

Special Issue

Structural Design, Health Monitoring and Performance Evaluation of Composite Materials

Message from the Guest Editors

Composite material, as a typical lightweight structure material, has been widely applied in various engineering applications, including aerospace, automobile, marine, civil engineering, medicine, etc., due to its flexible design, high specific strength, wear resistance, and corrosion resistance. However, following long-term service and external mechanical and thermal loading, composite material structures are prone to various types of damage, such as matrix crack, delamination, debonding, and fiber breakage. Such damages will inevitably cause the performance degradation of composite structure, and even lead to serious failure, presenting a significant challenge for the safe operation and reliable service of the equipment. This Special Issue focuses on various investigations into the structural design, health monitoring and performance evaluation of composite materials. Research areas may include (but are not limited to) composite structure optimization design, structural performance nonlinear modeling, advanced health monitoring methods, damage identification and imaging technique, and performance evaluation and reverse engineering, as well as data-driven performance prediction.

Guest Editors

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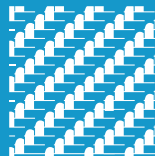
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