



Computational Mechanics and Modeling of Composite Materials and Structures

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Message from the Guest Editors

This Special Issue aims to address recent advances in the composite design, processing, and failure analyses of composite materials through computational and analytical approaches.

The key topics include (but are not limited to) the following:

- Lightweight and sustainable composite processing methods and modeling;
- Next-generation composite design and mechanics in automotive, aerospace, offshore, renewable energy, and other industries;
- Advanced modeling methods for progressive damage prediction of composites based on continuum damage mechanics, extended finite element method, discrete damage modeling, cohesive zone modeling, and other advanced models;
- Computational mechanics and modeling of composites across multiscale levels: micro-length scale to coupon and component levels;
- Defect characterization and modeling in composites such as ply waviness, fiber misalignment, fiber kinking, porosity;
- Life cycle assessment and modeling of multi-functional composites and biocomposites;
- Data-driven modeling approaches for predicting composite durability, reliability, and performance optimization.





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Editor-in-Chief

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Message from the Editor-in-Chief

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