: Katy Börner. December 14, 2012.


## Cyberinfrastructures Developed (cns.iu.edu/data\_tools)

 <b>Cyberinfrastructure Shell (CIShell)</b> cishell.org CIShell integration partner textrend.org	 <b>VIVO</b> vivoweb.org
 <b>Network Workbench (NWB)</b> nwb.cns.iu.edu	 <b>Science of Science Cyberinfrastructure and Sci2 Tool</b> sci2.cns.iu.edu
 <b>Scholarly Database (SDB)</b> sdb.cns.iu.edu	 <b>Epidemics Cyberinfrastructure (Epic)</b> epic.cns.iu.edu
 <b>MAPSustain</b> mapsustain.cns.iu.edu	 <b>National Gene Vector Biorepository</b> www.ngvbcc.org/GeographicMap.action



comes on the heels of the film's nomination to the "Best Animation" category in the 2013 Taipei Film Festival. As an added bonus, the latter festival brought Shen's work back to the artist's own place of birth, as *Humanexus* received screenings in venues throughout Taipei during the festival's three-week run. Then, in early August, the film was chosen for an Artistic Vision Award by the International Film Awards Berlin. It has also received an Award of Excellence from the Best Shorts Competition in La Jolla, California, and was named an Official Selection in New York's Bootleg Film Festival and the Balinale International Film Festival. Such accolades serve as testimony to both the relevance of the film's message and the artistic vision through which Shen conveys that message.

You can watch the trailer for *Humanexus* at YouTube (scan the QR code above, or search "Humanexus") and learn more at the film's official website: [yfshen.info/humanexus](http://yfshen.info/humanexus).



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>> Periscope's *State of the Polar Bear* map details the growing plight of these majestic arctic giants.

<< CNS's own Ted Polley and Sam Mills contributed to Peter Gloor's map indicating who the most influential people in the world are, based on Wikipedia links.

## Current/Recent Exhibitions (scimaps.org/exhibitions)

**Jan 1, 2013 – June 1, 2013** - National Academy of Sciences, Upstairs Gallery, Washington, D.C.

**Oct 9, 2012 – July 1, 2013** - Mundaneum Museum, Mons, Belgium.

**Sept 16, 2012 – Present** - Illuminated Diagram Display at the School of Library and Information Science at Indiana University, Bloomington, Indiana.

**Feb 9, 2006 – Present** - National Science Foundation, Washington, D.C.

## Humanexus Receives Accolades

*Humanexus: Knowledge and Communication through the Ages* is the product of a close collaboration between animator Ying-Fang Shen, Katy Börner, and composer and sound designer Norbert Herber, a senior lecturer in Indiana University's Department of Telecommunications. The film tracks the evolution of human communication from cave scrawls to Twitter feeds, offering a unique depiction of the ever-accelerating spread of information and communication over the course of human history.

Buzz about the film and recognition for Shen has built rapidly over the past year. Recently, *Humanexus* was named an Official Selection of the 2013 Guam Film Festival, scheduled to take place September 24th through the 29th. This honor

## Visualizations Designed (cns.iu.edu/visualizations)

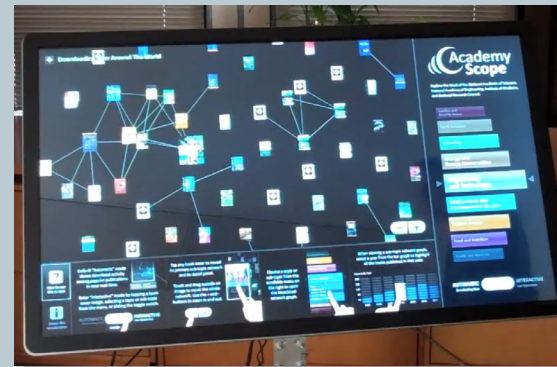


### TEDxBloomington Jump IN & Connect Visualization

This map by Katy Börner and Michael Stampler shows all TEDxBloomington attendees together with the subjects they like. People are linked via their top three topics of interest.

### AcademyScope Interactive Touch-Screen Visualization

AcademyScope is the product of a collaboration between CNS and the National Academy of Sciences that allows viewers to explore the past 20 years of National Academies Press reports.



## IVMOOC (ivmooc.cns.iu.edu)

CNS launched its first Information Visualization MOOC in January 2013, attracting participants from more than 100 countries. The course provides an overview about the state of the art in information visualization. It teaches the process of producing effective visualizations that take the needs of users into account.

Anyone interested in generating temporal, geospatial, topical, or network analyses and visualizations from either personal or professional data would benefit from the course.

The homepage for the Information Visualization MOOC offers an introductory video, a course schedule, biographies of Börner and the other instructors, and a registration link. Everyone who registers gains free access to the Scholarly Database (26 million paper, patent, and grant records) and the Sci2 Tool (100-plus algorithms and tools).

It is one of the first MOOCs offered by IU and the first to offer an opportunity for students to work in teams with actual clients like researchers interested in understanding data patterns and trends, government agencies developing visual interfaces for data holdings, industry representatives looking to maximize return on investment, medical doctors seeking cures, and not-for-profit organizations hoping to communicate impacts and achievements.

Due to the success of the course, it will return in January 2014.

