

Contents of Journal of Advanced Computational Intelligence and Intelligent Informatics Volume 15

Vol.15 No.1, January 2011

Regular Papers:

- | | |
|--|--|
| <ul style="list-style-type: none"> □ No Time Limit and Time Limit Model of Multiple Round Dutch Auction Based on Genetic Network Programming 3
Shingo Mabu, Donggeng Yu, Chuan Yue, and Kotaro Hirasawa □ Efficient Optimization Using Experimental Queries: A Peak-Search Algorithm for Efficient Load-Pull Measurements 13
Charles Baylis, Lawrence Dunleavy, Steven Lardizabal, Robert J. Marks II, and Alberto Rodriguez □ Predictor Using an Error-Convergence Neuron Network and its Application to Electrocardiograms 21
Shunsuke Kobayakawa and Hirokazu Yokoi □ Common Testbed Generating Tool Based on XML for Multiple Interdependent Issues Negotiation Problems 34
Katsuhide Fujita, Takayuki Ito, and Mark Klein □ A Fuzzy Multiobjective Particle Swarm Optimized TS Fuzzy Logic Congestion Controller for Wireless Local Area Networks 41
Clement N. Nyirenda, Dawoud S. Dawoud, Fangyan Dong, Michael Negnevitsky, and Kaoru Hirota | <ul style="list-style-type: none"> □ Ranking of DMUs Based on Efficiency Intervals 63
Tomoe Entani □ Fuzzy c-Means Clustering for Data with Clusterwise Tolerance Based on L_2- and L_1-Regularization 68
Yukihiro Hamasuna, Yasunori Endo, and Sadaaki Miyamoto □ Fuzzy c-Means Clustering for Uncertain Data Using Quadratic Penalty-Vector Regularization 76
Yasunori Endo, Yasushi Hasegawa, Yukihiro Hamasuna, and Yuchi Kanzawa □ Variable Weighting in PCA-Guided k-Means and its Connection with Information Summarization 83
Katsuhiro Honda, Akira Notsu, and Hidetomo Ichihashi □ Kernel Functions Derived from Fuzzy Clustering and Their Application to Kernel Fuzzy c-Means 90
Jeongsik Hwang and Sadaaki Miyamoto □ Semi-Supervised Fuzzy c-Means Algorithm by Revising Dissimilarity Between Data 95
Yuchi Kanzawa, Yasunori Endo, and Sadaaki Miyamoto □ Heuristic Algorithm for Attribute Reduction Based on Classification Ability by Condition Attributes 102
Yasuo Kudo and Tetsuya Murai □ Variable Precision Rough Set Model in Information Tables with Missing Values 110
Yoshifumi Kusunoki and Masahiro Inuiguchi |
| <hr/> <p>Special Issue on Modeling Decisions for Artificial Intelligence</p> | |
| <p>Editorial:</p> <ul style="list-style-type: none"> □ Special Issue on Modeling Decisions for Artificial Intelligence 55
Vicenç Torra, Yasuo Narukawa, and Masahiro Inuiguchi | |
| <p>Papers:</p> <ul style="list-style-type: none"> □ Risk Analysis of Portfolios Under Uncertainty: Minimizing Average Rates of Falling 56
Yuji Yoshida | |

Vol.15 No.2, March 2011

Regular Papers:

- **A Similarity Rough Set Model for Document Representation and Document Clustering** . . . 125
Nguyen Chi Thanh, Koichi Yamada, and Muneyuki Unehara
- **Mean Local Trend Error and Fuzzy-Inference-Based Multicriteria Evaluation for Supply Chain Demand Forecasting** 134
Jingpei Dan, Fuding Xie, Fangyan Dong, and Kaoru Hirota
- **A Proposal of Stock Price Predictor Using Associated Memory** 145
Shigeki Nagaya, Zhang Chenli, and Osamu Hasegawa
- **Integrated Decision-Making System for Robot Soccer** 156
Ján Vaščák and Kaoru Hirota
- **Analyses of Compound Structures of Groups that Produce Intellectual Property**. 180
Hiroyasu Inoue
- **Competition is Bad for Consumers: Analysis of an Artificial Payment Card Market** 188
Biliana Alexandrova-Kabadjova, Edward Tsang, and Andreas Krause
- **Effects of Information Diffusion in Online Word-of-Mouth Communication Among Consumers** 197
Isamu Okada and Hitoshi Yamamoto
- **Simulation of Futures and Spot Markets by Using an Agent-Based Multi-Market Model** 204
Tomoko Ohi, Yasuhiro Hashimoto, Yu Chen, and Hirotada Ohashi
- **Bounded Rationality on Consumer Purchase Decisions and Product Diffusion Under Network Externalities: A Study Using Agent-Based Simulation and Experiments with Human Subjects** 212
Nariaki Nishino, Sobei H. Oda, and Kanji Ueda
- **Risk Evaluation by Human Trajectory Simulation Based on Real Data** 220
Kiyoshi Izumi, Yoshifumi Nishida, and Yoichi Motomura
- **Virtual Social Experiment of Tram Railway Extension Using Multi-Agent-Based Traffic Simulator**. 226
Hideki Fujii, Takafumi Sakurai, and Shinobu Yoshimura
- **Massive Multiagent-Based Urban Traffic Simulation with Fine-Grained Behavior Models** 233
Hiromitsu Hattori, Yuu Nakajima, and Shohei Yamane
- **Analyzing the Emergency Restoration Processes of an Electric Power Distribution Network by a Multi-Agent Simulator** 240
Shigeo Sagai, Toshikatsu Mori, and Takao Terano

Special Issue on New Trends in Agent-Based Simulation**Editorial:**

- **Special Issue on New Trends in Agent-Based Simulation** 165
Keiki Takadama and Kiyoshi Izumi

Position Paper:

- **Social and Group Simulation Based on Real Data Analysis**. 166
Kiyoshi Izumi, Keiki Takadama, Hiromitsu Hattori, Nariaki Nishino, and Itsuki Noda

Papers:

- **Agent-Based Simulation of Product Diffusion with Network Externality in a Heterogeneous Consumer Network** 173
Nobutada Fujii, Toshiya Kaihara, and Takashi Eda

Vol.15 No.3, May 2011

Special Issue on Fuzzy Rule Interpolation**Editorial:**

- **Special Issue on Fuzzy Rule Interpolation** . . . 253
Szilveszter Kovács

Papers:

- **Fuzzy Rule Interpolation and Extrapolation Techniques: Criteria and Evaluation Guidelines** 254
Domonkos Tikk, Zsolt Csaba Johanyák, Szilveszter Kovács, and Kok Wai Wong

- **Inference for Nonlinear Mapping with Sparse Fuzzy Rules Based on Multi-Level Interpolation** 264
Kiyohiko Uehara, Shun Sato, and Kaoru Hirota
 - **Generalisation of Scale and Move Transformation-Based Fuzzy Interpolation.** 288
Qiang Shen and Longzhi Yang
 - **Compound Distance Function for Similarity Measurement Between Fuzzy Sets** 299
László Kovács
 - **Intelligent Automated Guided Vehicle Controller with Reverse Strategy** 304
Shigeru Kato and Kok Wai Wong
 - **Performance Optimization of the Fuzzy Rule Interpolation Method “FIVE”.** 313
Dávid Vincze and Szilveszter Kovács
-
- Special Issue on Selected Papers from ISCIIA 2010**
- Editorial:**
- **Special Issue on Selected Papers from ISCIIA 2010** 321
Yasufumi Takama
- Papers:**
- **Semantically Enhanced Code Clone Refinement Algorithm Based on Analysis of Multiple Detection Reports** 322
Ricardo Sotolongo, Fangyan Dong, and Kaoru Hirota
 - **A Fuzzy Weights Representation for Inner Dependence AHP.** 329
Shin-ichi Ohnishi, Takahiro Yamanoi, and Hideyuki Imai
 - **Fuzzy Nonlinear Regression Analysis Using Fuzzified Neural Networks for Fault Diagnosis of Chemical Plants** 336
Daisaku Kimura, Manabu Nii, Takafumi Yamaguchi, Yutaka Takahashi, and Takayuki Yumoto
 - **Unnormalized Interval Type-2 TSK Fuzzy Logic System Design Based on Convexity and Sample Data.** 345
Tiechao Wang and Jianqiang Yi
 - **Adaptive Cruise Control Based on Reinforcement Learning with Shaping Rewards** 351
Zhaohui Hu and Dongbin Zhao
 - **Spatiotemporal Brain Activity During Hiragana Word Recognition Task** 357
Hisashi Toyoshima, Takahiro Yamanoi, Toshimasa Yamazaki, and Shin-ichi Ohnishi
 - **Cerebral Contour Extraction with Particle Method in Neonatal MR Images** 362
Syoji Kobashi, Daisuke Yokomichi, Yuki Wakata, Kumiko Ando, Reichi Ishikura, Kei Kuramoto, Shozo Hirota, and Yutaka Hata
 - **Toward New Practical Education Based on Professional *Kansei*.** 370
Koji Murai, Yuji Hayashi, Kei Kuramoto, Takayuki Fujita, Kazusuke Maenaka, Kohei Higuchi, and Tsunemasa Saiki
 - **Finding Communities Using User Preference in Web Structure Mining.** 377
Takeshi Yoshikawa and Hidetoshi Nonaka
 - **Autonomous Environmental Sensing System for Human Activity Monitoring.** 383
Takayuki Fujita, Jun Okada, Sayaka Okochi, Kohei Higuchi, and Kazusuke Maenaka
 - **Information Presentation Support of Car Robotics Simulator System Based on Humatronics.** . . . 389
Cheng Chang, Gen Ohbayashi, Toru Yamaguchi, and Eri Sato-Shimokawara

Vol.15 No.4, June 2011

Special Issue on Selected Papers from ISME'2010**Editorial:**

- **Special Issue on Selected Papers from ISME'2010** 399
Vladik Kreinovich and Vyacheslav Kalashnikov

Papers:

- **Next Generation Passive Optical Networking Technology Predictions by Using Hybrid MCDM Methods.** 400
Chi-Yo Huang, Shih-Yu Chang, Yu-Hsien Yang, and Gwo-Hshiung Tzeng
- **Using Hybrid MCDM Methods to Assess Fuel Cell Technology for the Next Generation of Hybrid Power Automobiles** 406
Chi-Yo Huang, Yi-Hsuan Hung, and Gwo-Hshiung Tzeng
- **Product Innovation of Shinzaburo Hanpu and Regional Characteristic of Kyoto** 418
Yusuke Irisawa and Shin'ya Nagasawa

- **Consistent Conjectural Variations Equilibrium in a Mixed Duopoly** 425
Nataliya I. Kalashnykova, Vladimir A. Bulavsky, Vyacheslav V. Kalashnikov, and Felipe J. Castillo Pérez
- **Statistical Analysis for Human Preference to Colors** 433
Taki Kanda
- **Trustees' and Investors' Behavior in the First Two Rounds of a Trust Game: Overview and a (Partial) Explanation Based on Cooperative Game Theory** 438
Misha Koshelev
- **Rough Sets Based Prediction Model of Tick-Wise Price Fluctuations** 449
Yoshiyuki Matsumoto and Junzo Watada
- **Knowledge Mining for Project Management and Execution** 454
Shinji Mochida
- **Chanel's Strategy of Communication Tools and Packaging for its Beauty Products** 460
Shin'ya Nagasawa and Kana Sugimoto
- **Multi-Attribute Decision Making in Contractor Selection Under Hybrid Uncertainty** 465
Arbaiy Nureize and Junzo Watada
- **A Hybrid Particle Swarm Optimization Approach and its Application to Solving Portfolio Selection Problems** 473
Shamshul Bahar Yaakob and Junzo Watada
- **Fuzzy Robust Regression Model by Possibility Maximization** 479
Yoshiyuki Yabuuchi and Junzo Watada

Vol.15 No.5, July 2011

- **Congratulations for JACIII Best Paper & Young Researcher Awards 2011**. 487

Regular Papers:

- **Genetic Network Programming-Sarsa with Subroutines for Trading Rules on Stock Markets** 488
Yang Yang, Shingo Mabu, Jianhua Li, and Kotaro Hirasawa
- **Integrated Rule Mining Based on Fuzzy GNP and Probabilistic Classification for Intrusion Detection** 495
Nannan Lu, Shingo Mabu, and Kotaro Hirasawa
- **RTM (Robot Technology Middleware) Based Dynamic Interrupt System for Communication Between Humans and Robots** 506
Hai An Vu, Fangyan Dong, and Kaoru Hirota
- **Multi-Order Rules Extraction by Genetic Network Programming with Rule Accumulation and its Application to Stock Trading Problems** 515
Yafei Xing, Shingo Mabu, Lian Yuzhu, and Kotaro Hirasawa
- **Learning of Obstacle Avoidance with Redundant Manipulator by Hierarchical SOM** 525
Yuichi Kobayashi and Takahiro Nomura

Special Issue on Human-Robot Interaction Systems

Editorial:

- **Special Issue on Human-Robot Interaction Systems** 533
Tomomi Hashimoto and Yoshihito Kagawa

Papers:

- **Dual-Hierarchical Control Mechanism of Interpersonal Embodied Interactions in Cooperative Walking** 534
Takeshi Muto and Yoshihiro Miyake
- **High Accurate Discrimination Method of Forearm Motions from Surface Electromyogram and its Condition** 545
Yoshio Nishikawa, Yoshihito Kagawa, and Jun Kurabayashi
- **Development of Foot Gait Simulator for Presenting Environment to Each User** 554
Tomomi Hashimoto, Yasuyuki Takakura, Toshimitsu Hamada, Toshiko Akazawa, and Mitsuru Yamamoto
- **Multimodal Gesture Recognition for Mascot Robot System Based on Choquet Integral Using Camera and 3D Accelerometers Fusion** 563
Yongkang Tang, Hai An Vu, Phuc Q. Le, Daisuke Masano, Oo Han Thet, Chastine Fatichah, Zhentao Liu, Masashi Yamaguchi, Martin Leonard Tangel, Fangyan Dong, Yoichi Yamazaki, and Kaoru Hirota

- **Data Mining Using Human Motions for Intelligent Systems 573**
Yihsin Ho, Tomomi Shibano, Eri Sato-Shimokawara, and Toru Yamaguchi
- **Emotion Recognition Based on ECG Signals for Service Robots in the Intelligent Space During Daily Life 582**
Kanlaya Rattanyu and Makoto Mizukawa
- **Exploring the Natural Reaction of Young and Aged Person with Telenoid in a Real World 592**
Kohei Ogawa, Shuichi Nishio, Kensuke Koda, Giuseppe Balistreri, Tetsuya Watanabe, and Hiroshi Ishiguro
- **Generation Method of Quadrupedal Gait Based on Human Feeling for Animal Type Robot. 598**
Hidekazu Suzuki and Hitoshi Nishi
- **Cooperative Behavior Learning Based on Social Interaction of State Conversion and Reward Exchange Among Multi-Agents 606**
Kun Zhang, Yoichiro Maeda, and Yasutake Takahashi
- **Model Reference Control for Collision Avoidance of a Human-Operated Quadrotor Helicopter . 617**
Busara Piriyanont, Naoki Uchiyama, and Shigenori Sano

Vol.15 No.6, August 2011

Special Issue on Selected Papers from iFAN 2010

Editorial:

- **Special Issue on Selected Papers from iFAN 2010 631**
Toshio Fukuda and Yasufumi Takama

Papers:

- **Adaptive Control Using an Oscillator Network with Capacitive Couplers 632**
Takuro Moriyama and Daisuke Kurabayashi
- **Optimization of Fuzzy Logic Controller for Trajectory Tracking Using Genetic Algorithm. 639**
Pintu Chandra Shill, M. A. H. Akhand, Md. Faijul Amin, and Kazuyuki Murase
- **Hybrid Ensemble Construction with Selected Neural Networks 652**
M. A. H. Akhand, Pintu Chandra Shill, and Kazuyuki Murase
- **Feature Extraction with Space Folding Model and its Application to Machine Learning 662**
Minh Tuan Pham, Tomohiro Yoshikawa, Takeshi Furuhashi, and Kanta Tachibana
- **Ant Colony Optimization for Feature Selection Involving Effective Local Search 671**
Md. Monirul Kabir, Md. Shahjahan, and Kazuyuki Murase
- **Particle Filter with Gaussian Weighting for Vehicle Tracking 681**
Indah Agustien Siradjuddin and Muhammad R. Widyanto
- **Content-Based Image Retrieval via Combination of Similarity Measures. 687**
Kazushi Okamoto, Fangyan Dong, Shinichi Yoshida, and Kaoru Hirota
- **Efficient Color Transformations on Quantum Images 698**
Phuc Q. Le, Abdullah M. Ilyasu, Fangyan Dong, and Kaoru Hirota
- **Detection of Lung Nodules in Thoracic MDCT Images Based on Temporal Changes from Previous and Current Images 707**
Shinya Maeda, Yasuyuki Tomiyama, Hyungseop Kim, Noriaki Miyake, Yoshinori Itai, Joo Kooi Tan, Seiji Ishikawa, and Akiyoshi Yamamoto
- **Medical Image Diagnosis of Liver Cancer Using a Neural Network and Artificial Intelligence. . . 714**
Tadashi Kondo, Junji Ueno, and Shoichiro Takao
- **An Intelligent Human Support System Using Motion Patterns and Environment Information 723**
Yihsin Ho, Kazumasa Murakami, Tomomi Shibano, Eri Sato-Shimokawara, and Toru Yamaguchi
- **Proposal of Wearable Multiremote Controller Using Head-Tracking 731**
Kohei Miyata, Yuhki Kitazono, Shiyuan Yang, and Seiichi Serikawa
- **Development of an Automatic Landmine Detection and Marking System for the Demining Robot Gryphon. 737**
Alex M. Kaneko and Edwardo F. Fukushima

Regular Papers:

- **Enhancing Bidding Strategy Using Genetic Network Programming in Agent-Based Multiple Round English Auction 747**
Chuan Yue, Shingo Mabu, and Kotaro Hirasawa
- **Adaptive Controller for T-S Fuzzy Model with Modeling Error 759**
Hugang Han
- **Fuzzy Genetic Network Programming with Noises for Mobile Robot Navigation 767**
Siti Sendari, Shingo Mabu, Andre Tjahjadi, and Kotaro Hirasawa
- **Concept Finding Proofs 777**
Norihiro Kamide

Special Issue on Omnipresent Intelligent Computing – New Developments and Societal Impact
Editorial:

- **Special Issue on Omnipresent Intelligent Computing – New Developments and Societal Impact 785**
Alfons Schuster and Daniel Berrar

Papers:

- **The Omnipresent Computing Menace to Information Society 786**
Alfons Schuster and Daniel Berrar
- **4W1H and Particle Swarm Optimization for Human Activity Recognition 793**
Leon Palafox and Hideki Hashimoto
- **Dependence-Maximization Clustering with Least-Squares Mutual Information 800**
Manabu Kimura and Masashi Sugiyama
- **Multiagent Strategic Interaction Based on a Game Theoretical Approach to Polarization Reversal in Ferroelectric Capacitors. 806**
Dan Ricinschi and Eisuke Tokumitsu

Special Issue on Selected Papers from SCIS & ISIS 2010 – No.1.
Editorial:

- **Special Issue on Selected Papers from SCIS & ISIS 2010 – No.1 813**
Keigo Watanabe, Kazuhiro Ohkura, and Kiyotaka Izumi

Papers:

- **Merging with Extraction Method for Transfer Learning in Actor-Critic 814**
Toshiaki Takano, Haruhiko Takase, Hiroharu Kawanaka, and Shinji Tsuruoka
- **Network Parameter Setting for Reinforcement Learning Approaches Using Neural Networks 822**
Kazuaki Yamada
- **Adaptive Nutrient Water Supply Control of Plant Factory System by Reinforcement Learning . 831**
Takumi Wakahara and Sadayoshi Mikami
- **“Behavior Composed” for Artificial Flying Creature 838**
Masashi Furukawa, Makoto Morinaga, Ryosuke Ooe, Michiko Watanabe, Ikuo Suzuki, and Masahito Yamamoto
- **Neuro-PID Control for Electric Vehicle 846**
Shigeru Omatu, Michifumi Yoshioka, and Toru Fujinaka
- **Nonlinear Active Noise Control via Model-Based Approaches 854**
Sam Chau Duong, Hiroshi Kinjo, and Naoki Oshiro
- **An Unscented Rauch-Tung-Striebel Smoother for a Vehicle Localization Problem. 860**
Saifudin Razali, Keigo Watanabe, Shoichi Maeyama, and Kiyotaka Izumi
- **Human Pointing Navigation Interface for Mobile Robot with Spherical Vision System 869**
Yasutake Takahashi, Kyohei Yoshida, Fuminori Hibino, and Yoichiro Maeda
- **Experimental Evaluations of Approaching Hand/Eye-Vergence Visual Servoing. 878**
Fujia Yu, Wei Song, Mamoru Minami, Akira Yanou, and Mingcong Deng
- **A Workmanlike Orthogonal-Type Robot with a Force Input Device. 888**
Fusaomi Nagata, Takanori Mizobuchi, Sho Yoshitake, Hitoshi Suzukawa, Hiroto Ishihara, and Keigo Watanabe
- **Group Behavior Learning in Multi-Agent Systems Based on Social Interaction Among Agents . . 896**
Kun Zhang, Yoichiro Maeda, and Yasutake Takahashi
- **Induction of Cooperative Behavior Through Exchange of Nonverbal Information 904**
Yuzo Takahashi

- **Multi-Agent Transport Simulation Model for Eco-Commuting Promotion Planning 911**
Masashi Okushima and Takamasa Akiyama
- **Pragmatic Factors Influencing Word Choice: An Examination Based on Corpus and the IR Method 919**

Yu Wang, Wenzhen Shi, and Tetsuhisa Oda

- **Smart Management of HVDC Interface Flow for Jeju Island System with High Penetration of Wind Energy 926**
Hwachang Song, Dong-Hee Yoon, Gilsoo Jang, and Jang-Ho Lee

Vol.15 No.8, October 2011

Special Issue on Cross-Disciplinary Approaches to Embodied Knowledge of Human Skill

Editorial:

- **Special Issue on Cross-Disciplinary Approaches to Embodied Knowledge of Human Skill 941**
Isao Hayashi and Shinichi Furuya

Papers:

- **Neurophysiological and Dynamical Control Principles Underlying Variable and Stereotyped Movement Patterns During Motor Skill Acquisition 942**
Kazutoshi Kudo, Makoto Miyazaki, Hirofumi Sekiguchi, Hiroshi Kadota, Shinya Fujii, Akito Miura, Michiko Yoshie, and Hiroki Nakata
- **Abductive Reasoning as an Integrating Framework in Skill Acquisition. 954**
Koichi Furukawa, Toshiki Masuda, and Ikuo Kobayashi
- **Accuracy of Synchrony Judgment and its Relation to the Auditory Brainstem Response: the Difference Between Pianists and Non-Pianists 962**
Eriko Aiba, Koji Kazai, Takayuki Shimotomai, Toshie Matsui, Minoru Tsuzaki, and Noriko Nagata
- **Learning Strategy in Time-to-Contact Estimation of Falling Objects 972**
Hiroyuki Kambara, Keiichi Ohishi, and Yasuharu Koike
- **Decomposition of Limb Movement Based on Muscular Coordination During Human Running . 980**
Taiki Imura, Keita Inoue, Hang T. T. Pham, Hiroaki Hirai, and Fumio Miyazaki
- **Network Approach to Inducing Coordinative Structures of Skillful Movements 988**
Masanori Tsujino, Tsutomu Fujinami, and Keisuke Nagai
- **A Classification of Postural Sway Patterns During Upright Stance in Healthy Adults and Patients with Parkinson's Disease 997**
Tomohisa Yamamoto, Yasuyuki Suzuki, Kunihiko Nomura, Taishin Nomura, Takao Tanahashi, Kei Fukada, Takayuki Endo, and Saburo Sakoda

- **Acquisition of Embodied Knowledge on Gesture Motion by Singular Value Decomposition . . . 1011**
Isao Hayashi, Yinlai Jiang, and Shuoyu Wang
- **Extraction of Coordinative Structures of Motions by Segmentation Using Singular Spectrum Transformation. 1019**
Hiroaki Nakanishi, Sayaka Kanata, Hirofumi Hattori, Tetsuo Sawaragi, and Yukio Horiguchi
- **Kicking Motion Imitation of Inverted-Pendulum-Mobile Robot and Development of Body Mapping from Human Demonstrator. 1030**
Sataya Takahashi, Yasutake Takahashi, Yoichiro Maeda, and Takayuki Nakamura
- **Analysis of Driver Perceptions and Behavior When Driving in an Unfamiliar Traffic Regulation .1039**
Hidetoshi Nakayasu, Tetsuya Miyoshi, Nobuhiko Kondo, Hirokazu Aoki, and Patrick Patterson

Special Issue on Selected Papers from SCIS & ISIS 2010 – No.2

Editorial:

- **Special Issue on Selected Papers from SCIS & ISIS 2010 – No.2 1049**
Keigo Watanabe, Kazuhiro Ohkura, and Kiyotaka Izumi

Papers:

- **Non-Euclidean Extension of FCMdd-Based Linear Clustering for Relational Data 1050**
Takeshi Yamamoto, Katsuhiro Honda, Akira Notsu, and Hidetomo Ichihashi
- **KL-Divergence-Based and Manhattan Distance-Based Semisupervised Entropy-Regularized Fuzzy c-Means. 1057**
Yuchi Kanzawa, Yasunori Endo, and Sadaaki Miyamoto
- **Improving the Robustness of Instance-Based Reinforcement Learning Robots by Metalearning 1065**
Toshiyuki Yasuda, Kousuke Araki, and Kazuhiro

Ohkura

- **Extraction of Community Transition Rules from Data Streams as Large Graph Sequence . . . 1073**
Takehiro Yamaguchi and Ayahiko Niimi
- **A Proposal of Memory and Prediction Based Genetic Algorithm Using Speciation in Dynamic Multimodal Function Optimization. 1082**
Takumi Ichimura, Hiroshi Inoue, Akira Hara, Tetsuyuki Takahama, and Kenneth J. Mackin
- **Performance Analysis of Quantum-Inspired Evolutionary Algorithm 1095**
Tomohisa Takata, Tejiro Isokawa, and Nobuyuki Matsui
- **An Approximation Algorithm with Factor Two for a Repetitive Routing Problem of Grasp-and-Delivery Robots 1103**
Yoshiyuki Karuno, Hiroshi Nagamochi, and Aleksandar Shurbevski
- **Preservation and Application of Acquired Knowledge Using Instance-Based Reinforcement Learning for Multi-Robot Systems. 1109**
Junki Sakanoue, Toshiyuki Yasuda, and Kazuhiro Ohkura
- **Spiral Dynamics Inspired Optimization. . . . 1116**
Kenichi Tamura and Keiichiro Yasuda
- **Solving the Binding Problem with Separated Extraction of Information by Oscillatory Self-Organizing Maps 1123**
Ryota Miyata and Koji Kurata
- **A Proposal of Genetic Operations for BSIM Parameter Extraction Using Real-Coded Genetic Algorithm. 1131**
Ai Nishiba, Hiroharu Kawanaka, Haruhiko Takase, and Shinji Tsuruoka

Special Issue on Selected Papers from i-SAIRAS 2010

Editorial:

- **Special Issue on Selected Papers from i-SAIRAS 2010 1139**
Keiki Takadama

Papers:

- **Multi-Objective Scheduling for Space Science Missions. 1140**
Mark D. Johnston and Mark E. Giuliano
- **Deploying Interactive Mission Planning Tools – Experiences and Lessons Learned – 1149**
Amedeo Cesta, Gabriella Cortellesa, Simone Fratini, Angelo Oddi, and Giulio Bernardi
- **Benefits of Using Innovative Tools for Diagnostics and Planning in ESA Mission Operations . . . 1159**
Alessandro Donati, Jose Antonio Martinez-Heras, and Nicola Policella
- **Development of an Intelligent Simulator with SLAM Functions for Visual Autonomous Landing on Small Celestial Bodies 1167**
Cedric Cocaud and Takashi Kubota
- **Robustness to Bit Inversion in Registers and Acceleration of Program Evolution in On-Board Computer. 1175**
Tomohiro Harada, Masayuki Otani, Yoshihiro Ichikawa, Kiyohiko Hattori, Hiroyuki Sato, and Keiki Takadama
- **Improving Recovery Capability of Multiple Robots in Different Scale Structure Assembly 1186**
Masayuki Otani, Kiyohiko Hattori, Hiroyuki Sato, and Keiki Takadama

Vol.15 No.9, November 2011

Regular Papers:

- **WIN Algorithm for Discrete Online TSP. . . 1199**
Yonghua Wu, Guohun Zhu, Huaying Chen, and Jucun Qin
- **Enhancing a Fuzzy Failure Mode and Effect Analysis Methodology with an Analogical Reasoning Technique. 1203**
Tze Ling Jee, Kai Meng Tay, and Chee Khoo Ng
- **Spatiotemporal Analysis of Brain Activity During Understanding Honorific Expressions 1211**
Michio Sugeno and Takahiro Yamanoi

- **Evaluating Functional Connectivity in Alcoholics Based on Maximal Weight Matching 1221**
Guohun Zhu, Yan Li, and Peng (Paul) Wen

Special Issue on Awareness Computing in Science and Engineering

Editorial:

- **Special Issue on Awareness Computing in Science and Engineering 1229**
Cheng-Hsiung Hsieh and Hsien-Chou Liao

Papers:

- **Document Analysis System Based on Awareness Learning1230**
Jie Ji, Rung-Ching Chen, and Qiangfu Zhao
- **Process of Acquiring Musical Performance Skills for Enhanced “Awareness” Given by a Multimedia-Based Learning Approach1241**
Katsuko T. Nakahira, Miki Akahane, and Yukiko Fukami
- **An Improvement of Fuzzy Association Rules Mining Algorithm Based on Redundancy of Rules1248**
Toshihiko Watanabe
- **An Interactive Map Search System Using Wavelet and Shape Contexts1256**
Jungpil Shin and Hsien-Chou Liao
- **Error-Correcting Semi-Supervised Pattern Recognition with Mode Filter on Graphs . . .1262**
Weiwei Du and Kiichi Urahama
- **Mutual Localization of Multiple Sensor Node Robots.1269**
Keitaro Naruse, Shigekazu Fukui, and Jie Luo
- **Spatial Localization of Concurrent Multiple Sound Sources Using Phase Candidate Histogram . .1277**
Huakang Li, Jie Huang, Minyi Guo, and Qunfei Zhao
- **Using Radio Frequency Identification for Indoor Location Identification Based on Power Level, Signal Strength and Fuzzy Method.1287**
Rung-Ching Chen, Yu-Cheng Lin, Sheng-Ling Huang, and Qiangfu Zhao
- **An Extended Interactive Evolutionary Computation Using Heart Rate Variability as Fitness Value for Composing Music Chord Progression.1329**
Makoto Fukumoto, Shuta Nakashima, Shintaro Ogawa, and Jun-ichi Imai
- **Acknowledgements.I-1**
- **Contents of Journal of Advanced Computational Intelligence and Intelligent Informatics Volume 15I-3**
- **Keyword Index of Journal of Advanced Computational Intelligence and Intelligent Informatics Volume 15 I-12**
- **Author Index of Journal of Advanced Computational Intelligence and Intelligent Informatics Volume 15 I-17**

Special Issue on Selected Papers from NaBIC 2010**Editorial:**

- **Special Issue on Selected Papers from NaBIC 20101299**
Yusuke Nojima and Mario Köppen

Papers:

- **A Study on Computational Efficiency and Plasticity in Baldwinian Learning1300**
Shu Liu and Hitoshi Iba
- **Experimental Study of a Structured Differential Evolution with Mixed Strategies..1310**
Takashi Ishimizu and Kiyoharu Tagawa
- **Multi-Space Competitive DGA for Model Selection and its Application to Localization of Multiple Signal Sources1320**
Shudai Ishikawa, Hideaki Misawa, Ryosuke Kubota, Tatsuji Tokiwa, Keiichi Horio, and Takeshi Yamakawa