Special Issue

Probability-Based Fuzzy Sets: Extensions and Applications

Message from the Guest Editors

Since the concept of fuzzy sets was proposed by Zadeh, it has become possible to describe uncertainty and fuzziness information in practice quantitatively. Meanwhile, to reduce the loss of processed information, the probability theory is introduced into fuzzy sets to develop probabilistic fuzzy sets and other extensions. With the rapid development of artificial intelligence technology and tools, our understanding of the real world has been further deepened. Accordingly, researchers have successively defined various fuzzy set extensions to depict phenomena that are more complex in reality. Therefore, meaningfully introducing probability theory into new extensions to enhance the accuracy of information expression becomes an intriguing and important issue. Especially research areas such as the definitions of novel forms of probability-based fuzzy sets, probability-based fuzzy system optimization, and their applications in various fields need further investigation. This Special Issue welcomes papers combining probability theory with recent, new concepts in fuzzy sets to address the uncertainty and complexity that people are encountering.

Guest Editors

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Deadline for manuscript submissions

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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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