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Nota di contenuto	Title Page; Preface; SiMCRT - Kobe, Conference Organization; Participants of the SiMCRT 2011 Workshop, Kobe University, Japan; Contents; Modeling and Simulation; Simulation Algorithms for Continuous Time Markov Chain Models; Nonsmooth Optimization Method for the Elastic Contact Problem; Population Models & Data in Applied Ecology: Surrogate Species; A New Approach of Using Null Space of Jacobian Matrix in Simulation of Multibody Dynamics; Inverse Problems; Deformation Formulas and Inverse Problems for Advection-Diffusion Equations Crack Identification by the Passive and the Active Methods with the Use of Piezoelectric Film and Inverse Analysis Forward and Inverse Simulations of Pipe Wall Thinning Using Pulsed Eddy Current Signals; Stochastic Inverse Methodologies for Structural Health Monitoring Using Electromagnetic Measurements; Intelligent System; Neuro-Control and Its Applications to Electric Vehicle Control; Information Visualization in Intelligent Navigation for Multiple Mobile Robots; Parallel Distributed Genetic Rule Selection for Data Mining from Large Data Sets; Robotics; On Computational Robotics

Teleoperation of Universal Robot Hand with Pinching Force Stabilization
Object Manipulation Based on Tactile Information of Multi-Fingered Robot Hand; Displacement and Force Measurement, Vibration Detection by Magnetic Type Tactile Sensor; Applications; Saliency-Based Geographics Annotation for Robotic Access to Naturally Complex Scenes; Monitoring Method for Underground Condition; Exact Pipe Wall Thinning Management with Flow Accelerated Corrosion Using Electro-Magnetic Acoustic Transducer; Subject Index; Author Index

Sommario/riassunto

Simulation and modeling contribute to a broad range of applications in computational science and robotics technology, often addressing important design and control problems. This book presents a selection of papers from the International Workshop on Simulation and Modeling related to Computational Science and Robotics Technology (SiMCTR 2011), held at Kobe University, Japan, in November 2011. The workshop provided a forum for discussing recent developments in the growing field of engineering science and mathematical sciences, and brought together a diverse group of researchers in these areas to share and compare the different approaches to simulation and modeling in computational science and robotics technology. The workshop was also aimed at establishing collaborative links between engineering researchers of information and robotics technology (IRT) and applied mathematicians working in modeling and computational methods for design and control.
