Design Philosophies and Software Architectures for Robotics
A Multimodal Human-Robot-Dialog Applying Emotional Feedbacks p. 1
Pseudo Swarm Implementation Using Robotic Agents and Graphical Simulation p. 11
User Identification for Healthcare Service Robots: Multidisciplinary Design for Implementation of Interactive Services p. 20
Using a Social Robot as a Gaming Platform p. 30
Robotic Platform: A XML-Based Extensible Robot Intelligence Architecture (XRIA) p. 40
Social Acceptance for Human-Robot Interaction I p. 50
Socializing with Olivia, the Youngest Robot Receptionist Outside the Lab p. 50
Minimal Set of Recognizable Gestures for a 10 DOF Anthropomorphic Robot p. 63
STB: International Stance Grounded Child-Dependent Robot p. 71
Using the Interaction Rhythm as a Natural Reinforcement Signal for Social Robots: A Matter of Belief p. 81
Case Study of a Multi-robot Healthcare System: Effects of Docking and Metaphor on Persuasion p. 90
Learning, Adaptation and Evolution of Robot Intelligence
State Representation with Perceptual Constancy Based on Active Motion p. 100
Selection of Actions for an Autonomous Social Robot p. 110
On Internal Knowledge Representation for Programming Mobile Robots by Demonstration p. 120
A Software Framework for Multi Player Robot Games p. 131
A Behavior Adaptation Method for an Elderly Companion Robot-Rui p. 141
An Adaptive Information System for an Empathic Robot Using EEG Data p. 151
Mechatronics and Intelligent Control
Mind Robotic Rehabilitation Based on Motor Imagery Brain Computer Interface p. 161
COSA Finger: A Coupled and Self-Adaptive Under-actuated Unit for Humanoid Robotic Hand p. 172
A Humanoid Robot Upper Limb System with Anthropomorphic Robot Hand: GCUA Hand II p. 182
Improving Positioning Accuracy of Robotic Systems by Using Environmental Support Constraints - A New Bionic Approach p. 192
Nonlinear Control of a Robot Manipulator with "Time-Varying Uncertainties" p. 202
Adaptive Motion Synchronization of Bilateral Teleoperation Systems with Time-Varying Communication Delays p. 212
HRI in Assistive Technologies for People with Special Needs
Design of Robot Assisted Observation System for Therapy and Education of Children with Autism p. 222
Study on an Assistive Robot for Improving Imitation Skill of Children with Autism p. 232
Developing Play Scenarios for Tactile Interaction with a Humanoid Robot: A Case Study Exploration with Children with Autism p. 243
Development of PARO Interventions for Dementia Patients in Dutch Psycho-geriatric Care p. 253
Short Term Effect Evaluation of IROMEC Involved Therapy for Children with Intellectual Disabilities p. 259
Adaptive Robot Design with Hand and Face Tracking for Use in Autism Therapy p. 265
Affective and Cognitive Sciences for Interactive Robots
Selecting When Acting: How Human Perception is Tuned to Action Goals and How Robotics Can Benefit from That p. 275
Attention Determination for Social Robots Using Salient Region Detection p. 295
Bimodal Emotion Recognition p. 305
Objective Evaluation of Spatial Information Acquisition Using a Visuo-tactile Sensory Substitution Device p. 315
Social Acceptance for Human-Robot Interaction II
Can I Help You? A Spatial Attention System for a Receptionist Robot p. 325
Understanding Communication Patterns for Designing Robot Receptionist p. 345
Do Social Robots Walk or Roll? p. 355
Interaction and Collaboration
Synthetic Skins with Humanlike Warmth p. 362
Entrainment of Pointing Gestures by Robot Motion p. 372
Emo-dramatic Robotic Stewards p. 382
Fusion and Self-adaptation of Color and Gradient Based Models for Object Detection and Localization in Applications of Service Robots p. 392
Development of Robotic Arm Rehabilitation Machine with Biofeedback That Addresses the Question of Filipino Elderly Patient Motivation p. 401
Author Index p. 411

Table of Contents provided by Blackwell's Book Services and R.R. Bowker. Used with permission.