Preface

This volume contains a collection of papers presented at the 3rd International Symposium on Autonomous Minirobots for Research and Edutainment (AMiRE 2005) that is held at Awara-Spa, Fukui, Japan, September 20-22, 2005.

This is a biennial symposium, which started as AMiRE 2001 at the Heinz Nixdorf Institute of the University of Paderborn, Germany, in 2001, and was followed by AMiRE 2003 at Queensland University of Technology, Brisbane, Australia, in 2003. After these successful symposia, AMiRE 2005 is held under the sponsorship of the Faculty of Engineering, University of Fukui and under the co-sponsorship of the IEEE Robotics and Automation Society. It is funded by the Fukui Convention Bureau and the University of Fukui.

Each full-length paper submitted to the symposium was independently reviewed by 3 referees from the world's front-line researchers, and 55 papers were accepted for oral presentation. We acknowledge generous support for those who gave excellent reviews in order to maintain the high standards of the symposium despite a very tight schedule.

What highlights AMiRE2005 is plenary talks presented by Professors Marco Dorigo and Henrik H. Lund, on the latest work in the field of swarm intelligence and modular robotics. Professors Mattias Whade and Hiroyuki Mishima hold two tutorial sessions on evolutionary robotics and affordance theory. There are 5 organized sessions proposed by Drs. Tomoharu Nakashima, Masayuki Kikuchi, Yasutake Takahashi, Daisuke Katagami, and Ulf Witkowski. Exhibitions and demonstrations from companies and universities were promoted with the assistance of Eiwa System Management, Inc., and these events will provide an important opportunity for an exchange between academia and industries. We especially thank Dr. Takashi Gomi for his contribution to the exhibition.

Robots have been widely used in education with entertainment; edutainment, especially human-friendly robots, such as small pet robots and small biped robots, are developed for further research and higher education. The symposium theme in AMiRE2005 is Highly Intelligent Technology for Robots,
VI  Preface

aiming at the realization of the autonomy in unknown and dynamic environments including humans. We sincerely hope that AMiRE 2005 becomes an important step for these research directions and for further contributions toward future AMiRE symposia.

Finally, one more thing to be mentioned in this symposium is the conference site, where Awara spa is one of the major hot-spa spots in Japan. As well as academic discussions, we are sure that participants will enjoy the excellent hot-spa and experience Japanese style accommodation that should expedite the exchange between participants. We hope you find AMiRE 2005 an inspiring place for the promotion of research and edutainment.

September 20, 2005,  
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Contents

Plenary Talks

Swarm-bot: A Novel Type of Self-Assembling Robot
Marco Dorigo ................................................................. 3

Self-reconfigurable Robot with ATRON Modules
Henrik H. Lund, Richard Beck, Lars Dalgaard ............................ 5

Technical Sessions

Autonomous Agent & Robot

Universal FPGA-Microcontroller Module for Autonomous Minirobots
T. Chinapirom, U. Witkowski, U. Rücker .................................. 21

Seeing Empty Space in an Unknown Environment without Silhouettes
A. Eppendahl, A. Ojamaa ......................................................... 27

SubSim: An autonomous underwater vehicle simulation package
A. Boeing, T Bräunl ............................................................... 33

Toward Micro Wall-Climbing Robots Using Biomimetic Fibrillar Adhesives
M. Greuter, G. Shah, G. Caprari, F. Tâche, R. Siegwart, M. Sitti ... 39

Teleoperation in Robot
Contents

Teleworkbench: A Teleoperated Platform for Multi-Robot Experiments
A. Tanoto, U. Witkowski, U. Rückert ......................... 49

Teleoperation of a Mobile Autonomous Robot using Web Services

Bluetooth for Autonomous Mini-Robots and Scatternet Formation
O. Orhan, M. Grünewald, U. Witkowski ................. 61

Teleoperation of a Mobile Robot under Office Automation Floors with Visual Assistance
N. Kubota, S. Kamijima, K. Taniguchi ................... 67

RoboCup Soccer Simulation

Developing a Goal Keeper for Simulated RoboCup Soccer and its Performance Evaluation
S. Yokoyama, N. Namikawa, T. Nakashima, M. Udo, H. Ishibuchi ..... 75

An Action Rule Discovery Technique from Simulated RoboCup Soccer Logs
M. Nii, M. Kajihara, Y. Takahashi, T. Nakashima ............. 81

Adapting Recognition of Shootable Situations by Learning from Experience and Observation in a RoboCup Simulated Soccer Game
T. Kawarabayashi, T. Kubo, I. Takahashi, J. Kuroiwa, T. Odaka,
H. Ogura .................................................. 87

Getting closer: How Simulation and Humanoid League can benefit from each other
J. Boedecker, N.M. Mayer, M. Ogino, R. da S. Guerra, M. Kikuchi,
M. Asada .................................................. 93

Evaluation for Selecting Method Using Reinforcement Learning with Hand-Coded Rules in RoboCup Soccer Agents
H. Sasaoka, K. Araki ........................................ 99

RoboCup Real Robot

Yumekobo: An Effective Educational System for RoboCup
K. Demura, Y. Asano ..................................... 107

A Method of Sensing own States for Tele-operating Aibos at Ruined Homes
K. Kawamura, T. Takahashi ................................ 113
Trajectory Generation for a Mobile Robot by Reinforcement Learning
M. Shimizu, M. Fujita, H. Miyamoto ........................................... 119

Multi-Layered Fuzzy Behavior Control Method for Autonomous Soccer Robot with MOVIS
Y. Maeda, S. Hanaka, W. Shimizuhiro ....................................... 125

Robot Soccer – Challenges and Future Developments

FPGA-based Object Detection in Robot Soccer Application
T. Kaulmann, M. Strünkmann, U. Witkowski.............................. 135

Robot Soccer KheperaSot League: Challenges and Future Directions
N. Keeratipranon, F. Maire, J. Sitte ........................................... 141

What Robot Soccer can Contribute to Education and Research - Some Lessons Learned
N. Jesse ............................................................................... 147

Coevolutionary Algorithm for Behavior Acquisition of Soccer Robots
N. Kubota, T. Umeda .............................................................. 154

Visual Information Processing in the Brain

Relation between Contour Integration and Figure-Ground Separation
M. Kikuchi, S. Oguni .............................................................. 161

How the early visual system extract angles and junctions embedded within contour stimuli?
M. Ito ..................................................................................... 167

Neural Correlate of Depth Cue Integration Studied with MEG
T. Owaki, T. Takeda ................................................................. 175

Coding of 3D curvature in the parietal cortex (area CIP) of macaque monkey

A Study of Orientation Selectivity of TAM Network Incorporated Receptive Field Structure
I. Hayashi, J. R. Williamson .................................................... 187

Vision-based Adaptive Behavior
Evolutionary Recognition of Corridor and Branch using Adaptive Model with Layered Structure
H. Liu, J.C. Yuan, F. Gao, Y. Mae, M. Minami .......................... 195

A Direct Localization Method Using only the Bearings Extracted from Two Panoramic Views Along a Linear Trajectory
H. Huang, F. Maire, N. Keeratipranon ................................. 201

Early Results in Vision-based Map Building
T. Taylor, S. Geva, W. W. Boles ...................................... 207

Prediction of Fish Motion by Neural Network
Y. Li, Y. Takezawa, H. Suzuki, M. Minami, Y. Mae .............. 217

Visual Homing with Learned Goal Distance Information
M. D. Szenher ................................................................. 223

Robots for Education

A Low Cost Controller Board for Teaching Robotics
R. Singh, F. Maire, J. Sitte, A. Tickle ............................... 231

Robotics and Robotics Education with Smalltalk
J. Sitte ............................................................................. 237

Education for Creativity by Making Small Line Trace Robot in Department of HAIS, University of Fukui
T. Naniwa .......................................................................... 243

Education Using Small Humanoid Robot
F. Yamasaki, Y. Nakagawa .................................................. 248

Evolutionary Robots

Self-Organization of Spiking Neural Network Generating Autonomous Behavior in a Miniature Mobile Robot
F. Alnajjar, K. Murase ....................................................... 255

Behavioral Selection Using the Utility Function Method: A Case Study Involving a Simple Guard Robot
M. Wahde, J. Pettersson, H. Sandholt, K. Wolff .................... 261

Spiking Neural Network for Behavior Learning of A Mobile Robot
N. Kubota, H. Sasaki ........................................................... 267
Safety of Autonomous Evolutionary Robots: Elimination of Certain Behavioral patterns by Complex Systems Analysis
K. Ashihara, K. Murase ........................................... 273

Swarm Intelligence 1

Two Steps towards a Mechanically Autonomous Self-replicating System
A. Eppendahl, S. Sajnani ............................................... 281

Using mini robots for prototyping intersection management of vehicles
M. Grünewald, C. Rust, U. Witkowski ................................ 287

Embodied Cognition in Directed Multi-Agent Systems - Empirical Study on Subjective Distance -
K. Sekiyama, T. Yamamoto ........................................... 293

Crack Detection by Mobile Robot with ECT Sensor
F. Kobayashi, F. Kojima, H. Nakatsuka .............................. 299

Swarm Intelligence 2

Self-organized Path Formation by Ant Robots - An Approach to Understanding Ant’s Aacts by Autonomous Distributed Systems -
N. Shuto, T. Hirata .................................................. 307

Autonomous Self-assembly in a Swarm-bot
R. Groß, M. Bonani, F. Mondada, M. Dorigo ....................... 314

Human-Agent Interaction and Social Robots

Long-term Interaction between Seal Robots and Elderly People – Robot Assisted Activity at a Health Service Facility for the Aged –
K. Wada, T. Shibata, K. Sakamoto, K. Tanie ........................ 325

State Space Self Organization based on Human-Robot Interaction
M. Sekino, D. Katagami, K. Nitta .................................... 331

Strategies using Facial Expressions and Gaze Behaviors for Animated Agents
M. Yuasa .......................................................... 337

Emotion Behavior Learning System Based on Meta-Parameter Control of Q-Learning with plural Q-values
S. Akiguchi, Y. Maeda ............................................... 344
System Human in the Loop

Development of a Companion Robot "SELF"
Y. Mori, M. Ueno, N. Kubota .................................................. 351

An Evaluation of the Methods to Convert Non-segmented "kana" Strings to "kanji-kana" Strings Using Markov Chain Models
T. Araki, M. Kurano, Y. Furukawa, K. Yamada, Y. Ogoshi ............ 360

An Evaluation of the Method to Detect Erroneous Sentences of "kana-to-kanji" conversion
T. Araki, T. Nozawa, M. Minobe, Y. Ogoshi ............................ 368

Cyclic Gestures Recognition for Interactive Learning of A Partner Robot
N. Kubota, M. Abe .............................................................. 376

Late Papers

Traffic-like Movement on a Trail of Interacting Robots with Virtual Pheromone
T. Kazama, K. Sugawara, T. Watanabe................................. 383

Extending the Temporal Horizon of Autonomous Robots
C.L. Nehaniv, N.A. Mirza, K. Dautenhahn, R. te Boekhorst .......... 389

Author Index
Plenary Talks

Swarm-bot: A Novel Type of Self-Assembling Robot
Marco Dorigo
IRIDIA, Université Libre de Bruxelles, Belgium

Self-reconfigurable Robot with ATRON Modules
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