Studies in Fuzziness and Soft Computing

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Interval-Valued Methods in Classifications and Decisions

This book describes novel algorithms based on interval-valued fuzzy methods that are expected to improve classification and decision-making processes under incomplete or imprecise information. At first, it introduces interval-valued fuzzy sets. It then discusses new methods for aggregation on interval-valued settings, and the most common properties of interval-valued aggregation operators. It then presents applications such as decision making using interval-valued aggregation, and classification in case of missing values. Interesting applications of the developed algorithms to DNA microarray analysis and in medical decision support systems are shown. The book is intended not only as a timely report for the community working on fuzzy sets and their extensions but also for researchers and practitioners dealing with the problems of uncertain or imperfect information.

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