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Nota di contenuto	Natural Computation -- Multiple Lagrange Multiplier Method for Constrained Evolutionary Optimization -- Robust Evolution Strategies -- Hybrid Genetic Algorithm for Solving the p-Median Problem -- Correction of Reflection Lines Using Genetic Algorithms -- Adaptation under Changing Environments with Various Rates of Inheritance of Acquired Characters -- Dynamic Control of Adaptive Parameters in Evolutionary Programming -- Information Operator Scheduling by Genetic Algorithms -- Solving Radial Topology Constrained Problems with Evolutionary Algorithms -- Automating Space Allocation in Higher Education -- Application of Genetic Algorithm and k-Nearest Neighbour Method in Medical Fraud Detection -- Evolution of Reference Sets in Nearest Neighbor Classification -- Investigation of a Cellular Genetic Algorithm that Mimics Landscape Ecology -- Quantifying Neighborhood Preservation: Joint Properties of Evolutionary and Unsupervised Neural Learning -- Neural Networks and Evolutionary Algorithms for the Prediction of Thermodynamic Properties for Chemical Engineering -- Evolving FPGA Based Cellular Automata -- Asynchronous Island Parallel GA Using Multiform Subpopulations -- Multiple Sequence Alignment Using Parallel Genetic Algorithms -- Evolving Logic Programs to Classify Chess-Endgame Positions -- Genetic Programming with Active Data Selection -- Evolutionary

Programming-Based Uni-vector Field Method for Fast Mobile Robot Navigation -- Evolution with Learning Adaptive Functions -- Modelling Plant Breeding Programs as Search Strategies on a Complex Response Surface -- Generating Equations with Genetic Programming for Control of a Movable Inverted Pendulum -- A Hybrid Tabu Search Algorithm for the Nurse Rostering Problem -- Reinforcement Learning: Past, Present and Future -- A Reinforcement Learning with Condition Reduced Fuzz Rules -- Generality and Conciseness of Submodels in Hierarchical Fuzzy Modeling -- Using Evolutionary Programming to Optimize the Allocation of Surveillance Assets -- Applying the Evolutionary Neural Networks with Genetic Algorithms to Control a Rolling Inverted Pendulum -- Evolving Cooperative Actions Among Heterogeneous Agents by an Evolutionary Programming Method -- Cooperative Works for Welfare Agent Robot and Human Using Chaotic Evolutionary Computation -- Evolutionary Computation for Intelligent Agents Based on Chaotic Retrieval and Soft DNA -- A Study of Bayesian Clustering of a Document Set Based on GA -- An Evolutionary Approach in Quantitative Spectroscopy -- Evolutionary Recognition of Features from CAD Data -- Modeling Strategies as Generous and Greedy in Prisoner's Dilemma Like Games -- Using Genetic Algorithms to Simulate the Evolution of an Oligopoly Game -- An Evolutionary Study on Cooperation in N-person Iterated Prisoner's Dilemma Game -- Simulating a N-person Multi-stage Game for Making a State -- Learning from Linguistic Rules and Rule Extraction for Function Approximation by Neural Networks -- Can a Niching Method Locate Multiple Attractors Embedded in the Hopfield Network? -- Time Series Prediction by Using Negatively Correlated Neural Networks -- Animating the Evolution Process of Genetic Algorithms -- Analysis on the Island Model Parallel Genetic Algorithms for the Genetic Drifts -- A Paradox of Neural Encoders and Decoders or Why Don't We Talk Backwards? -- Continuous Optimization Using Elite Genetic Algorithms With Adaptive Mutations -- Evolutionary Systems Applied to the Synthesis of a CPU Controller -- Novel Models in Evolutionary Designing -- Co-evolution, Determinism and Robustness -- Co-operative Evolution of a Neural Classifier and Feature Subset -- Optimal Power Flow Method Using Evolutionary Programming -- Grammatical Development of Evolutionary Modular Neural Networks -- Hybridized Neural Network and Genetic Algorithms for Solving Nonlinear Integer Programming Problem -- Evolution of Gene Coordination Networks -- Adaptive Simulation: An Implementation Framework -- A Model of Mutual Associative Memory for Simulations of Evolution and Learning -- The Application of Cellular Automata to the Consumer's Theory: Simulating a Duopolistic Market -- Object-Oriented Genetic Algorithm Based Artificial Neural Network for Load Forecasting.

Sommario/riassunto

This volume contains selected papers presented at the Second Asia-Paci c C- ference on Simulated Evolution and Learning (SEAL'98), from 24 to 27 Nov- ber 1998, in Canberra, Australia. SEAL'98 received a total of 92 submissions (67 papers for the regular sessions and 25 for the applications sessions). All papers were reviewed by three independent reviewers. After review, 62 papers were - cepted for oral presentation and 13 for poster presentation. Some of the accepted papers were selected for inclusion in this volume. SEAL'98 also featured a fully refereed special session on Evolutionary Computation in Power Engineering - ganised by Professor Kit Po Wong and Dr Loi Lei Lai. Two of the ve accepted papers are included in this volume. The papers included in these proceedings cover a wide range of topics in simulated evolution and learning, from self-adaptation to dynamic modelling, from reinforcement learning to agent systems, from evolutionary

games to e- lutionary economics, and from novel theoretical results to successful applications, among others. SEAL'98 attracted 94 participants from 14 di erent countries, namely A- tralia, Belgium, Brazil, Germany, Iceland, India, Japan, South Korea, New Z- land, Portugal, Sweden, Taiwan, UK and the USA. It had three distinguished international scientists as keynote speakers, giving talks on natural computation (Hans-Paul Schwefel), reinforcement learning (Richard Sutton), and novel m- els in evolutionary design (John Gero). More information about SEAL'98 is still available at http://www.cs.adfa.edu.au/conference/seal98/.