Special Issue

Computer Methods and Experimental Testing for Advanced Structural Materials

Message from the Guest Editors

Recent trends in engineering research are seeing diverse computer methods being applied for structural simulations involving advanced materials that are usually subjected to nonlinear deformation. In these problems, the selection of the appropriate constitutive model for describing the material's mechanical response is crucial, which has to be supported by a robust computational framework (e.g., finite element method, boundary element method or meshless methods) in order to yield reliable simulated results both at the material point and at the overall structural scale. These methods are being applied in vast engineering and scientific branches, modelling a large diversity of materials, ranging from bio-materials, eco-materials, composites, textiles, glass, timber, paperboard to more commonly used materials such as metals, ceramics or concrete.

This Special Issue is devoted to the application of some of the abovementioned methods combined with experimental techniques in diverse applications, including (but not limited to) aeronautical, biomechanical, civil and mechanical engineering.

Guest Editors

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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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