

Special Issue

Qualitative Analysis of Differential Equations: Theory and Applications

Message from the Guest Editors

In the past year, qualitative analyses, i.e., analyses of the stability, boundedness, integrability, existence and uniqueness of solutions functional differential equations (delay differential equations, neutral differential equations, advanced differential equations and impulsive differential equations); dynamic models; integral equations; integro-differential equations; partial differential equations; fractional differential equations; fractional integro-differential equations; fractional partial differential equations; etc., have attracted the attention of numerous researchers at the theoretical level and at the level of their applications. Therefore, these kinds of equations can be solved analytically in particular cases, but not numerically. Qualitative theory can enable us to obtain information about the behaviour of solutions without prior information on them by means of Lyapunov's second method, the fixed-point method, the Lyapunov–Krasovskii method, and so on. The aim of this SI is to collect some new theoretical contributions and real-world applications with regard to the qualitative theory of the equations mentioned above.

Guest Editors

Dr. Osman Tunç
Prof. Dr. Vitalii Slynko
Prof. Dr. Sandra Pinelas

Deadline for manuscript submissions

closed (30 June 2024)



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Mathematics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
mathematics@mdpi.com

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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.

Editor-in-Chief

Prof. Dr. Francisco Chiclana
School of Computer Science and Informatics, De Montfort University,
The Gateway, Leicester LE1 9BH, UK

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