

Fibre-Reinforced Polymer Composites in Civil Engineering

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Message from the Guest Editors

Dear Colleagues,

The retrofitting of civil engineering structures is essential for creating a sustainable built environment. Structural engineers are challenged with assessing the vulnerability of deteriorated or damaged structures and deciding on the appropriate retrofit methods. Fiber-reinforced polymer (FRP), a non-metallic composite, is considered a novel and promising material and an alternative to traditional materials.

Authors are invited to submit high-quality research or review articles on the topics including, but not limited to:

- Fibre-reinforced polymer (FRP) composites for structural applications;
- (FRP) composites for building blast protection;
- Buildings, bridges, pipelines, and other civil infrastructures made of (FRP) composite;
- Analysis of the growth of fatigue cracks in (FRP) composites;
- Retrofitting, repairing, and strengthening structural elements with (FRP) composites;
- Non-destructive evaluation of structural elements made with (FRP) composites;
- Finite element analysis, artificial neural networks, and other machine learning techniques for FRP composite civil engineering materials;



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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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