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Fuzzy set-based techniques are also an important ingredient in the development of information technologies. In the field of information processing fuzzy sets are important in clustering, data analysis and data fusion, pattern recognition and computer vision. Fuzzy rule-based modeling has been combined with other techniques such as neural nets and evolutionary computing and applied to systems and control engineering, with applications to robotics, complex process control and supervision. In the field of information systems, fuzzy sets play a role in the development of intelligent and flexible manBmachine interfaces and the storage of imprecise linguistic information. In Artificial Intelligence various forms of knowledge representation and automated reasoning frameworks benefit from fuzzy set-based techniques, for instance in interpolative reasoning, non-monotonic reasoning, diagnosis, logic programming, constraint-directed reasoning, etc. Fuzzy expert systems have been devised for fault diagnosis, and also in medical science. In decision and organization sciences, fuzzy sets has had a great impact in preference modeling and multicriteria evaluation, and has helped bringing optimization techniques closer to the users needs. Applications can be found in many areas such as management, production research, and finance. Moreover concepts and methods of fuzzy set theory have attracted scientists in many other disciplines pertaining to human-oriented studies such as cognitive psychology and some aspects of social sciences.

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INTRODUCTION

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