

Sustainable Construction Management and Engineering: Residential Construction with Focus on Life Cycle of Buildings and Costs

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Message from the Guest Editors

Humanity faces a number of problems related to the deterioration of the living environment, the unavailability of energy sources and building materials, the deterioration of living standards and the economic situation of households. The new situation requires the search for innovative solutions in the field of planning and implementation of buildings and ensuring their long-term sustainability from a technical and economic point of view. Innovative solutions should be cost-effective with minimal impact on the environment and achieving the maximum lifespan of buildings. The present time brings a whole range of risks and policy issues associated with the unavailability of housing, but at the same time, it is a matter of new opportunities and challenges. In view of climatic, socio-economic and demographic trends, it is necessary to modify the existing practices of building design and maintenance to guarantee comfortable, safe and affordable housing.

For these reasons, the purpose of this Special Issue is to provoke a scientific discussion and encourage scientists to identify new opportunities and advances in sustainable construction and engineering.



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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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