Advances in Intelligent Systems and Computing

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The series "Advances in Intelligent Systems and Computing" contains publications on theory, applications, and design methods of Intelligent Systems and Intelligent Computing. Virtually all disciplines such as engineering, natural sciences, computer and information science, ICT, economics, business, e-commerce, environment, healthcare, life science are covered. The list of topics spans all the areas of modern intelligent systems and computing such as: computational intelligence, soft computing including neural networks, fuzzy systems, evolutionary computing and the fusion of these paradigms, social intelligence, ambient intelligence, computational neuroscience, artificial life, virtual worlds and society, cognitive science and systems, Perception and Vision, DNA and immune based systems, self-organizing and adaptive systems, e-Learning and teaching, human-centered and human-centric computing, recommender systems, intelligent control, robotics and mechatronics including human-machine teaming, knowledge-based paradigms, learning paradigms, machine ethics, intelligent data analysis, knowledge management, intelligent agents, intelligent decision making and support, intelligent network security, trust management, interactive entertainment, Web intelligence and multimedia.

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Robot Intelligence Technology and Applications 5

Results from the 5th International Conference on Robot Intelligence Technology and Applications



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Preface

This is the fifth edition that aims at serving the researchers and practitioners in related fields with a timely dissemination of the recent progress on robot intelligence technology and its applications, based on a collection of papers presented at the 5th International Conference on Robot Intelligence Technology and Applications (RiTA), held in Daejeon, Korea, December 13–15, 2017. For better readability, this edition has the total of 47 articles grouped into 5 parts: Part I: Artificial Intelligence, Part II: Autonomous Robot Navigation, Part III: Intelligent Robot System Design, Part IV: Intelligent Sensing and Control, and Part V: Machine Vision.

The theme of this year's conference is: "Robots revolutionizing the paradigm of human life by embracing artificial intelligence." The gap between human and robot intelligence is shrinking fast, and this is changing the way we live and work. It also affects how we conduct research in AI, recognizing the need for robotic systems that can interact with their environments in human-like ways, and embracing intelligent robots and the new paradigms they create in business and leisure. This book will bring their new ideas in these areas and leave with fresh perspectives on their own research.

vi Preface

We do hope that readers find the Fifth Edition of Robot Intelligence Technology and Applications, RiTA 5, stimulating, enjoyable, and helpful for their research endeavors.

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Contents

Part I Artificial Intelligence Artificial Intelligence Approach to the Trajectory Generation 3 Dipankar Bhattacharya, Leo K. Cheng, Steven Dirven and Weiliang Xu Reinforcement Learning of a Memory Task Using an Echo State 17 Toshitaka Matsuki and Katsunari Shibata 27 Minju Jung and Junmo Kim Improving Deep Neural Networks by Adding 35 Sihyeon Seong, Chanho Lee and Junmo Kim **Improved InfoGAN: Generating High Quality Images** 43 Doyeon Kim, Haechang Jung, Jaeyoung Lee and Junmo Kim Task-related Item-Name Discovery Using Text and Image 49 Putti Thaipumi and Osamu Hasegawa An Exploration of the Power of Max Switch Locations in CNNs..... 63 Jeongwoo Ju, Junho Yim, Sihaeng Lee and Junmo Kim An Empirical Study on the Optimal Batch Size for the Deep 73 Minsuk Choi

viii Contents

| Design and Development of Intelligent Self-driving Car Using ROS and Machine Vision Algorithm | 83 |
|--|-----|
| Aswath Suresh, C. P. Sridhar, Dhruv Gaba, Debrup Laha and Siddhant Bhambri | |
| Intelligent Smart Glass for Visually Impaired Using Deep Learning Machine Vision Techniques and Robot Operating System (ROS) Aswath Suresh, Chetan Arora, Debrup Laha, Dhruv Gaba and Siddhant Bhambri | 99 |
| A Proactive Robot Tutor Based on Emotional Intelligence Siva Leela Krishna Chand Gudi, Suman Ojha, Sidra, Benjamin Johnston and Mary-Anne Williams | 113 |
| Reusability Quality Metrics for Agent-Based Robot Systems Cailen Robertson, Ryoma Ohira, Jun Jo and Bela Stantic | 121 |
| Part II Autonomous Robot Navigation | |
| SVM-Based Fault Type Classification Method for Navigation of Formation Control Systems | 137 |
| Indoor Magnetic Pose Graph SLAM with Robust Back-End Jongdae Jung, Jinwoo Choi, Taekjun Oh and Hyun Myung | 153 |
| Multi-robot SLAM: An Overview and Quantitative Evaluation of MRGS ROS Framework for MR-SLAM Mahmoud A. Abdulgalil, Mahmoud M. Nasr, Mohamed H. Elalfy, Alaa Khamis and Fakhri Karray | 165 |
| A Reinforcement Learning Technique for Autonomous Back Driving Control of a Vehicle | 185 |
| Rapid Coverage of Regions of Interest for Environmental Monitoring | 195 |
| Part III Intelligent Robot System Design | |
| Embedded Drilling System Using Rotary-Percussion Drilling Jongheon Kim, Jinkwang Kim and Hyun Myung | 213 |
| Design and Development of Innovative Pet Feeding Robot Aswath Suresh, Debrup Laha, Dhruv Gaba and Siddhant Bhambri | 221 |

Contents ix

| SignBot, Sign-Language Performing Robot, Based on Sequential Motion of Servo Motor Arrays | 239 |
|---|-----|
| Rami Ali Al-Khulaidi, Nuril Hana Binti Abu Bakr, Norfatehah Mohammad Fauzi and Rini Akmeliawati | |
| Isolated Bio-Regenerative System for Vertical Farming Through Robots in Space Explorations | 251 |
| A Mobile Social Bar Table Based on a Retired Security Robot David Claveau and Stormon Force | 263 |
| I Remember What You Did: A Behavioural Guide-Robot Suman Ojha, S. L. K. Chand Gudi, Jonathan Vitale, Mary-Anne Williams and Benjamin Johnston | 273 |
| Robot Supporting for Deaf and Less Hearing People | 283 |
| The Use of Machine Learning for Correlation Analysis of Sentiment and Weather Data | 291 |
| Design and Analysis of a Novel Sucked-Type Underactuated Hand with Multiple Grasping Modes | 299 |
| Robotizing the Bio-inspiration | 313 |
| Part IV Intelligent Sensing and Control | |
| An Observer Design Technique for Improving Velocity Estimation of a Gimbal System | 337 |
| Voice Controlled Multi-robot System for Collaborative Task Achievement | 345 |

x Contents

| The Control of an Upper Extremity Exoskeleton for Stroke Rehabilitation by Means of a Hybrid Active Force Control | 361 |
|---|-----|
| Intellectual Multi Agent Control of Tripod | 371 |
| Estimation and Recognition of Motion Segmentation and Pose IMU-Based Human Motion Capture | 383 |
| Fault Diagnosis of a Robot Manipulator Based on an ARX-Laguerre Fuzzy PID Observer | 393 |
| A Two-Level Approach to Motion Planning of Soft Variable-Length Manipulators Dengyuan Wang, Xiaotong Chen, Gefei Zuo, Xinghua Liu, Zhanchi Wang, Hao Jiang and Xiaoping Chen | 409 |
| A Grasp Strategy for Polygonal Objects Using a Honeycomb Pneumatic Network Soft Gripper | 427 |
| A Parameterized Description of Force Output of Soft Arms in Full Workspace | 447 |
| Intelligent Multi-fingered Dexterous Hand Using Virtual Reality (VR) and Robot Operating System (ROS) Aswath Suresh, Dhruv Gaba, Siddhant Bhambri and Debrup Laha | 459 |
| FEA Evaluation of Ring-Shaped Soft-Actuators for a Stomach Robot | 475 |
| Part V Machine Vision | |
| Detection and Classification of Vehicle Types from Moving Backgrounds Xuesong Le, Jun Jo, Sakong Youngbo and Dejan Stantic | 491 |
| Multi-object Tracking with Pre-classified Detection | 503 |

Contents xi

| Autonomous 3D Model Generation of Unknown Objects for Dual-Manipulator Humanoid Robots | 515 |
|--|-----|
| Adaptive Planar Vision Marker Composed of LED Arrays for Sensing Under Low Visibility | 531 |
| Development of Robust Recogintion Algorithm of Retro-reflective Marker Based on Visual Odometry for Underwater Environment Pillip Youn, Kwangyik Jung and Hyun Myung | 541 |
| A Robust Estimation of 2D Human Upper-Body Poses Using Fully Convolutional Network | 549 |
| Surface Crack Detection in Concrete Structures Using Image Processing | 559 |
| Evaluation of High-Speed Image Processing for Low Latency Control of a Mechatronic System | 565 |
| Author Index | 577 |