

1. Record Nr.	UNISA996465671603316
Titolo	Simulation, Modeling, and Programming for Autonomous Robots [[electronic resource] ] : Third International Conference, SIMPAR 2012, Tsukuba, Japan, November 5-8, 2012, Proceedings // edited by Itsuki Noda, Noriako Ando, Davide Brugali, James J. Kuffner
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2012
ISBN	3-642-34327-9
Edizione	[1st ed. 2012.]
Descrizione fisica	1 online resource (XIV, 414 p. 198 illus.)
Collana	Lecture Notes in Artificial Intelligence ; ; 7628
Disciplina	006.3
Soggetti	Artificial intelligence Computer simulation User interfaces (Computer systems) Computers Computer communication systems Software engineering Artificial Intelligence Simulation and Modeling User Interfaces and Human Computer Interaction Computation by Abstract Devices Computer Communication Networks Software Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Invited Talks -- A Geometric Perspective of Anthropomorphic Embodied Actions -- Cybernetics:Fusion of Human, Machine and Information:Robot Suit for the Future.-If Abstraction Is the Answer, What Is the Question? Reasoning for Everyday Manipulation Tasks -- Learning and Behavior Towards Partners Profiling in Human Robot Interaction Contexts -- Motivation-Based Autonomous Behavior Control of Robotic Computer -- An Evaluation Method for Smart Variable Space in Living Space -- Modeling Robot Behavior with CCL --

Visual-Trace Simulation of Concurrent Finite-State Machines for Validation and Model-Checking of Complex Behaviour -- Modeling of Robots Fast Dynamic Simulation of Highly Articulated Robots with Contact via (n2) Time Dense Generalized Inertia Matrix Inversion -- A Differential-Algebraic Multistate Friction Model -- Simulation of Flexible Objects in Robotics -- Continuous Integration for Iterative Validation of Simulated Robot Models -- Software Modeling and Architecture -- Software Abstractions for Simulation and Control of a Continuum Robot -- A Visual Modeling Language for RDIS and ROS Nodes Using AToM3.-PRACSYS: An Extensible Architecture for Composing Motion Controllers and Planners -- RobotML, a Domain-Specific Language to Design, Simulate and Deploy Robotic Applications -- A Java vs. C++ Performance Evaluation: A 3D Modeling Benchmark -- Simulation and Applications A Comparison of Sampling Strategies for Parameter Estimation of a Robot Simulator -- A Framework with a Pedestrian Simulator for Deploying Robots into a Real Environment -- Simulating Complex Robotic Scenarios with MORSE -- Humanoid and Biped Robots Masters' Skill Explained by Visualization of Whole-Body Muscle Activity -- Studying the Effect of Different Optimization Criteria on Humanoid Walking Motions -- Modeling and Simulating Compliant Movements in a Musculoskeletal Bipedal Robot -- Simulation and Experimental Evaluation of the Contribution of Biarticular Gastrocnemius Structure to Joint Synchronization in Human-Inspired Three-Segmented Elastic Legs -- Mobile Robots Graph Optimization with Unstructured Covariance: Fast, Accurate, Linear Approximation -- Mobile Robot SLAM Interacting with Networked Small Intelligent Sensors Distributed in Indoor Environments -- Manipulation Computing 2D Robot Workspace in Parallel with CUDA -- Acquisition of Object Pose from Barcode for Robot Manipulation -- WorkCellSimulator: A 3D Simulator for Intelligent Manufacturing -- Tools and Middleware -- A Meta-model and Toolchain for Improved Interoperability of Robotic Frameworks -- Integrated Software Development for Embedded Robotic Systems -- Combining IEC 61499 Model-Based Design with Component-Based Architecture for Robotics -- A Reuse-Oriented Development Process for Component-Based Robotic Systems -- UAV Simulation SwarmSimX:Real-Time Simulation Environment for Multi-robot Systems.-Evaluating the Effectiveness of Mixed Reality Simulations for Developing UAV Systems -- Comprehensive Simulation of Quadrotor UAVs Using ROS and Gazebo.

---

### Sommario/riassunto

This book constitutes the refereed proceedings of the Third International Conference on Simulation, Modeling, and Programming for Autonomous Robots, SIMPAR 2012, held in Tsukuba, Japan, in November 2012. The 33 revised full papers and presented together with 3 invited talks were carefully reviewed and selected from 46 submissions. Ten papers describe design of complex behaviors of autonomous robots, 9 address software layers, 8 papers refer to related modeling and learning. The papers are organized in topical sections on mobile robots, software modeling and architecture and humanoid and biped robots.

---