



International Cartographic Association
Association Cartographique Internationale

Mapping Tomorrow: GeoAI, Multiscale Cartography, and Sustainability

Joint Workshop of the ICA Commissions on GeoAI, Multiscale Cartography, and Cartography and Sustainability

St. Louis

To be held in conjunction with the [CaGIS conference, 8-11 Sept 2026](#)
Saint Louis University (room to be determined)

Call for Participation

Rapid advancements in remote sensing and geospatial databases—both in spatial resolution and temporal coverage—are generating vast amounts of data that serve as critical assets for infrastructure development, strategic resource allocation, and disaster recovery operations. These data support cost-effective mitigation efforts, such as prioritizing the replacement of structurally fatigued transportation or flood control structures or reducing environmental contamination. Such applications promote resilient infrastructure and responsible resource management that safeguard national interests and economic vitality.

Geospatial Artificial Intelligence (GeoAI) encompasses a wide range of data management and analysis techniques that automate knowledge extraction from vast geospatial data stores. GeoAI enhances decision-making for infrastructure planning, resource management, and sustainability practices. Recent innovations include agentic AI workflows that are systems of autonomous agents capable of executing complex, multipart tasks with minimal human intervention. Examples include compiling elevation models for watersheds and optimizing transportation routes using digital terrain models. Multiscale cartography has long provided the backbone for displaying and analyzing geospatial data. It involves generalization and assessment methods that adjust the visible quantity and quality of data to produce legible maps at varying scales. Identifying spatial patterns that support sustainable decision-making requires multiscale analysis and appropriate levels of generalization. Accurate data at a range of scales is imperative for addressing sustainability challenges from the community to global scale. Recent research has explored how cartographic generalization workflows can be implemented using GeoAI techniques to support scalable, context-aware visualization for planning and recovery.

This workshop will bring together participants from diverse backgrounds, including data science, cartography, planning, and resource management, who use or develop GeoAI and multiscale cartography methods for real-world challenges. The goal is to showcase emerging techniques for evaluating, automating, and visualizing geospatial data, advancing our understanding of complex systems, and informing decisions that promote resilient, economically efficient, and sustainable development.

In-person participation is encouraged. For this workshop only, presenters may join remotely if needed. Please contact Larry Stanislawski (lstan@usgs.gov) or other organizers with questions.



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Topics of Interest

- GeoAI techniques for automated map generalization and feature extraction
- Agentic AI workflows
- Multiscale cartography in practice
- Scalable cartographic methods for sustainability, resilience, and recovery
- Ethical considerations in AI-driven cartography
- Context-aware mapping for urban and rural sustainability
- Cross-scale data harmonization and integration strategies
- Human-AI collaboration in cartographic design and decision-making
- Visualization of environmental change across temporal and spatial scales
- Sustainable map production and design practices
- GeoAI for artistic cartographic design and creativity

Submissions

You are invited to submit a **2-page extended abstract** or a **10-page extended abstract**, following the general guidelines of the ICA conference abstracts: Word (https://www.ica-conference-publications.net/ica-abstracts_word_template.docx). Abstracts will be reviewed for inclusion in the workshop. Accepted 10-page abstracts will be revised before submission for a book publication (Details TBD).

Proceedings of the workshop will be published openly on the Commission on Multiscale Cartography website, with a CC-BY license. All abstracts should be submitted to EasyChair at the following link: [2026 CAGIS Submissions](#) and choose "Workshop: Mapping Tomorrow" under Submission Type.

Important dates

Submission deadline:	Monday, 4 May 2026
Notification of acceptance:	Monday, 15 June 2026
Revisions due:	Monday, 17 August 2026
Workshop:	Friday, 11 September 2026

Organizing Committee

- Samantha Arundel, U.S. Geological Survey, USA
- Carolyn Fish, University of Oregon, USA
- Yuhao Kang, University of Texas at Austin, TX, USA
- Izabela Karsznia, University of Warsaw, Poland
- Nicolas Regnauld, Esri, Redlands, CA, USA
- Britta Ricker, Utrecht University, Netherlands
- Timofey Samsonov, Lomonosov Moscow State University, Russia
- Lawrence Stanislawski, U.S. Geological Survey, Missouri, USA, Istan@usgs.gov
- Guillaume Touya, LASTIG, IGN France, Univ. Gustave Eiffel, France
- Zhiyong Zhou, University of Wisconsin Madison, WI, USA