Special Issue

Composite Materials: Nonlinear Behavior and Analytical Methods in Bending, Buckling, and Vibration

Message from the Guest Editor

Composite materials are widely used in aerospace, marine, and automotive industries due to their high strength, low density, and environmental resistance. Despite progress in bending, buckling, and vibration studies, challenges remain in analyzing their nonlinear behaviors. Firstly, it is difficult to develop some precise analytical methods for predicting the nonlinear behavior of anisotropic materials and structures due to the complexity of geometric and material nonlinearities. Furthermore, nonlinear analytical models and experimental investigations relating to the bending, buckling, and vibration issues of composite materials and structures are relatively limited. A large number of composite materials and structures often serve in multi-field coupling environments, which further increases the complexity and difficulty of research. Therefore, these issues are hot topics, and much effort should be devoted to researching the above areas for a long time to come. We invite submissions (full papers, reviews, or communications) to this Special Issue.

Guest Editor

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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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