ICA Commission on Visual Analytics

Report on Activities from 2019-2023

Co-Chairs: Anthony C. Robinson and Arzu Çöltekin

Terms of Reference

The Commission on Visual Analytics will:

- Promote and advance visual analytics in cartography, which is the science of analytical reasoning as supported by interactive visual interfaces to spatio-temporal data.
- Develop science, technology, and design approaches to address major challenges associated with geographic information analysis and synthesis that enable users to solve key societal and environmental problems.
- Foster interdisciplinary and international collaboration between potential users of geospatial visual analytics and researchers, as well as between allied research communities in other disciplines and other ICA Commissions.

The Commission will achieve this vision by:

- Actively disseminating technical and methodological advances in cartographic visual analytics through workshops, seminars, edited special issues of journals, and peer-reviewed publications - with linkages to other ICA Commissions and allied organizations in other fields.
- Conducting annual meetings, workshops, or tutorials to develop research in key thematic areas, partnering with international conferences and other ICA commissions to expand our reach beyond traditional venues and audiences and to diversify who engages with visual analytics in the ICA.
- Recruiting and retaining a co-chair and bolstering the core membership to help guide Commission activities and foster collaboration within and outside of the ICA.
- Maintaining a dedicated web presence and engaging with members via social media to highlight Commission activities and promote participation beyond attendance at in-person meetings through new forms of distance collaboration.

Meetings & Workshops

Since 2019 the Commission on Visual Analytics has led the following meetings and workshops:

2023 – Cartography and AI (MapAI 2023), an ICC 2023 pre-conference workshop held in Stellenbosch, South Africa.
The Commission has also co-sponsored these events with other ICA Commissions and non-ICA sister organizations:

2022 - Co-led workshop on Cybertcartography at AGILE 2022 in Vilnius, Lithuania on June 14: http://cybercarto.ntua.gr/events/agile2022/


2021 - Co-led Virtual Geographic Environments, multiple sessions in the 28th International Conference on Geoinformatics CPGIS: https://www.cpgis.org/Files/202107190420334591.pdf

2019 - User Experience Design for Mobile Cartography: Setting the Agenda, an ICC 2019 pre-conference Workshop held in Beijing, China.

Publications & Journal Special Issues

The Commission on Visual Analytics has developed a range of articles to support the goals outlined in the 2019 Terms of Reference:


In addition, the Commission has edited and co-edited the following journal special issues:


2019 - *Information Visualization* - Special Section on Visual Movement Analytics: https://journals.sagepub.com/toc/ivia/18/1


**Outreach & Web Presence**

Commission Website: http://www.viz.icaci.org/

Commission Twitter Presence: http://www.twitter.com/@icaviz

ICA Commission on Visual Analytics co-chairs have been invited to present on Commission work at the following events:

Talks by Anthony Robinson:


Robinson, A.C., Anderson C.L. “Understanding emotional responses to color schemes on categorical maps” Lecture for the Geographic Information Visualization and Analysis laboratory at the University of Zurich. Zurich, CH, October 28, 2021.


Robinson, A.C. “Viral Cartography: Elements of Design, Sharing, and Disinformation” Lecture for the Department of Geography, The Ohio State University, Columbus, OH, January 17, 2019.

Talks by Arzu Çöltekin (selected):

Çöltekin, A. Visualization flows and the challenge of multivariate data visualization. Public transportation Switzerland Meetup, Olten, Switzerland, 29 June 2023.

Çöltekin, A. Thinking with and without an extended version of reality: Forms of visuospatial knowledge representation and their effects on what we know. “Thinking Within” symposium, 13 April 2023, Wageningen, The Netherlands.


Çöltekin, A. "When the whole world is a display". DataViz for Society, Digital Future Society, Barcelona, December 2, 2022.

Çöltekin, A. "Recognizing and overcoming illusions: A journey to our unconscious mind" University of Haifa, November 10, 2022.

Çöltekin, A. "Rethinking our relationship with space: Modern forms of representation and spatial cognition" Invited talk at CUSP London Seminar, King’s College London, 30th of June 2022.


Çöltekin, A."Visualization, virtual reality and reproducibility: Challenges and opportunities." Keynote at the Open Data Science Europe workshop 2022, 13-16 June 2022.


Çöltekin, A. "Mixed Reality to support collaborative planning processes" Geosummit 2022, Olten, Switzerland, 1st of June 2022.

Çöltekin, A. "Visuospatial knowledge acquisition in virtual environments: Effects of age, visual realism and task types in navigational learning." University of Geneva, Department of Psychology, March 9th 2022.