



Partial Differential Equations and Applications

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Deadline for manuscript
submissions:

closed (30 September 2022)

Message from the Guest Editor

This Special Issue of *Mathematics* entitled “Partial Differential Equations and Applications” will be a collection of approximately half expository and half unpublished research papers. The goal is to provide both students and practitioners, or scholars working in different areas, with knowledge of the problems, tools, and most recent developments in Partial Differential Equations (PDEs) and Applications.

All aspects of Partial Differential Equations, both linear and non-linear, will be covered, as well as Partial Differential Operators (PDOs), with emphasis on the dynamics adopted by these solutions. In addition, articles concerning the applications of PDEs to mathematical, physical, social, and computational sciences will be presented.

The following is a list of topics that will be covered: well-posedness; existence/uniqueness; qualitative properties of the solutions; boundary-value problems; bifurcation and chaotic behavior; special solutions (e.g., orthogonal polynomials); integrability; PDEs on manifolds; heat flow; spectral properties of PDOs; kernels; representation of solutions on a particular basis; inverse problems...





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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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