

MS: Multi-scale Modeling and Simulation of Functional Materials and Structures

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Due to their distinguished multi-field coupling properties, the functional materials, including piezoelectric, ferroelectric, multiferroic, superconducting, semiconducting and thermoelectric materials, have a wide range of application in aerospace, mechanical engineering, medical treatment, information storage, energy transfer and storage, and so on. In past decades, functional materials have been received considerable attention. We organize a mini-symposium on Multi-scale Modeling and Simulation of functional Materials at WCCM-ECCOMAS 2020, which will be held from 19 to 24th July, 2020 in Paris. The purpose of the mini-symposium is to provide a forum for discussion of recent advances in the multi-scale modeling and simulation of functional materials and structures, and exchange ideas and scientific findings in the field.

The mini-symposium invites the contributions on following topics :

1. Phase field modeling on microstructures evolution of functional materials
2. First-principles calculations and molecular dynamics simulations on functional materials and structures
3. Finite element analysis and other continuum methods on multi physics coupling of functional materials and structures
4. Concurrent and hierarchical multi-scale methods for functional materials
5. Other topics related to functional materials and structures