Special Issue

Reconstruction of 3D Buildings Models and 3D Buildings Extraction from High-Resolution Geospatial Data

Message from the Guest Editors

Recently, there has been considerable demand for 3D building models in several applications, including the design and construction of infrastructure in the urban environment, 3D/city modeling, and building information modeling (BIM). Additionally, the availability of high-resolution, multi-source geospatial data, such as vertical and oblique terrestrial imagery, LIDAR data, UAV data, etc., has facilitated the high-quality reconstruction of 3D object models. Furthermore, this has led to the development of automated algorithms for the robust extraction of buildings from high-resolution imagery and LIDAR data. In this Special Issue, we aim to compile research articles that address various aspects of building extraction from high-resolution geospatial data, 3D building reconstruction, as well as building extraction from imagery and LIDAR data. Review contributions and papers describing new data/concepts are also welcomed.

Guest Editors

Prof. Dr. Tarig Ali

Department of Civil Engineering, American University of Sharjah, Sharjah 26666, United Arab Emirates

Dr. Ahmed Elaksher

Geomatics Program, College of Engineering, New Mexico State University, Las Cruces, NM 88003, USA

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Buildings
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
buildings@mdpi.com

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About the Journal

Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

Editor-in-Chief

Prof. Dr. David Arditi
Construction Engineering and Management Program, Department of Civil, Architectural, and Environmental Engineering, Illinois Institute of Technology, 3201 South Dearborn Street, Chicago, IL 60616, USA

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