



Applied Analysis of Ordinary Differential Equations 2018

Guest Editor:

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Deadline for manuscript
submissions:
closed (31 October 2018)

Message from the Guest Editor

Dear Colleagues,

One might say that ordinary differential equations (notably in Isaac Newton's analysis of the motion of celestial bodies) had a central role in the development of modern applied mathematics. This special issue is devoted to research articles which build on this spirit: combining analysis with applications of ordinary differential equations (ODEs).

ODEs arise across a spectrum of applications in physics, engineering, geophysics, biology, chemistry, economics, etc., because the rules governing the time-variation of relevant fields is often naturally expressed in terms of relationships between rates-of-change. ODEs also emerge in stochastic models—for example when considering the evolution of a probability density function—and in large networks of interconnected agents.

This Special Issue solicits articles that possess both the following features: interesting applications, and mathematical analysis driven by such applications. Novel and innovative applications of ODEs are particularly welcome, as are unconventional ways of using rigorous mathematics to obtain intuition in applications.

Prof. Dr. Sanjeeva





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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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