

1. Record Nr.	UNISA996465850103316
Titolo	Intelligent Robotics and Applications [[electronic resource]] : 5th International Conference, ICIRA 2012, Montreal, Canada, October 3-5, 2012, Proceedings, Part I // edited by Chun-Yi Su, Subhash Rakheja, Liu Honghai
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2012
ISBN	3-642-33509-8
Edizione	[1st ed. 2012.]
Descrizione fisica	1 online resource (XXXVI, 723 p. 434 illus.)
Collana	Lecture Notes in Artificial Intelligence ; ; 7506
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	Control Strategies of a Mobile Robot Inspector in Inaccessible Areas -- Advanced High Precision Control for XY-Table -- Application of Fixed-Structure Genetic Programming for Classification -- Variable Universe Fuzzy PID Control Strategy of Permanent Magnet Biased Axial Magnetic Bearing Used in Magnetic Suspension Wind Power Generator -- Adaptive Dynamic Surface Control of a Class of Nonlinear Systems with Unknown Duhem Hysteresis -- Balancing and Posture Controls for Biped Robots with Unmodelled Dynamics -- Adaptive Learning

Prediction on Rolling Force in the Process of Reversible Cold Rolling Mill -- Modeling and Simulation of Air-Boots for a Novel Soft-Terrain Walking Concept Vehicle -- Concept of Actuation and Control for the EO Smart Connecting Car (EO scc) -- Wavelet-Based Linearization for Single-Degree-Of-Freedom Nonlinear Systems -- An Application of DCS Device to a Heat Exchange Process -- Application of Driver-in-the-Loop Real-Time Simulations to the Design of SUV Differential Braking Controllers -- Optimization of Measurement Configurations for Geometrical Calibration of Industrial Robot -- Multi-line Fitting Using Two-Stage Iterative Adaptive Approach -- Collaborative Training Mechanism Design for Wireless Sensor and Actuator Networks -- A Practical Calibration Method for Spray Painting Robot in Factory -- Study on a New Bridge Crack Detection Robot Based on Machine Vision -- Robust Gaussian-Based Template Tracking -- Combined Online and Offline Information for Tracking Facial Feature Points -- Extracting Minimalistic Corridor Geometry from Low-Resolution Images -- Triangulation-Based Plane Extraction for 3D Point Clouds -- Evolutionary Computation for Intelligent Self-localization in Multiple Mobile Robots Based on SLAM -- Optimum Design of a Planar 3-DOF Parallel Manipulator for Good Motion and Force Transmissibility -- Singularity Analysis of the Planar 3-RRR Parallel Manipulator Considering the Motion/Force Transmissibility -- Dimensional Synthesis of a Planar Parallel Manipulator for Pick-and-Place Operations Based on Rigid-Body Dynamics -- Analytical Forward Kinematics for Two Kinds of Typical Tripods Part I: Closed-Form Solutions for Forward Kinematics Methods -- Analytical Forward Kinematics for Two Kinds of Typical Tripods Part II: Analyzing for Their Workspaces, and Performances of the Forward Kinematics -- Robust Sliding Mode Control Law Design for Unmanned Gyroplane -- Realization of an Autonomous Team of Unmanned Ground and Aerial Vehicles -- Design of Helicopter Cable-Orientation Control System Based on Finite-Element Modeling -- Research on Alignment of Camera and Receptacle during the Autonomous Aerial Refueling -- Consensus Algorithms in a Multi-agent Framework to Solve PTZ Camera Reconfiguration in UAVs -- Detection and Tracking of Underwater Object Based on Forward-Scan Sonar -- Structural Design and Analysis of 3-DOF Bionic Eye Based on Spherical Ultrasonic Motor -- Cooperative Control for UAV Formation Flight Based on Decentralized Consensus Algorithm -- Segmentation and Classification of Side-Scan Sonar Data -- Vision Guidance System for AGV Using ANFIS -- Payload Drop Application of Unmanned Quadrotor Helicopter Using Gain-Scheduled PID and Model Predictive Control Techniques -- UAV Flight Performance Optimization Based on Improved Particle Swarm Algorithm -- Trajectory Optimization of Unmanned Aerial Vehicle in Vertical Profile -- Trajectory Tracking with Model Predictive Control for an Unmanned Quad-rotor Helicopter: Theory and Flight Test Results -- Parallel Tracking and Mapping with Multiple Cameras on an Unmanned Aerial Vehicle -- Rotorcraft UAV Actuator Failure Detection Based on a New Adaptive Set-Membership Filter -- Robust Attitude Control Design for Spacecraft under Assigned Velocity and Control Constraints -- Fault-Tolerant Control of a Class of Switched Nonlinear Systems with Application to Flight Control -- Leak Detection in Water Distribution Networks with Optimal Linear Regression Models -- Experimental Test of an Interacting Multiple Model Filtering Algorithm for Actuator Fault Detection and Diagnosis of an Unmanned Quadrotor Helicopter -- Reliability Analysis of Fault Tolerant Wind Energy Conversion System with Doubly Fed Induction Generator -- Distribution Rates Analysis of Symplectic Geometry Spectrum for Surface EMG Signals on Healthy

Hand Muscles -- Mutual Information Analysis with Ordinal Pattern for EMG Based Hand Motion Recognition -- Design of an Anthropomorphic Prosthetic Hand towards Neural Interface Control -- Adaptive Pattern Recognition of Myoelectric Signal towards Practical Multifunctional Prosthesis Control -- SSVEP Based Brain-Computer Interface Controlled Functional Electrical Stimulation System for Knee Joint Movement -- A Feedforward Compensation Method for Control of Joint Equilibrium Position -- A New 4M Model-Based Human-Machine Interface for Lower Extremity Exoskeleton Robot -- Design and Performance Evaluation of a Rotary Series Elastic Actuator -- Realistic Dynamic Posture Prediction of Humanoid Robot: Manual Lifting Task Simulation -- Human Brain Control of Electric Wheelchair with Eye-Blink Electrooculogram Signal -- Development of an Endoscopic Continuum Robot to Enable Transgastric Surgical Obesity Treatment -- Fuzzy Adaptive Backstepping Control of a Two Degree of Freedom Parallel Robot -- Non-smooth Observer for Mechanical Systems Based on Sandwich Model with Backlash -- Robust Proportional-Derivative Control of a Three-Axis Milling Machine Tool -- A Novel Stabilization Scheme for Asymmetric Bilateral Teleoperation Systems with Time Varying Delays -- Adaptive Exponential Sliding Mode Control for Dynamic Tracking of a Nonholonomic Mobile Robot -- The Study of a Vision-Based Pedestrian Interception System -- Self-optimizing Handling System for Assembling Large Components -- Robot Assisted Manufacturing System for High Gloss Finishing of Steel Molds -- Measurement of the Cognitive Assembly Planning Impact -- Selfoptimized Assembly Planning for a ROS Based Robot Cell -- Virtual Production Intelligence – A Contribution to the Digital Factory.

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 adaptive control systems; automotive systems; estimation and identification; intelligent visual systems; application of differential geometry in robotic mechanisms; unmanned systems technologies and applications; new development on health management, fault diagnosis, and fault-tolerant control; biomechatronics; intelligent control of mechanical and mechatronic systems.
