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| Soggetti | Artificial intelligence<br>Optical data processing<br>Bioinformatics<br>Computers<br>Algorithms<br>Pattern recognition<br>Artificial Intelligence<br>Computer Imaging, Vision, Pattern Recognition and Graphics<br>Computation by Abstract Devices<br>Algorithm Analysis and Problem Complexity<br>Pattern Recognition |
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| Nota di contenuto | Basic Models in Visual Sciences -- Physiology of Simple Photoreceptors in the Abdominal Ganglion of Onchidium -- Diffuse Nerve Net of Hydra Revealed by NADPH-Diaphorase Histochemical Labeling -- On Global Geometry of Image on Eye’s Back -- Cortical Mechanism of Vision -- Independent Encoding of Position and Orientation by Population Responses in Primary Visual Cortex -- A Neural Model for Attentional Modulation of Lateral Interactions in the Visual Cortex -- Testing Viewpoint Invariance in the Neural Representation of Faces: An MEG Study -- Modeling Visual Information Processing in Brain: A Computer |

Vision Point of View and Approach -- Color Processing in Natural Vision -- Higher Order Color Mechanisms for Image Segmentation -- How Does the Brain Arrive at a Color Constant Descriptor? -- Temporal Characteristics of Artificial Retina Based on Bacteriorhodopsin and Its Variants -- Action Oriented Vision -- Vision and Action in the Language-Ready Brain: From Mirror Neurons to SemRep -- A Neural Network Model for a View Independent Extraction of Reach-to-Grasp Action Features -- Neuromimetic Indicators for Visual Perception of Motion -- Reversal of “Cubic” and “Cylindric” Figures -- Visual Recognition and Attentive Modulation -- Different Binding Strategies for the Different Stages of Visual Recognition -- The Bayesian Draughtsman: A Model for Visuomotor Coordination in Drawing -- Independent Component Analysis of Layer Optical Flow and Its Application -- A Self-organizing Approach to Detection of Moving Patterns for Real-Time Applications -- Biometric Recognition -- Recognition of Human Faces: From Biological to Artificial Vision -- Incremental Subspace Learning for Cognitive Visual Processes -- Real–Time Robot Manipulation Using Mouth Gestures in Facial Video Sequences -- Image Segmentation and Recognition -- A Variational Bayes Approach to Image Segmentation -- Watershed Segmentation Via Case-Based Reasoning -- Digital Removal of Blotches with Variable Semi-transparency Using Visibility Laws -- Classification with Positive and Negative Equivalence Constraints: Theory, Computation and Human Experiments -- A Graph-Based Clustering Method and Its Applications -- Neural Object Recognition by Hierarchical Learning and Extraction of Essential Shapes -- Disparity Calculation and Noise Analysis -- Increasing Efficiency in Disparity Calculation -- Patterns of Binocular Disparity for a Fixating Observer -- 3D Reconstruction and Mapping from Stereo Pairs with Geometrical Rectification -- Noise Analysis for Depth Estimation -- Signal Identification in Neural Models -- Stimulus-Response Curves in Sensory Neurons: How to Find the Stimulus Measurable with the Highest Precision -- Molecular Mechanism of Glutamate-Triggered Brain Glucose Metabolism: A Parametric Model from FDG PET-Scans -- Steady-State Properties of Coding of Odor Intensity in Olfactory Sensory Neurons -- Input Identification in the Ornstein-Uhlenbeck Neuronal Model with Signal Dependent Noise -- Numerical Results on the Hodgkin-Huxley Neural Network: Spikes Annihilation -- Excitatory Synaptic Interaction on the Dendritic Tree -- Ghost Stochastic Resonance for a Neuron with a Pair of Periodic Inputs -- Coincidence Detector Properties of Small Networks of Interneurons -- Computing the Maximum Using Presynaptic Inhibition with Glutamate Receptors -- Bounds of the Ability to Destroy Precise Coincidences by Spike Dithering -- Natural and Artificial Representation Issues in Artificial Intelligence -- Non-invasive Brain-Actuated Interaction -- Decomposition Approach to Solve Dial-a-Ride Problems Using Ant Computing and Constraint Programming -- Logic as Energy: A SAT-Based Approach -- Towards a Formal Approach to Generative Design: An Assistant System for the Creation of Artefact Models -- Using Software Agent Negotiation for Service Selection -- A Genetic Algorithm for the Quadratic Multiple Knapsack Problem -- The Application of Neural Networks in Classification of Epilepsy Using EEG Signals -- Meaning, Interaction and Emotion -- Moving Creative Words -- Applying Neural Networks to Knowledge Representation and Determination of Its Meaning -- New Frameworks to Boost Feature Selection Algorithms in Emotion Detection for Improved Human-Computer Interaction -- The Significance of Empty Speech Pauses: Cognitive and Algorithmic Issues -- Human Robot Interactions: Towards the Implementation of Adaptive Strategies for Robust

Communication -- Robot Navigation and Control -- A Neurosymbolic Hybrid Approach for Landmark Recognition and Robot Localization -- A Robotic Architecture with Innate Releasing Mechanism -- An Application of Vision Systems to the Path Planning of Industrial Robots -- Tracking Trajectories with a Robotic Manipulator with Singularities -- Motion Planning for Wheeled Mobile Robots Based on Singularity Criteria.