Special Issue

Multiscale Reliability Analysis of Stiffened Composites

Message from the Guest Editors

Stiffened composites have excellent damage tolerance, outstanding structural efficiency, and good design ability, which are widely used to load bearing structures in aerospace. With the improvement of equipment performance, the reliability of stiffened composites is increasingly becoming a topic of concern. Because of the complexity of stiffened composite design and the diversity of composite materials, its failure mechanism is very complex, and its reliability analysis is faced with great challenges. Therefore, we need to carry out multiscale failure mechanism research, from microscopic parameters to the macroscopic mechanical properties, and quantify the uncertain factors of design, molding, machining, and assembly for stiffened composites, and then develop multiscale reliability analysis methods to improve the reliability of stiffened composites. This Special Issue will focus on the failure behaviors and mechanical properties of stiffened composites and the reliability analysis model considering the mesoscopic and macroscopic parameters. Submissions of original research articles, review articles, and case studies are all welcome.

Guest Editors

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Deadline for manuscript submissions

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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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