Special Issue

AI-Enhanced 4D Geospatial Monitoring for Healthy and Resilient Cities

Message from the Guest Editor

Four-dimensional geospatial data, including the dimension of time, provide critical information for a deeper understanding of our ever-changing urban landscapes. This empowers us to develop sustainable urban strategies by considering local micro-climates, urban heat islands, and flood risks, leading to the development of healthier and more resilient cities. Four-dimensional monitoring exposes the facets of urban expansion, environmental impacts, and the evolution of infrastructure. The application of AI in analyzing these data yields profound insights into the dynamics of environmental change and ecosystem sustainability. The topics include, but are not limited to:

- urban sustainability
- remote sensing and geospatial technology
- urban geomorphology
- vegetation and public health
- urban ecosystem analysis
- AI, machine learning, and deep learning
- urban design and micro-climatic conditions
- green infrastructures and water management systems
- lidar and photogrammetry
- extreme weather events and heat stroke
- air quality and public health
- spectral analysis and biodiversity indices
- social issues and urban resilience strategies
- optical, radar, and lidar sensing

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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