

Special Issue

Numerical Approaches for Solving Nonlinear Equations and Systems

Message from the Guest Editors

Understanding real-life phenomena observed in the life, physical, and social sciences and engineering has been aided by mathematical and computational modelling. Nonlinear equations and systems arise in the modelling of a wide variety of problems of astrophysics, chemical reactions, economics, electronic circuits, fluid flow, gene propagation, heat transfer, kinematics, population growth, and so on. While these applications appear to be varied in the problems they model, and although they might lead to different classes of nonlinear equations and systems, they share a common mathematical theme of initial- and boundary-value problems in ordinary and partial differential equations. The major difficulties encountered in the mathematical theory of nonlinear systems are attributed to factors such as the nature of the nonlinearity and the geometry involved. For this reason, the development of robust and accurate numerical methods for use in nonlinear equations and systems continues to be a great challenge, and this Special Issue will be focused on numerical approaches to solving such systems.

Guest Editors

Prof. Dr. Asai Asaithambi

School of Computing, University of North Florida, Jacksonville, FL 32224, USA

Prof. Dr. Nan Jiang

Department of Mathematical Sciences, University of South Dakota, Vermillion, SD 57069, USA

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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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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.

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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