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Recent Achievements in Multiphase Materials and Their Applications in Solid Mechanics

Guest Editor:

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Message from the Guest Editor

Multiphase materials have a number of different properties today and have found wide applications in various fields of engineering, including aerospace, mechanical, civil, and marine structures. Hybrid multiphase material have also emerged as a hot topic in recent research. Using these types of materials to improve the vibrational behavior of shell structures with different geometries—including cylindrical, conical, spherical, paraboloidal, hyperboloidal, and other doubly curved shapes—can be investigated numerically and experimentally. There are several approaches to obtaining the equivalent mechanical properties of hybrid materials, such as the rule of mixture or the Halpin–Tsai, Hahn, Hashin–Rosen, Mori–Tanaka, and Bridge models. The main objective of this Special Issue is to bring together, at an international level, a high-quality collection of original, review articles and short communications dealing with the vibrational behavior of different types of shell composed of nanocomposite hybrid materials.