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Nota di contenuto	Part I Computational Intelligence in Visual Pattern Recognition -- 1 Visual Pattern Recognition -- 2 Computational Intelligence Techniques -- 3 Multi-Feature Pattern Recognition -- Part II Feature Selection and Classification -- 4 Fuzzy-Rough Discriminative Feature Selection and Classification -- 5 Hand Posture and Face Recognition using Fuzzy-Rough Approach -- 6 Boosting based Fuzzy-Rough Pattern Classifier -- Part III Biologically Inspired Approaches in Hand Posture Recognition -- 7 Hand Posture Recognition using Neurobiologically Inspired Features -- 8 Attention based Segmentation and Recognition (ASR) Algorithm for Hand Postures Against Complex Backgrounds -- Appendices -- Index.
Sommario/riassunto	This book presents a collection of computational intelligence algorithms that addresses issues in visual pattern recognition such as high computational complexity, abundance of pattern features, sensitivity to size and shape variations and poor performance against complex backgrounds. The book has 3 parts. Part 1 describes various research issues in the field with a survey of the related literature. Part 2

presents computational intelligence based algorithms for feature selection and classification. The algorithms are discriminative and fast. The main application area considered is hand posture recognition. The book also discusses utility of these algorithms in other visual as well as non-visual pattern recognition tasks including face recognition, general object recognition and cancer / tumor classification. Part 3 presents biologically inspired algorithms for feature extraction. The visual cortex model based features discussed have invariance with respect to appearance and size of the hand, and provide good inter class discrimination. A Bayesian model of visual attention is described which is effective in handling complex background problem in hand posture recognition. The book provides qualitative and quantitative performance comparisons for the algorithms outlined, with other standard methods in machine learning and computer vision. The book is self-contained with several figures, charts, tables and equations helping the reader to understand the material presented without instruction.