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Advances in Computational Mechanics for Symmetrical Engineering Systems

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Message from the Guest Editors

Dear Colleagues,

Computational mechanics has been playing a vital role in the modeling and simulation of many symmetrical engineering systems during their full life cycles. Its solution allows us to significantly increase the bulk and efficiency of numerical investigations and to guarantee a high confidence in numerical results for advanced load-bearing structures. Recent rapid developments in, for example, computational capacity, meta-materials, and artificial intelligence, stimulate novel and interesting advancements for providing reliable numerical solutions to computational mechanics. Aiming to provide a platform to promote up-to-date research and share promising ideas in related realms, this Special Issue focuses on the most recent advancements in computational mechanics for symmetrical engineering applications, including but not limited to computational constitutive modeling, data-driven methods, computational mechanics of meta-materials, thermomechanical analysis, surrogate modeling, reliability analysis and optimization, additive manufacturing, uncertainty quantification, prognostics health management, and inverse mechanical analysis...



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Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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