



## **Sustainable Solutions in Civil Engineering: From Materials to the Structural Scale**

Guest Editor:

**Dr. Quoc-Bao BUI**

Faculty of Civil Engineering, Ton  
Duc Thang University, Ho Chi  
Minh City, Vietnam

Deadline for manuscript  
submissions:

**closed (31 December 2022)**

### **Message from the Guest Editor**

Civil engineering is one of the domains which have a significant impact on the environment. These impacts mainly relate to energy consumption, CO<sub>2</sub> emission, and natural resource depletion. Different solutions have been explored to reduce environmental impacts of the civil engineering sector, from the material scale, such as using low-embodied energy materials (“eco-materials”) and new sustainable binders, through the component scale, such as developing high thermal insulations and positive hygrothermal behavior components, to the structure scale, such as energy-efficient buildings with zero or negative energy consumption thanks to the integration of renewable energies and/or the creation of new concepts in the architectural and structural designs, to optimize energy consumption and living comfort.

The issue is a collection of different approaches contributing to the sustainability of civil engineering sector, from sustainable materials to intelligent solutions in structural design, and the development of new technologies (3D printing, BIM, etc.) to create, analyze, and assess sustainable materials and structures.





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### **Prof. Dr. Marc A. Rosen**

Faculty of Engineering and  
Applied Science, University of  
Ontario Institute of Technology,  
Oshawa, ON L1G 0C5, Canada

## Message from the Editor-in-Chief

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*Sustainability* Editorial Office  
MDPI, St. Alban-Anlage 66  
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