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   Soggetti   Artificial intelligence
                         Computer science - Mathematics
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                         Artificial Intelligence
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                         Special Purpose and Application-Based Systems
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   Note generali   Includes index.

   Nota di contenuto   Networks -- Dynamical criticality in growing networks -- Effective Resistance based Weight Thresholding for Community Detection -- An Oracle for the Optimization of Underconstrained Compositions of Neural Networks - The Tick Hazard Use Case -- Droplets, Fluids, and Synthetic Biology -- Obstacles on the Pathway towards Chemical Programmability using Agglomerations of Droplets -- The Good, the Bad and the Ugly: droplet recognition by a "shootout"-heuristics -- Exploring the three-dimensional arrangement of droplets -- Geometric

restrictions to the agglomeration of spherical particles -- Effectiveness of Dynamic Load Balancing in Parallel Execution of a Subsurface Flow Cellular Automata Model -- Two possible AI-related paths for bottom-up synthetic cell research -- Robot Systems -- A hybrid control system architecture for a mobile robot to provide an energy-efficient and fast data processing -- On the evolution of mechanisms for collective decision making in a swarm of robots -- A novel online adaptation mechanism in artificial systems provides phenotypic plasticity -- Computer Vision and Computational Creativity -- Exploration of Genetic Algorithms and CNN for Melanoma Classification -- Using Genetic Algorithms to optimize a deep learning based system for the prediction of cognitive impairments -- Autonomous inspections of power towers with an UAV -- Self-organizing Maps of Artificial Neural Classifiers - a Brain like Pin Factory -- Evolutionary Music: Statistical Learning and Novelty for automatic improvisation -- Semantic Search -- ARISE: Artificial Intelligence Semantic Search Engine -- Artificial Medicine and Pharmacy -- Influence of the Antigen Pattern Vector on the Dynamics in a Perceptron-based Artificial Immune - Tumour-Ecosystem during and after Radiation Therapy -- Two-level detection of dynamic organization in cancer evolution models -- Artificial chemical neural network for drug discovery applications -- Trade and Finance -- Information Flow Simulations in Multi-Dimensional and Dynamic Systems -- Investigation of the Ramsey-Pierce-Bowman Model -- Ethics in Computational Modelling -- Ethical Aspects of Computational Modelling in Science, Decision Support and Communication.

Sommario/riassunto	This book constitutes the proceedings of the 15th Italian Workshop on Artificial Life and Evolutionary Computation, WIVACE 2021, held in Winterthur, Switzerland, in September 2022. The 14 full papers and 10 short papers presented in this volume were carefully reviewed and selected from 25 submissions. The papers are organized in the following topical sections: Networks; Droplets, Fluids, and Synthetic Biology; Robot Systems; Computer Vision and Computational Creativity; Semantic Search; Artificial Medicine and Pharmacy; Trade and Finance; Ethics in Computational Modelling.