

## Special Issue

# Knowledge-Guided Map Representation and Understanding

### Message from the Guest Editors

This Special Issue delves into the mutual construction of knowledge and map representation. We welcome interdisciplinary submissions that combine theory, methodology, modeling, and applications across cognitive cartography, representation design, computer vision, knowledge graphs, and multimodal foundation models, aiming to advance the symbiotic evolution of map representation and knowledge service under the influence of intelligent technologies. Topics of Interest (include but are not limited to):

- Knowledge-driven cartography representation;
- Hybrid-intelligent map design, generation, service, and applications;
- Cognitive and perceptual foundations of spatial visualization;
- Automatic extraction of spatial-temporal and cartography knowledge from maps;
- Automatic map interpretation and understanding;
- Spatial question answering and reasoning using cartographic sources;
- Map-based training data for large language or vision-language models;
- Human-map interaction and visual reasoning;
- Integration of spatial knowledge and cartographic representations in digital twins.

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### Guest Editors

Prof. Dr. Peng Ti

Prof. Dr. Wanzeng Liu

Prof. Dr. Wenhao Yu

Dr. Tian Lan

Dr. Wende Li

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### Deadline for manuscript submissions

30 June 2026



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## About the Journal

### Message from the Editor-in-Chief

The *ISPRS International Journal of Geo-Information* invites you to submit research articles, reviews, and reports covering topics of the whole domain of geo-information. Although the journal was only founded in 2012, it has already achieved wide recognition in the scientific community. We are proud that since April 2015, our journal is indexed by the SCIE of the Web of Science. As Editor-in-Chief, I encourage you to consider *IJGI* for your scientific papers and would be pleased to welcome you as authors.

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### Editor-in-Chief

Prof. Dr. Wolfgang Kainz

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