



Advances in Computational Analytics for Urban Planning and Design: Methods, Technologies and Practices

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Message from the Guest Editors

Dear Colleagues,

Urban planning and design have played pivotal roles in urban growth and preparing cities for the future. The methods, technologies and practices utilized in urban planning and design evolve with innovations in computational analytics, such as Big Data, Internet of Things, Augmented Reality, Virtual Reality, Artificial Intelligence and Robotics. Computational analytics allows for interactive analysis and disseminating reproducible workflows that weave together code, visuals and narratives. Computational analytics is used in urban projects to generate an intelligent, flexible and sharable process involving municipalities, planners, urban designers and developers. This Special Issue seeks to collect cutting-edge studies using computational analytics or related approaches to explore innovative insights into urban planning and design.

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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.

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