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Altri autori (Persone)	ChatterjeeAmitava SiarryPatrick
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Nota di contenuto	Part I - Image Preprocessing Algorithms -- Chap. 1 - Improved Digital Image Enhancement Filters Based on Type-2 Neuro-Fuzzy Techniques (Mehmet Emin Yüksel, Alper Batürk) -- Chap. 2 - Locally-Equalized Image Contrast Enhancement Using PSO-Tuned Sectorized Equalization (N.M. Kwok, Q.P. Ha, G. Fang, D. Wang, S.Y. Chen) -- Chap. 3 - Hybrid BBO-DE Algorithms for Fuzzy Entropy Based Thresholding (Ilhem Boussaïd, Amitava Chatterjee, Patrick Siarry, Mohamed Ahmed-Nacer) -- Chap. 4 - A Genetic Programming Approach for Image Segmentation (Hugo Alberto Perlin, Heitor Silvério Lopes) -- Part II - Image Compression Algorithms -- Chap. 5 - Fuzzy Clustering-Based Vector Quantization for Image Compression (George E. Tsekouras, Dimitrios M. Tsolakis) -- Chap. 6 - Layers Image Compression and

Reconstruction by Fuzzy Transforms (Ferdinando Di Martino, Salvatore Sessa) -- Chap. 7 - Modified Bacterial Foraging Optimization Technique for Vector Quantization-Based Image Compression (Nandita Sanyal, Amitava Chatterjee, Sugata Munshi) -- Part III - Image Analysis Algorithms -- Chap. 8 - A Fuzzy-Condition-Sensitive Hierarchical Algorithm for Approximate Template Matching in Dynamic Image Sequences (Rajshree Mandal, Anisha Halder, Amit Konar, Atulya K. Nagar) -- Chap. 9 - Digital Watermarking Strings with Images Compressed by Fuzzy Relation Equations (Ferdinando Di Martino, Salvatore Sessa) -- Chap. 10 - Study on Human Brain Registration Process Using Mutual Information and Evolutionary Algorithms (Mahua Bhattacharya, Arpita Das) -- Chap. 11 - On the Use of Stochastic Optimization Algorithms in Image Retrieval Problems (Mattia Broilo, Francesco G.B. De Natale) -- Chap. 12 - A Cluster-Based Boosting Strategy for Red Eyes Removal (Sebastiano Battiato, Giovanni Maria Farinella, Mirko Guarnera, Giuseppe Messina, Daniele Ravi) -- Part IV - Image Inferencing Algorithms -- Chap. 13 - Classifying Pathological Prostate Images by Fractal Analysis and Texture Features of Multicategories (Po-Whei Huang, Cheng-Hsiung Lee, Phen-Lan Lin) -- Chap. 14 - Multiobjective PSO for Hyperspectral Image Clustering (Farid Melgani, Edoardo Pasolli) -- Chap. 15 - A Computational Intelligence Approach to Emotion Recognition from the Lip-Contour of a Subject (Anisha Halder, Srishti Shaw, Kanika Orea, Pavel Bhowmik, Aruna Chakraborty, Amit Konar) -- Index.

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#### Sommario/riassunto

Computational intelligence based techniques have firmly established themselves as viable, alternate, mathematical tools for more than a decade. They have been extensively employed in many systems and application domains, among these signal processing, automatic control, industrial and consumer electronics, robotics, finance, manufacturing systems, electric power systems, and power electronics. Image processing is also an extremely potent area which has attracted the attention of many researchers who are interested in the development of new computational intelligence-based techniques and their suitable applications, in both research problems and in real-world problems. Part I of the book discusses several image preprocessing algorithms; Part II broadly covers image compression algorithms; Part III demonstrates how computational intelligence-based techniques can be effectively utilized for image analysis purposes; and Part IV shows how pattern recognition, classification and clustering-based techniques can be developed for the purpose of image inferencing. The book offers a unified view of the modern computational intelligence techniques required to solve real-world problems and it is suitable as a reference for engineers, researchers and graduate students.

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