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                        Implementing Central Pattern Generators in Hexapod Robotic
                        Structures -- Genetic Algorithm for the Job-Shop Scheduling with
                        Skilled Operators -- Preliminary Design of the Real-Time Control
                        Software for the Adaptive Optics of AOLI -- Graph-Based Learning on

Sparse Data for Recommendation Systems in Social Networks -- Self-sampling Strategies for Multimemetic Algorithms in Unstable Computational Environments -- On the Influence of Illumination Quality in 2D Facial Recognition -- A Binary Cuckoo Search Algorithm for Solving the Set Covering Problem -- State Machine Based Architecture to Increase Flexibility of Dual-Arm Robot Programming -- A Cellular Automata Model for Mobile Worm Propagation -- Evolving Cellular Automata to Segment Hyperspectral Images Using Low Dimensional Images for Training.-. Multicriteria Inventory Routing by Cooperative Swarms and Evolutionary Algorithms -- Embodied Evolution for Collective Indoor Surveillance and Location -- On the Spectral Clustering for Dynamic Data -- A Multiple-Model Particle Filter Based Method for Slide Detection and Compensation in Road Vehicles -- Pedestrian Tracking-by-Detection Using Image Density Projections and Particle Filters -- Comparative Study of the Features Used by Algorithms Based on Viola and Jones Face Detection Algorithm -- Experiments of Skin Detection in Hyperspectral Images -- Scene Recognition for Robot Localization in Difficult Environments -- Pyramid Representations of the Set of Actions in Reinforcement Learning -- Related Tasks Selection to Multitask Learning Schemes -- Towards Robot Localization Using Bluetooth Low Energy Beacons RSSI Measures -- Development of a Web Platform for On-line Robotics Learning Workshops Using Real Robots -- A Growing Functional Modules Learning Based Controller Designed to Balance of a Humanoid Robot on One Foot -- Optimized Representation of 3D Sequences Using Neural Networks -- Object Recognition in Noisy RGB-D Data -- Topology Preserving Self-Organizing Map of Features in Image Space for Trajectory Classification -- A Comparative Study of Downsampling Techniques for Non-rigid Point Set Registration Using Color -- Robust Control Tuning by PSO of Aerial Robots Hose Transportation -- Visual Bug Algorithm for Simultaneous Robot Homing and Obstacle Avoidance Using Visual Topological Maps in an Unmanned Ground Vehicle -- Neural Modeling of Hose Dynamics to Speedup Reinforcement Learning Experiments -- Autonomous Robot Navigation Based on Pattern Recognition Techniques and Artificial Neural Networks -- Collaborative Group Formation Using Genetic Algorithms -- The CALIMACO Multimodal System: Providing Enhanced Library Services Using Mobile Devices.-Agent Based Modelling to Build Serious Games: The Learn to Lead Game -- An Augmented Reality Application for Learning Anatomy -- Data Cleansing Meets Feature Selection: A Supervised Machine Learning Approach -- Multicriterion Segmentation of Demand Markets to Increase Forecasting Accuracy of Analogous Time Series: A First Investigation -- A Self-Organising Multi-Manifold Learning Algorithm -- Artificial Metaplasticity for Deep Learning: Application to WBCD Breast Cancer Database Classification -- Comparing ELM Against MLP for Electrical Power Prediction in Buildings.-.Fish Monitoring and Sizing Using Computer Vision -- Computer-Aided Development of Thermo-Mechanical Laser Surface Treatments for the Fatigue Life Extension of Bio-Mechanical Components -- From Smart Grids to Business Intelligence, a Challenge for Bioinspired Systems -- Neural Recognition of Real and Computer-Designed Architectural Images.

Sommario/riassunto	The two volumes LNCS 9107 and 9108 constitute the proceedings of the International Work-Conference on the Interplay Between Natural and Artificial Computation, IWINAC 2015, held in Elche, Spain, in June 2015. The total of 103 contributions was carefully reviewed and selected from 190 submissions during two rounds of reviewing and improvement. The papers are organized in two volumes, one on artificial computation and biology and medicine, addressing topics

such as computational neuroscience, neural coding and neuro-informatics, as well as computational foundations and approaches to the study of cognition. The second volume deals with bioinspired computation in artificial systems; topics alluded are bio-inspired circuits and mechanisms, bioinspired programming strategies, and bioinspired engineering AI&KE.