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Collana	Lecture Notes in Artificial Intelligence ; ; 7508
Disciplina	006.3
Soggetti	Artificial intelligence Pattern recognition Optical data processing Computers and civilization Application software Special purpose computers Artificial Intelligence Pattern Recognition Image Processing and Computer Vision Computers and Society Computer Applications Special Purpose and Application-Based Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	International conference proceedings.
Nota di bibliografia	Includes bibliographical references and author index.
Nota di contenuto	Hands-Free Head-Motion Interface Using Air Pillow -- A Self-localization System with Global Error Reduction and Online Map-Building Capabilities -- Sensor Classification Methods Applied to Robotics -- Design and Simulation of Bio-inspired Flexible Tactile Sensor for Prosthesis -- A Monitoring Network Based on Embedded Vision Nodes Suitable for Robotic Systems -- Conceptual Design and Kinematic Analysis of a Parallel Rotational Robot -- Attitude Control of the Unicycle Robot Using Fuzzy-Sliding Mode Control -- Evaluation of

Response Models to a Series of Commands in a Telerobotics Supervisory Control System -- An Embedded Control System for Automatic Guided Vehicle -- Predictive Delay Compensation for Camera Based Oscillation Damping of a Multi Link Flexible Robot -- Control of an Ostrich-Like Knee Joint for a Biped Robot Based on Passive Dynamic Walking -- Adaptive Neural Network Control of Robot with Passive Last Joint -- 4M-Model Based Bionic Design of Artificial Skeletal Muscle Actuated by SMA -- Design Considerations of a Robotic Head for Telepresence Applications -- Scaling Studies for an Actively Controlled Curvature Robotic Pectoral Fin -- Control of a Passive-Dynamic-Walking-Based Biped Model with Semicircular Feet for a Small Stair Step -- Evaluation of a Proposed Workspace Spanning Technique for Small Haptic Device Based Manipulator Teleoperation -- Prior Knowledge Employment Based on the K-L and Tanimoto Distances Matching for Intelligent Autonomous Robots -- Interactive Features for Robot Viewers -- Searching Energy-Efficient Route in Rough Terrain for Mobile Robot with Ant Algorithm -- Real-Time Recognizing Human Hand Gestures -- Safe Robot Learning by Energy Limitation -- Motion Recovery of Parallel Manipulators Using Task-Decomposition Approach -- Derivation of Dynamic Equations of Serial Robot Manipulators with Coupled Ideal Joint Motion -- Mechatronics Design Applied to the Concept of Service Robot to Clean Storage Tanks -- Research on the Impact of the Number of Wheels and Layouts to the Performances of Omni-Directional Chassis -- A Novel Distributed Tuned Mass Damper Design Approach -- The Basic Component of Computational Intelligence for AX-12 Robotic Arm Manipulator -- Guiding Sampling-Based Motion Planning by Forward and Backward Discrete Search -- Kinematic Modeling of a Heavy-Duty Forging Manipulator -- Simultaneous Localization and Map Building for Wheeled Robot with Colored Measurement Noise -- A Comparison of Different Metaheuristic Algorithms for Optimizing Blended PTP Movements for Industrial Robots -- Stable Gait Planning for Biped Robot's Lower Limb Based on Natural ZMP Trajectories -- Numerical and Analytical Methods for Synthesis of Central Pattern Generators -- Trajectory Planning for Omni-Directional Mobile Robot Based on Bezier Curve, Trigonometric Function and Polynomial -- A Low-Cost, Practical Localization System for Agricultural Vehicles -- Static Gait Control for Quadruped Robot -- Accurate Correction of Robot Trajectories Generated by Teaching Using 3D Vision by Laser Triangulation -- Improved Method of Robot Trajectory in IBVS Based on an Efficient Second-Order Minimization Technique -- Tactile Sensors Based Object Recognition and 6D Pose Estimation -- Graph-Based Detection of Objects with Regular Regions -- Semantic Interpretation of Novelty in Images Using Histograms of Oriented Gradients -- Far-Field Terrain Perception Using Max-Margin Markov Networks -- An Adaptive Trajectory Prediction Method for Ping-Pong Robots -- A New Method of Stereo Localization Using Dual-PTZ-Cameras -- Monocular Depth from Motion Using a New Closed-Form Solution -- Fast Template Matching of Objects for Visual SLAM -- Body Pixel Classification by Neural Network -- Robust Recognition against Illumination Variations Based on SIFT -- Robust Real-Time Stereo Edge Matching by Confidence-Based Refinement -- A Symbol Identifier Based Recognition and Relative Positioning Approach Suitable for Multi-robot Systems -- New Stereovision Self-calibration Method and Its Application in Vision Guided Approaching -- A Real-Time On-Board Orthogonal SLAM for an Indoor UAV -- An Infrastructure-Free Indoor Navigation System for Blind People -- Q-Tree: Automatic Construction of Hierarchical State Representation for Reinforcement Learning -- Navigation and Localization for Autonomous Vehicle at

Road Intersections with Low-Cost Sensors -- On-Road Motion Planning for Autonomous Vehicles -- On the Development of an Open-Source Vehicle Dynamics Simulation -- A Study of New Path Planning Algorithm Using Extended A* Algorithm with Survivability.

Sommario/riassunto

The three volume set LNAI 7506, LNAI 7507 and LNAI 7508 constitutes the refereed proceedings of the 5th International Conference on Intelligent Robotics and Applications, ICIRA 2012, held in Montreal, Canada, in October 2012. The 197 revised full papers presented were thoroughly reviewed and selected from 271 submissions. They present the state-of-the-art developments in robotics, automation and mechatronics. This volume covers the topics of robot actuators and sensors; robot design, development and control; robot intelligence, learning and linguistics; robot mechanism and design; robot motion analysis and planning; robotic vision, recognition and reconstruction; and planning and navigation.
