The 131st GIST Seminar

Insightful and Actionable Visual Analytics

Speaker:

Prof. Katy Börner

Victor H. Yngve Distinguished Professor of Engineering and Information Science

Luddy School of Informatics, Computing, and Engineering, Indiana University, USA

◆ **Date:** 18:30-20:00, Nov 11 Mon, 2024 (Doors open at 18:00)

◆ **Venue:** 4th Floor, Lecture Room 4B, GRIPS and Online

7-22-1 Roppongi, Minato-ku, Tokyo

http://www.grips.ac.jp/en/about/access/

※**Before the seminar, from 18:00, the exhibition "Places & Spaces: Mapping Science （https://cns.iu.edu/exhibit.html） " will be held at Room 4F. Please feel free to visit, if you are interested.**

◆ **Organizer:** GRIPS Innovation, Science and Technology Policy Program (GIST)

◆ **Language:** English (No Japanese translation)

◆ **Outline**

In the information age, the ability to read and make data visualizations is as important as the ability to read and write. This talk introduces a theoretical data visualization framework (DVL) meant to empower anyone to systematically render data into insights using temporal, geospatial, topical, and network analyses and visualizations. Exemplarily, the DVL is applied to (1) Map science and technology, see interactive data visualizations from the Places & Spaces: Mapping Science exhibit (http://scimaps.org) and recent *PNAS* special issue on Modelling and Visualizing Science and Technology Developments (https://www.pnas.org/modeling). (2) Design reference systems and user interfaces for the Human Reference Atlas (https://humanatlas.io) within the Human BioMolecular Atlas Program (HuBMAP) (https://commonfund.nih.gov/hubmap) that support the exploration

and communication of single-cell data—from the subcellular to the whole body level. (3) Teach Visual Analytics (https://visanalytics.cns.iu.edu) to students and practitioners around the globe. The talk concludes with an invite to visit the *Places & Spaces: Mapping Science* exhibit on display at University Collections at McCalla (https://bit.ly/SciMaps20) to explore 100 large-format static and 40 interactive data visualizations.

◆ **Speaker's Short bio**

KATY BÖRNER is the Victor H. Yngve Distinguished Professor of Engineering and Information Science in the Departments of Intelligent Systems Engineering and Information Science, Luddy School of Informatics, Computing, and Engineering; core faculty of the Cognitive Science Program; and founding director of the Cyberinfrastructure for Network Science Center (http://cns.iu.edu)—all at Indiana University in Bloomington, Indiana. Börner became a Fellow of the American Association for the Advancement of Science (AAAS) in 2012, a Humboldt Research Fellow in 2017, and an Association for Computing Machinery (ACM) Fellow in 2018. Since 2005, she serves as a curator of the international *Places & Spaces: Mapping Science* exhibit (http://scimaps.org). Börner's research focuses on the development of data analysis and visualization techniques for information access, understanding, and management. She is particularly interested in the formalization, measurement, and systematic improvement of people's data visualization literacy; the study of the structure and evolution of scientific disciplines; the construction and usage of a human reference atlas; and the development of cyberinfrastructures for large-scale scientific collaboration and computation. She holds an MS in electrical engineering from the University of Technology in Leipzig, and a PhD in computer science from the University of Kaiserslautern.

◆ **Warnings**

This is an in person and online seminar.

The number of seats onsite is limited to 40 (First-come, first served basis). In the case of over-capacity, we may ask you to participate online.

Zoom link will be sent by the day before the seminar via e-mail.

◆ **Registration**

Please register at this registration form (https://forms.gle/vGxGMf1vHKKmhy7V8)by 17:00, Nov 7th Thu . If you cannot open the form, please send email to GIST Secretariat, gist-ml@grips.ac.jp. Registration email must include: 1) your name, 2) institution, 3) position, and 4) e-mail address.