

MapAI 2023

ICC 2023 Pre-Conference Workshop on Cartography and AI

82 Ryneveld St, Stellenbosch ([Map Link](#))

Narga D Computer Lab, Chamber of Mines Building (Geology), Stellenbosch University

- 8:30 - 9:00** Coffee, mingle, check-in
- 9:00 - 9:10** Welcome, introductions, and overview of the workshop
- 9:10 - 9:20** **Introduction to the Department of Geography & Environmental Studies**
Dr. Jaco Kemp, Stellenbosch University
- 9:20 - 10:30** Lightning Talks

AI-Assisted Cartography

What is a map? Questions about what makes a map a map and the potential for the layers in CartoAI

Carolyn Fish, University of Oregon

The Use of AI in Atlas Projects

Zhaoxu Sui, University of Oregon

Diffusion in Cartography - Opportunities and Challenges

Raimund Schnürer, Sidi Wu and Lorenz Hurni, ETH Zürich

Deep learning empowering global geospatial data production: Examples from industry

Leigh Lotter, LuxCarta & Stellenbosch University

Adapting and Personalizing Maps with AI

Artificial Intelligence and Cognitive Cartography: From Sequence Visualization to Interpretation

Standa Popelka, Palacky University Olomouc

Using Eye Tracking and AI to Personalize Map Reading: The importance of open benchmark datasets

Merve Keskin, NLS Finland

Transforming context inference techniques for mobile maps with generative AI

Mona Bartling, University of Zürich

AI for personalising maps and its dangers

Tumasch Reichenbacher, University of Zürich

Where can combining eye-tracking and artificial intelligence take us?

Pyry Kettunen, NLS Finland

Group Q&A - 25 Minutes from 10:05 - 10:30

- 10:30 - 11:00** Coffee break
- 11:00 - 12:00** Lightning Talks

Trust, Ethical Considerations, and Social Implications for Cartography & AI

The Ethics of AI-Generated Maps: A Study of DALL-E 2 and Implications for Cartography

Yuhao Kang, Qianheng Zhang and Robert Roth, University of Wisconsin Madison

The Intersection of AI, Trust, and Cartography

Tim Prestby, Penn State University

The importance of trust in maps

Marketa Beitlova, Palacký University Olomouc

Potential Implications of Artificial Intelligence Generated Maps in the Dissemination of Misinformation

Noah Mead & Amy Griffin, RMIT University

Deepfake Maps and Satellite Images: Implications and Opportunities

Aileen Buckley, Esri

The Challenges of Using AI to Promote Further Learning in Cartographic Education

Lily Houtman, Penn State University

Creativity, Labor, & Cartography in the Age of AI

Jack Swab, University of Kentucky

Explainable AI - A Cartographic Imperative

André Skupin, San Diego State University

Group Q&A - 20 Minutes from 11:40 - 12:00

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| 12:00 - 13:30 | Lunch break |
| 13:30 - 14:30 | Collaborative Task #1 <ul style="list-style-type: none">• Comparing prompt generation w/ different platforms• Generate thematic maps based on statistical data using AI• Design a cartographic experiment methodology using an LLM |
| 14:30 - 14:45 | Coffee break |
| 14:45 - 16:00 | Collaborative Task #2: MapAI research question development |
| 16:00 - 16:10 | GeoAI and Cartography: ICA Commission Needs
Samantha T. Arundel, U.S. Geological Survey |
| 16:10 - 16:30 | Wrap-up discussion, next steps |
| 18:00 - 21:00 | Optional Dinner at The Wine Glass (map link) - set menu price is 460ZAR (\$26 / €23) not including alcohol, multiple dietary options available |

This Workshop is presented by the ICA Commission on Visual Analytics (<https://viz.icaci.org/>) and the ICA Commission on Cognitive Issues in Geographic Information Visualization (<https://cogvis.icaci.org/>)

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