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Guest Editor

Editorial

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Welcome to the first of two themed issues of the Structures and Buildings Journal on the use of fibre reinforced polymer composites (FRPs) in construction. The original intention was to have a single themed issue, but the response to the call for papers was such that it has been necessary to have two issues, which shows the level of interest in FRPs in construction. These advanced materials have been used for many years in the aerospace, shipbuilding and sports equipment industries, and are now being used in a variety of construction-based applications. These applications include strengthening or stiffening existing metal (steel, wrought and cast iron), concrete, masonry and timber structures, new builds and seismic upgrades. The papers in the themed issues cover all these topics, and present the latest research findings and practical applications.

The biggest application of FRPs has been for strengthening reinforced concrete, and the papers in the second issue will be solely concerned with RC applications. This first issue contains papers on strengthening wrought iron¹ (until recently a problem area because of the unique laminar structure of wrought iron), adhesive bonding of FRP to steel structures^{2,3} (which requires excellent surface preparation and produces a variety of stress concentrations that must be carefully considered at the design stage), the behaviour of carbon fibre and aramid tendons^{4,5} (a very promising area for new build) and long-term environmental effects on FRP joints⁶. The authors are all prominent in the area of FRP research. I trust that the readers of the journal will find the contents interesting

and challenging and that they will be persuaded to use these fascinating materials in yet more applications.

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