

## Special Issue

# New Perspectives in Applied Mathematics with Nonlinear Equations and Dynamical Systems

### Message from the Guest Editor

The resolution of nonlinear equations poses a recurring challenge across various scientific domains. It is widely acknowledged that closed-form solutions for such equations are seldom attainable, necessitating the application of iterative techniques. Among these methods, Newton's method stands out as the most well-known, extensively studied, and frequently employed, owing to its favorable convergence properties and straightforward computational approach. This Special Issue aims to showcase research developments in this discipline, particularly delving into the analysis of the dynamic behavior of nonlinear equations. Such investigations offer researchers new avenues for finding solutions to these equations or systems of equations. Manuscripts are encouraged in areas such as the following:

- Explorations of complex dynamics through parameter and dynamical planes;
- Multi-point iterative methods (with or without memory);
- Study of the dynamics of higher-order methods;
- Development of tools aiding researchers in studying dynamical behavior;
- Optimal-order derivative-free iterative methods.

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### Guest Editor

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### Deadline for manuscript submissions

closed (31 January 2026)



## Axioms

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## About the Journal

### Message from the Editor-in-Chief

*Axioms* is dedicated to the foundations (structure and axiomatic basis, in particular) of mathematical theories, not only from a crisp or strictly classical sense, but also from a fuzzy and generalized sense. This includes the more innovative current scientific trends, devoted to discover and solve new challenging problems. The prime goal of *Axioms* is to publish first-class, original research articles under an open access policy with minimal fees for the authors. We would be pleased to welcome you as one of our authors.

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### Editor-in-Chief

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