

PREFACE

This Special Issue features twelve articles presented during the COBGI24 workshop (<https://figcom3-croatia2024.hgd1952.hr/>), which focused on the challenges and opportunities in BIM and GIS integration. The event took place in Varaždin, Croatia, from June 18 to June 21, 2024. Organized by the Department of Geodesy and Geomatics at University North in collaboration with The Croatian Geodetic Society (<https://www.hgd1952.hr/>), the workshop was conducted under the auspices of the FIG (International Federation of Surveyors) Commission 3 (<https://www.fig.net/organisation/comm/3/>) and the BIRGIT Project (<https://birgitproject.eu/>).

The workshop served as a platform for participants to share and discuss innovative use cases and cutting-edge technologies related to BIM-GIS integration. Attendees included representatives from academia, industry, and national organisations worldwide, featuring distinguished keynote speakers, exhibitions, and presentations of advanced research and development. COBGI24 proved to be a productive venue for fostering advancements in technology, practice, and education, while facilitating new collaborations.

The focus of the COBGI 2024 workshop was on the utilization, analysis, and integration of 2D/3D digital modeling to enhance the effective and scalable management of built environments. Specifically, it addressed the challenges and opportunities associated with the integration of Building Information Modeling (BIM) and Geographic Information Systems (GIS). The workshop provided a forum for discussing the latest challenges and opportunities in BIM-GIS integration across various applications and services.

Participants had the opportunity to showcase recent research, developments, technologies, and policies, while also identifying emerging tools, trends, and services. Key topics covered during the workshop included:

- Geospatial data and geo-analytics
- Smart cities, digital twins, GIS, BIM, and SIM
- Indoor and outdoor mapping and navigation
- 3D modeling, analysis, and visualization, including VR and AR
- Geospatial planning, policies, and standards
- 3D data formats, standards, and interoperability.

The articles showcased in the COBGI24 workshop, and featured in this special edition, include:

- Prioritising Street Shade Intensification to Support Pedestrian Accessibility to Public Transport: A Data-driven Approach
- Assessment and Zoning of Areas by Risk Level of Snow Avalanches in Sharr Mountains
- Assessment and the Future Development of the Zagreb 3D City Model
- Developing of a Digital Twin for Urban Planning in an International Context
- Assessment of Solar Photovoltaic Potential of Building Rooftops Based on Multicriteria Spatial Analysis
- Navigating Urban Space: Unveiling Patterns in Walking Routes through Space Syntax in Kypseli Neighborhood (Athens)
- Selection of an Appropriate Extrinsic Camera Calibration Method for Handheld Mobile Mapping Systems
- Influence of 3D Barriers on Walkability for the Elderly in a German City
- BIM-GIS Integration for Interactive, Open and Low-Cost 3D Land Use Registration and Urban Neighbourhood Management
- Challenges and Opportunities for BIM-GIS Integration – BIRGIT Case Study
- Analyzing Depth Uncertainty of Near-Shore Bathymetric Survey Conducted by Single-Beam Echo Sounder
- Harnessing Remote Sensing Technologies for Successful Large-Scale Projects

The Special Issue is accommodating extra articles since the regular issues for 2024 have reached their limit, preventing the publication of articles accepted in that year. The articles selected at the COBGI24 workshop are not associated with these publications, as they explore different topics.

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