



## Tradition and Innovation in Civil Engineering—C70 International Conference

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### Message from the Guest Editors

Traditionally, civil engineering has drawn upon well-established methodologies, time-tested construction materials, and engineering practices honed through centuries. These traditional approaches have afforded reliability, safety, and a connection to cultural heritage.

In contrast, innovation in civil engineering manifests through the infusion of cutting-edge technologies, advanced materials, and novel methodologies. Computer-aided design, sustainable building materials, and intelligent construction technologies have transformed the landscape of civil engineering, promising enhanced efficiency, sustainability, and resilience in infrastructure development.

The intersection of tradition and innovation generates nuanced debates within civil engineering and its subfields, including architecture, structural engineering. It necessitates a critical examination of each approach's relative merits and drawbacks, considering factors such as cost, environmental impact, cultural preservation, and safety. Furthermore, it underscores the importance of a balanced approach that leverages the strengths of both traditions and innovations to meet the evolving demands of the modern world.



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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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