Special Issue

Advanced Finite Element Method and Its Applications

Message from the Guest Editor

The finite element method has become a fundamental tool for many engineering disciplines, providing valuable simulation results to support the design process. The accuracy of these results has allowed researchers to streamline conceptual iterations in order to create a final product and has introduced new optimization possibilities. Even today, research on this topic is highly relevant. Since the first applications, many scientific contributions have aimed to broaden the applications of the finite element method to encompass structural engineering, aerospace engineering, mechanics of materials, fracture mechanics, thermo-fluid mechanics, chemical engineering, electro-magnetism, manufacturing processes, and more recently, digital twins. Therefore, this Special Issue aims to gather innovative research on the formulation of finite element solutions for specific problems, the derivation of custom approaches and in-house software, the definition of specific multi-physical workflows, and optimized approaches. Papers discussing algorithms for the numerical efficiency of the analysis and post-processing procedures are also welcome.

Guest Editor

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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