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Altri autori (Persone)	DiamantarosKonstantinos I DuchW <1954-> (Wlodzislaw) IliadisLazaros S
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Nota di contenuto	Kernel Algorithms – Support Vector Machines -- Convergence Improvement of Active Set Training for Support Vector Regressors -- The Complex Gaussian Kernel LMS Algorithm -- Support Vector Machines-Kernel Algorithms for the Estimation of the Water Supply in Cyprus -- Faster Directions for Second Order SMO -- Almost Random

Projection Machine with Margin Maximization and Kernel Features -- A New Tree Kernel Based on SOM-SD -- Kernel-Based Learning from Infinite Dimensional 2-Way Tensors -- Semi-supervised Facial Expressions Annotation Using Co-Training with Fast Probabilistic Tri-Class SVMs -- An Online Incremental Learning Support Vector Machine for Large-scale Data -- A Common Framework for the Convergence of the GSK, MDM and SMO Algorithms -- The Support Feature Machine for Classifying with the Least Number of Features -- Knowledge Engineering and Decision Making -- Hidden Markov Model for Human Decision Process in a Partially Observable Environment -- Representing, Learning and Extracting Temporal Knowledge from Neural Networks: A Case Study -- Recurrent ANN -- Multi-Dimensional Deep Memory Atari-Go Players for Parameter Exploring Policy Gradients -- Layered Motion Segmentation with a Competitive Recurrent Network -- Selection of Training Data for Locally Recurrent Neural Network -- A Statistical Approach to Image Reconstruction from Projections Problem Using Recurrent Neural Network -- A Computational System of Metaphor Generation with Evaluation Mechanism -- Recurrence Enhances the Spatial Encoding of Static Inputs in Reservoir Networks -- Action Classification in Soccer Videos with Long Short-Term Memory Recurrent Neural Networks -- Reinforcement Learning -- A Hebbian-Based Reinforcement Learning Framework for Spike-Timing-Dependent Synapses -- An Incremental Probabilistic Neural Network for Regression and Reinforcement Learning Tasks -- Using Reinforcement Learning to Guide the Development of Self-organised Feature Maps for Visual Orienting -- Exploring Continuous Action Spaces with Diffusion Trees for Reinforcement Learning -- An Alternative Approach to the Revision of Ordinal Conditional Functions in the Context of Multi-Valued Logic -- One-Shot Supervised Reinforcement Learning for Multi-targeted Tasks: RL-SAS -- An Oscillatory Neural Network Model for Birdsong Learning and Generation -- A Computational Neuromotor Model of the Role of Basal Ganglia and Hippocampus in Spatial Navigation -- Reinforcement Learning Based Neural Controllers for Dynamic Processes without Exploration -- A Neurocomputational Model of Nicotine Addiction Based on Reinforcement Learning -- Robotics -- Teaching Humanoids to Imitate 'Shapes' of Movements -- The Dynamics of a Neural Network of Coupled Phase Oscillators with Synaptic Plasticity Controlling a Minimally Cognitive Agent -- Integrative Learning between Language and Action: A Neuro-Robotics Experiment -- Sliding Mode Control of Robot Based on Neural Network Model with Positive Definite Inertia Matrix -- Hardware Implementation of a CPG-Based Locomotion Control for Quadruped Robots -- Evolutionary Strategies Used for the Mobile Robot Trajectory Tracking Control -- A Novel Topological Map of Place Cells for Autonomous Robots -- Hybrid Control Structure for Multi-robot Formation -- From Conditioning of a Non Specific Sensor to Emotional Regulation of Behavior -- A Robot Vision Algorithm for Navigating in and Creating a Topological Map of a Reconfigurable Maze -- Self Organizing ANN -- Generation of Comprehensible Representations by Supposed Maximum Information -- Visualization of Changes in Process Dynamics Using Self-Organizing Maps.-Functional Architectures and Hierarchies of Time Scales -- A Novel Single-Trial Analysis Scheme for Characterizing the Presaccadic Brain Activity Based on a SON Representation -- Web Spam Detection by Probability Mapping GraphSOMs and Graph Neural Networks -- Self-Organizing Maps for Improving the Channel Estimation and Predictive Modelling Phase of Cognitive Radio Systems -- Application of SOM-Based Visualization Maps for Time-Response Analysis of Industrial Processes -- Snap-Drift Self Organising Map --

Fault Severity Estimation in Rotating Mechanical Systems Using Feature Based Fusion and Self-Organizing Maps -- Self-Organization of Steerable Topographic Mappings as Basis for Translation Invariance -- A Self-Organizing Map for Controlling Artificial Locomotion -- Visualising Clusters in Self-Organising Maps with Minimum Spanning Trees -- Elementary Logical Reasoning in the SOM Output Space -- Adaptive Algorithms – Systems -- Adaptive Critic Design with ESN Critic for Bioprocess Optimization -- Correcting Errors in Optical Data Transmission Using Neural Networks -- Adaptive Classifiers with ICI-Based Adaptive Knowledge Base Management -- Multi Class Semi-Supervised Classification with Graph Construction Based on Adaptive Metric Learning -- Genetically Tuned Controller of an Adaptive Cruise Control for Urban Traffic Based on Ultrasounds -- Adaptive Local Fusion with Neural Networks -- A Controlling Strategy for an Active Vision System Based on Auditory and Visual Cues -- Optimization -- A One-Layer Dual Neural Network with a Unipolar Hard-Limiting Activation Function for Shortest-Path Routing -- Optimizing Hierarchical Temporal Memory for Multivariable Time Series -- Solving Independent Component Analysis Contrast Functions with Particle Swarm Optimization -- Binary Minimization: Increasing the Attraction Area of the Global Minimum in the Binary Optimization Problem -- An Artificial Immune Network for Multi-objective Optimization.

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### Sommario/riassunto

This volume is part of the three-volume proceedings of the 20th International Conference on Artificial Neural Networks (ICANN 2010) that was held in Thessaloniki, Greece during September 15–18, 2010. ICANN is an annual meeting sponsored by the European Neural Network Society (ENNS) in cooperation with the International Neural Network Society (INNS) and the Japanese Neural Network Society (JNNS). This series of conferences has been held annually since 1991 in Europe, covering the field of neurocomputing, learning systems and other related areas. As in the past 19 events, ICANN 2010 provided a distinguished, lively and interdisciplinary discussion forum for researchers and scientists from around the globe. It covered a wide range of topics, including the latest advances of research and also all the developments and applications in the area of Artificial Neural Networks (ANNs). ANNs provide an information processing structure inspired by biological nervous systems and they consist of a large number of highly interconnected processing elements (neurons). Each neuron is a simple processor with a limited computing capacity typically restricted to a rule for combining input signals (utilizing an activation function) in order to calculate the output one. Output signals may be sent to other units along connections known as weights that excite or inhibit the signal being communicated. ANNs have the ability “to learn” by example (a large volume of cases) through several iterations without requiring a priori fixed knowledge of the relationships between process parameters.

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