Special Issue

Advanced Techniques in Health Monitoring of Composite Structures

Message from the Guest Editors

Composite structures are susceptible to complex damage and failure modes during the manufacturing and service processes. Some typical defects of the composite structure include matrix cracking, fiber breakage, delamination, etc., which can deteriorate the integrity of the structure and cause catastrophic failures. The continuous monitoring of composite structure health conditions aids in identifying such damages early, and taking appropriate measures to prolong their service life. Advanced artificial intelligence techniques have been extensively integrated into health monitoring systems to enhance the performance of composite structures. A basic health monitoring process for composite structures coves data acquisition via sensing technologies, data-processing and analysis, and decision-making. This Special Issue aims to present recent advanced models, methods, and technologies related to the health monitoring of composite structures for structural safety and integrity.

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