

Special Issue on
Fibre Reinforced Polymer Composites for Structural Applications in Construction

CALL FOR PAPERS

In recent years, advanced fibre reinforced polymer (FRP) composites have become increasingly popular following the rapid growth in structural applications in construction around the world. Since carbon fibre reinforced polymer (CFRP) has a high strength-to-weight ratio and basalt fibre reinforced polymer (BFRP) has a high performance-to-cost ratio in comparison with other FRP composites, they have been most commonly utilized in construction both for new structures and for strengthening/rehabilitation of existing buildings and bridges. Despite their widespread use, their full potential has still not been realized because of a number of fundamental concerns including high material costs, durability issues, bonding integrity, long-term interaction between loading and damage, and gaps in the development of standards for practice. The long-term durability of the FRP strengthened existing structures is currently a crucial issue. Environmental factors, such as wet/dry cycles, freeze-thaw action, and exposure to aggressive environments, may affect both the interfacial bonding and the polymer material, leading to a decrease in the performances of the strengthened structures. Meanwhile, combining FRP with traditional materials such as steel and concrete to create innovative structural forms that are cost-effective and of high performance is a major research focus in the use of FRP in new construction.

The main aim of this special issue is to provide a platform for the dissemination and discussion of recent research and achievements which address the issues in this topic from the theoretical and practical viewpoints. Reports on theoretical as well as experimental investigations are welcome.

Potential topics include but are not limited to the following:

- ▶ Materials and products
- ▶ Seismic retrofit of structures
- ▶ Bond behavior
- ▶ Strengthening of concrete, steel, masonry, and timber structures
- ▶ Durability
- ▶ Design codes/guidelines

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/ijps/frps/>.

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