Special Issue

Nonlinear Partial Differential Equations in Mathematical Fluid Dynamics

Message from the Guest Editor

Most of the nonlinear problems in fluid dyanmics are governed by the nonlinear partial differential equations such as Navier–Stokes equations, Boussineqa equations, MHD equations, etc. The analysis and application of those nonlinear partial differential equations have attracted more and more attention over the past half century. The understanding of those important nonlinear partial differential equaitons is fascinating and challenging. As a Special Issue of the international journal *Mathematics*, we invite investigators to contribute good quality and original research articles as well as review articles that will stimulate the continuing efforts to understand the related nonlinear partial differential equations in fluid dynamics. Potential topics include, but are not limited to: Navier–Stokes equations and Euler equations ; Magneto- hydrodynamic equations; Boussinesq equations; Kinetic equations in gas; Primitive equations and quasi-geostrophic equations in the ocean and atmosphere; and related nonlinear partial differential equations in applied sciences.

Guest Editor

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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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