Special Issue

Differential Equations and Stochastic Processes: Trends and Challenges

Message from the Guest Editor

Differential equations are used to model natural phenomena from various scientific fields. Many dynamic processes can be analyzed and understood through the solutions to problems expressed via differential equations. Differential equations involving a stochastic process, also known as stochastic differential equations (SDEs), can enable modeling of chaotic and random structures evolving over time at a very high level of accuracy.

- Trends and challenges related to stochastic processes and their applications;
- Stochastic differential equations;
- Optimal control problems governed by stochastic differential equations (and systems);
- Variational approach for solving stochastic differential equations;
- Iterative algorithms for solving stochastic differential equations;
- Numerical methods for solving stochastic differential equations.

Guest Editor

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Deadline for manuscript submissions

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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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