

Special Issue

New Trends in Fuzzy Logic and Its Applications

Message from the Guest Editors

Since its inception, fuzzy logic has provided robust tools for modeling vagueness and imprecision in complex systems. Over the years, its theoretical foundations have evolved alongside a growing range of practical applications in the fields of control systems, data mining, artificial intelligence, decision-making, and others. This Special Issue aims to highlight recent advancements in the mathematical development of fuzzy logic, with a special emphasis on rigorous methods and models grounded in formal mathematics. It welcomes contributions that explore novel theoretical developments—such as generalizations of fuzzy sets, fuzzy relations, fuzzy topology, algebraic structures in fuzzy logic, fuzzy measure theory, and formal aspects of fuzzy decision-making. In addition, we welcome works that explore the mathematical applications of fuzzy logic in areas such as optimization, statistics, operations research, and applied analysis, as well as interdisciplinary studies where fuzzy methods are rigorously integrated into mathematical models.

Guest Editors

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Deadline for manuscript submissions

30 November 2026



Axioms

an Open Access Journal
by MDPI

Impact Factor 1.5



mdpi.com/si/249550

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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.

Editor-in-Chief

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