



Mathematical Fuzzy Logic and Fuzzy Set Theory

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Message from the Guest Editors

Fuzzy set theory (FST) started with L. A. Zadeh's 1965 paper where he suggested the unit interval as a set of truth values instead of the classical binary Boolean algebra. This was followed by J. Goguen's generalization (1967), replacing the unit interval by an abstract set L (usually a bounded lattice). Since then, fuzzy sets have been considered in a variety of fields, ranging from algebra, topology and category theory to measures, integrals, probability and statistics, and to decision making. Zadeh's paper also inspired a discipline known as Mathematical Fuzzy Logic (MFL). MFL started at the beginning of the 1990's and its backbone is made of two fundamental volumes written by P. Hájek (1998) and S. Gottwald (2001). Nowadays, MFL reaches other areas of pure and applied logic among which: proof theory, modal logics, first order logics, generalized quantifiers, game theory. The mathematical grounds of both FST and MFL, reveal that symmetry is of great inspiration for all researchers which are working on and contributing to the development of these areas. Special Issue aims collecting





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Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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