Special Issue

Computational Mechanics and Finite Element Method: Theory and Applications

Message from the Guest Editor

Computational mechanics is a discipline that combines principles from engineering mechanics and computer science to study and analyze the behavior of complex structures and materials.   Finite element methods (FEM) serve as a fundamental tool in computational mechanics, providing a systematic approach to discretize and solve the governing equations of a physical system.   The application of computational mechanics has revolutionized the design and analysis of structures.   In addition, finite element analysis enables the accurate modeling of complex geometries, material properties, and boundary conditions, facilitating the study of structural integrity, mechanical response, and failure mechanisms.   Hence, this Special Issue encourages submissions that apply the FEM in the various fields of computational mechanics.   Suggested topics include, but are not limited to, numerical analysis, structural mechanics, structures dynamics, mechanics of materials, fluid mechanics, thermal sciences, computer-aided engineering, optimization, discretization, and mesh generation.

Guest Editor

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MDPI

About the Journal

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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