Special Issue

Element-Based Methods for the Solution of Engineering Problems

Message from the Guest Editors

The finite element method (FEM) is one of the most used numerical methods thanks to its robustness and the fact that it has been well-developed to date. This Special Issue will collect papers showing the applicability of the FEM-based methods to solve complex engineering problems from different fields, with an emphasis on fluid dynamics and related coupled problems (in particular, but not limited to, multiphase, fluid–structure interaction, and thermally coupled flows). While the emphasis of the SI is FEM, contributions devoted to applications of Finite Volume and Finite Difference approaches to engineering problems are also welcome. This issue will also highlight and discuss how tremendous growth in computer technology, as well as coupling with other numerical methods, will continue to have a significant impact on the evolution of FEM. Keywords:

- Finite element method
- simulation
- fluid dynamics
- Navier–Stokes
- coupled problems
- fluid–structure interaction
- multiphase flows
- thermally coupled flows

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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.

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