

Special Issue

Urban Digital Twins Empowered by AI and Dataspaces

Message from the Guest Editors

The digital transformation of cities is accelerating, driven by the proliferation of geospatial data, advancements in artificial intelligence (AI), and the emergence of federated data ecosystems, such as Dataspaces. Urban Digital Twins (UDTs) have recently emerged as a key paradigm in this transformation, being dynamic, data-driven, and continuously updated digital representations of physical environments. They enable real-time monitoring, simulation, and predictive analysis to support urban planning, sustainable development, crisis management, and citizen engagement. This Special Issue aims to advance the scientific and practical understanding of how AI and Dataspaces can empower UDTs to address pressing urban challenges. It seeks contributions that combine theoretical insights, methodological advances, and empirical case studies to explore: (1) the design and governance of UDTs in the era of AI and Dataspaces; (2) the technical and semantic challenges of integrating geospatial data, real-time sensing, and citizen science data into trusted UDTs; and (3) the societal, ethical, and policy dimensions of data sharing and AI-driven decision-making in urban contexts.

Guest Editors

Prof. Dr. Dessislava Petrova-Antonova

Prof. Dr. Sisi Zlatanova

Dr. Mila Koeva

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*ISPRS International Journal of
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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
ijgi@mdpi.com

mdpi.com/journal/

[ijgi](https://ijgi.org)





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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.

Editor-in-Chief

Prof. Dr. Wolfgang Kainz

Cartography and Geographic Information Science, Department of
Geography and Regional Research, University of Vienna,
Universitätsstr. 7, A-1010 Vienna, Austria

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