Special Issue

Mathematical Modelling and Computer Simulation in Solid Mechanics and Hydrodynamics

Message from the Guest Editors

Mathematical modelling transforms real-life problems to the language of mathematics that utilizes its methods and provides solutions that can be tested back in real life. Models in solid mechanics and hydrodynamics are typically formulated by partial differential equations that can be coupled so that complex and realistic description of real-world processes is obtained. The finite element method is an efficient method to approximately obtain numerical solutions of partial differential equations. Due to the massive expansion of computers, vectorized and parallel algorithms are developed taking into account modern computer architectures and new trends in information technologies.

This Special Issue focuses on the use of current advances in mathematical modeling and large-scale computer simulations in solid mechanics and hydrodynamics including (but not limited to) models for porous media. The topics of the issue are wide and cover various aspects of modeling and a broad spectrum of problems related to computer simulations and development of numerical algorithms, taking into account modern hardware architectures and trends.

Guest Editors

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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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