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Manufacturing Simulation for Composites and Composite Structures

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Message from the Guest Editor

Dear Colleagues,

Although composite materials have numerous advantages, they have some relevant disadvantages, including high manufacturing costs. Manufacturing process simulation can help to shift from an experimental trial and error approach towards a knowledge-based development of the manufacturing process.

The objective of this Special Issue is to present elements of a coherent virtual process chain for a composite structure manufacturing process which represents all physical effects leading to critical quality aspects such as process-induced deformations and stresses, filling/injection and curing, as well as draping errors.

Virtual process models and their connection to online process monitoring methods can enable feedback loops to enable “as-built” analysis and the comparison to “as planned” conditions. Uncertainty analysis, sensitivity analysis, and evaluation of the effects of defects are the focus of this Special Issue.



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Special issue



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Message from the Editor-in-Chief

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