Special Issue

Numerical Methods and Applications for Differential Problems

Message from the Guest Editors

Differential equations arise in several research domains of applied sciences and engineering. These include but are not limited to fluid dynamics, heat conduction with mixed boundary conditions, population dynamics, and epidemiology. In most cases, it is difficult, if not impossible, to determine analytical solutions to the models listed above. Often, researchers have recourse to semi-analytical and numerical methods. However, obtaining a reliable semi-analytical solution involves a number of different elements and can become cumbersome. This difficulty may become more pronounced in the case of singularly perturbed problems. These includes a class of parameter-dependent problems and those presenting multiscale phenomena. This Special Issue provides a platform where novel numerical methods that can be used to solve ordinary and partial differential equations as well as integro-differential equations will be presented. The stability and accuracy of those methods will be analyzed. Methods will be implemented on applied problems in various domains of science and engineering.

Guest Editors

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Deadline for manuscript submissions

closed (30 April 2024)

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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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