

## Soft computing approach to pattern classification and object recognition: a unified concept

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### Abstrak

The book also surveys various soft computing tools, fuzzy relational calculus (FRC), genetic algorithm (GA) and multilayer perceptron (MLP) to provide a strong foundation for the reader. The supervised approach to pattern classification and model-based approach to occluded object recognition are treated in one framework, one based on either a conventional interpretation or a new interpretation of multidimensional fuzzy implication (MFI) and a novel notion of fuzzy pattern vector (FPV). By combining practice and theory, a completely independent design methodology was developed in conjunction with this supervised approach on a unified framework, and then tested thoroughly against both synthetic and real-life data. In the field of soft computing, such an application-oriented design study is unique in nature. The monograph essentially mimics the cognitive process of human decision making, and carries a message of perceptual integrity in representational diversity.