

Fuzzy Management Methods

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Applying Fuzzy Logic for the Digital Economy and Society

 Springer

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Preface

With today's information overload, it has become increasingly difficult to analyze the huge amounts of data and to generate appropriate management decisions. Furthermore, the data are often imprecise and will include both quantitative and qualitative elements. For these reasons, it is important to extend traditional decision-making processes by adding intuitive reasoning, human subjectivity, and imprecision.

In the age of big data, decision-making processes for economy and society have to deal with uncertainty, vagueness, and imprecision. Besides volume, variety, and velocity, two others V's for veracity and value have also to be taken into consideration. Therefore, the application of fuzzy sets and fuzzy logic becomes a hot topic.

In 2008, the Department for Informatics at the University of Fribourg, Switzerland, founded its Research Center for Fuzzy Management Methods (FMM = FM^2), often only called FMsquare. Later on, the International Research Book Series for FMsquare was launched by Springer, where researchers published in fuzzy-based reputation management, fuzzy classification of online customers, inductive fuzzy classification for marketing analytics, fuzzy data warehousing for performance measurement, using intuitionistic fuzzy sets for service level engineering, building a knowledge carrier based on granular computing, and a fuzzy-based recommender system for political communities, among others.

To celebrate the 10th anniversary of FMsquare in 2018, international researchers have been invited to submit their contributions in the following topics:

- Fuzzy-based portfolio management
- Web analytics with fuzzy measures
- Community marketing with fuzzy approaches
- Fuzzy-based customer equity
- Business process modeling with words
- Data mining with fuzzy reasoning
- Fuzzy cognitive maps for knowledge management
- Fuzzy-based stakeholder management

- Sense-making with vague data
- Related topics

After the international call for book chapters in November 2017, ten chapters were selected for this book in April 2018. The book presents state-of-the-art methods, case studies, and web-based services for a digital economy and society. The target audience are researchers, practitioners, project leaders, politicians, and managers who like to apply or improve fuzzy-based skills.

Fribourg, Switzerland
Fribourg, Switzerland
Sangolquí, Ecuador
July 2018

Andreas Meier
Edy Portmann
Luis Terán

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