Special Issue

Computational and Experimental Methodologies for Advanced and Sustainable Structural Materials

Message from the Guest Editors

Recent advancements in engineering research have led to the widespread use of various computational techniques for structural simulations involving advanced materials, which typically exhibit non-linear behaviours. A critical aspect of these problems is selecting the appropriate constitutive model to accurately describe the material's mechanical response. Such models have to be supported by the implementation of a robust computational framework, such as the Finite Element Method, Boundary Element Method, or meshless methods, to ensure reliable simulation results at both the material point and at the overall structural scale. These computational approaches are applied across a broad range of engineering and scientific fields, modelling a diverse array of materials. This Special Issue of *Materials* is devoted to the application of some of the above outlined methods combined with experimental techniques and Inverse Analysis methodologies, relating to diverse applications of structural engineering such as (but not limited to) the aeronautical, biomechanical, building, and civil and mechanical engineering fields.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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