Towards Smart Tech 4.0 in the Built Environment: Applications of Disruptive Digital Technologies in Smart Cities, Construction, and Real Estate

Guest Editor:

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Message from the Guest Editor

The traditional built environment needs a technological transformation in line with the Industry 4.0 requirements to transform into a smart built environment. For this to materialize, disruptive digital technologies must be adopted. Accordingly, the goals of integrated smart cities, construction, and t real estate can be achieved to promote Sustainability in the built environment in line with the United Nations sustainable development goals. Such technologies in line with industry 4.0 requirements have been proposed in various fields and include the big9 technologies such as AI, IoT, UAVs, Clouds, Big Data, 3D Scanning, Wearable Technologies, VR, AR, Robotics, Blockchains, Software as a Service, 3D Printing, Digital Twins, Ubiquitous Computing, Renewable Energy, Autonomous Vehicles, and 5G Communications. However, currently, the research around the adoption and implementation of these smart technologies is limited. This special issue invites and aims to attract contributions in related fields.

Special Issue

Editor-in-Chief

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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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