

Special Issue

Multiscale Modelling in Aerospace Engineering

Message from the Guest Editor

The state-of-the-art aerospace research studies biomaterials for aerospace applications, nanomaterials, and the use of plasma to improve material performance. The aerospace design depends on developing numerical methods. This Special Issue will cover multidisciplinary tools, including quantum mechanical methods, molecular dynamics, Monte Carlo simulations, coarse-grained simulations, dissipative particle dynamics, lattice Boltzmann, computational fluid dynamics, finite element, mathematical theory, and novel numerical methods to bridge material characterization between multiple scales. We expect the authors will use material characterization techniques (gas adsorption, microscopy, etc.) and a wide range of process analytics tools (tomography, rheometry, particle sizing, etc.) to validate their numerical studies.

Multiscale modelling often fails to efficiently combine large datasets from different sources and levels of resolution. The journal acknowledges the emergence of machine learning in multiscale modelling to manage ill-posed problems and explore massive design spaces. The journal invites researchers to publish their studies using machine learning in multiscale modelling.

Guest Editor

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You are welcome to contribute a research article or a comprehensive review for consideration and publication in *Aerospace* (ISSN 2226-4310), an on-line, open access journal.

Aerospace adheres to rigorous peer-review as well as editorial processes and publishes high quality manuscripts that address both the fundamentals and applications of aeronautics and astronautics. Our goal is to enable rapid dissemination of high impact works to the scientific community.

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