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Soggetti	Computer simulation Artificial intelligence Computer science Algorithms Pattern recognition systems Application software Computer Modelling Artificial Intelligence Theory of Computation Automated Pattern Recognition Computer and Information Systems Applications
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Formato	Materiale a stampa
Livello bibliografico	Monografia
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Nota di bibliografia	Includes bibliographical references and author index.
Nota di contenuto	Face Recognition by Searching Most Similar Sample with Immune Learning -- A Multi-Objective Artificial Immune System Based on Hypervolume -- A Comparative Study of Negative Selection Based Anomaly Detection in Sequence Data -- Immune-Inspired Self Healing in Wireless Sensor Networks -- A Beginner's Guide to Systems Simulation in Immunology -- Clustering-Based Multi-objective Immune Optimization Evolutionary Algorithm -- Petri Nets Approach to Modeling of Immune System and Autism -- Mathematical Implementation of Interaction between Malaria and Immune System -- Computing Longest Common Subsequences with the B-Cell Algorithm

-- Bait a Trap: Introducing Natural Killer Cells to Artificial Immune System for Spyware Detection -- AC-CS: An Immune-Inspired Associative Classification Algorithm -- RC-DCA: A New Feature Selection and Signal Categorization Technique for the Dendritic Cell Algorithm Based on Rough Set Theory -- Artificial Immune Network Approach with Beta Differential Operator Applied to Optimization of Heat Exchangers -- A Negative Selection Approach to Intrusion Detection -- Clonal Expansion without Self-replicating Entities -- A Real Time Anomaly Detection System Based on Probabilistic Artificial Immune Systems -- CSA/IE: Novel Clonal Selection Algorithm with Information Exchange for High Dimensional Global Optimization Problems -- An Ecological Approach to Anomaly Detection: The EIA Model -- Rethinking Concepts of the Dendritic Cell Algorithm for Multiple Data Stream Analysis -- Stability-Based Model Selection for High Throughput Genomic Data: An Algorithmic Paradigm -- Towards an Evolutionary Procedure for Reverse-Engineering Biological Networks -- Distributed Computing with Prokaryotic Immune Systems -- The Immune System as a Metaphor for Topology Driven Patterns Formation in Complex Systems.

Sommario/riassunto

This book constitutes the refereed proceedings of the 11th International Conference on Artificial Immune Systems, ICARIS 2012, held in Taormia, Italy, in August 2012. The 19 revised selected papers presented were carefully reviewed and selected for inclusion in this book. In addition 4 papers of the workshop on bio and immune inspired algorithms and models for multi-level complex systems are included in this volume. Artificial immune systems (AIS) is a diverse and maturing area of research that bridges the disciplines of immunology, biology, medical science, computer science, physics, mathematics and engineering. The scope of AIS ranges from modelling and simulation of the immune system through to immune-inspired algorithms and in silico, in vitro and in vivo solutions.
