

Program of the MDAI 2007 Conference

Thursday, 16th August

12:30 Registration

13:30 Opening Session

- Yuji Yoshida, General Chair
- Vicenç Torra, PC Chair
- Yasuo Narukawa, PC Chair

14:00 Plenary talk

- **E. E. Kerre (U. Gent, Belgium), An Overview of Fuzzy Relational Calculus and Its Applications**

15:00 Coffee break

15:20 Session T1-A: Clustering - I

- Fuzzy c-Means for Data with Tolerance Defined as Hyper-rectangles, *Y. Hasegawa, Y. Endo, Y. Hamasuna, S. Miyamoto*
- Kernel Functions Based on Fuzzy Neighborhoods and Agglomerative Clustering, *S. Miyamoto, Y. Kawasaki*
- c-Means Clustering on the Multinomial Manifold, *R. Inokuchi, S. Miyamoto*

15:20 Session T1-B: Data Mining and Knowledge Discovery - I

- On a Rough Sets Based Tool for Generating Rules from Data with Categorical and Numerical Values, *H. Sakai, K. Koba, R. Ishibashi, M. Nakata*
- Applying Rough Sets to Information Tables Containing Probabilistic Values, *M. Nakata, H. Sakai*
- A Study of Emotion Recognition and Its Applications, *W.-J. Yoon, K.-S. Park*
- Mining Frequent Diamond Episodes from Event Sequences, *T. Katoh, K. Hirata, M. Harao*

16:40 Break

16:50 Session T2-A: Clustering - II

- Formulation of Fuzzy c-Means Clustering Using Calculus of Variations, *S. Miyamoto*
- CWC: A Clustering-based Feature Weighting Approach for Text Classification, *L. Zhu, J. Guan, S. Zhou*
- Algorithms for Sequential Extraction of Clusters by Possibilistic Clustering, *S. Miyamoto, Y. Kuroda*

16:50 Session T2-B: Bioinformatics

- Classification of Normal and Tumor Tissues Using Geometric Representation of Gene Expression Microarray Data, *S. Kim, D. Shin*
- A Seed-Based Method for Predicting Common Secondary Structures in Unaligned RNA Sequences, *X. Fang, Z. Luo, Z. Wang, B. Yuan, J. Shi*
- Learning Dynamic Bayesian Networks from cDNA Microarray Gene Expression Data, *A. Shermin, M. A. Orgun*

18:15 Kokura Gion Festival (welcome ceremony)

Friday, 17th August

9:00 Plenary talk

- **S. Iwamoto (U. Kyushu, Japan), The Golden Quadruplet: Optimization-Inequality-Identity-Operator**

10:00 Coffee break

10:20 Session F1-A: Decision Making - I

- Weighting Individual Opinions in Group Decision Making, *J. L. García-Lapresta*
- Research on Next Generation Grids using a Fuzzy Assessment Method, *C. Ye, F. Xiong, Q. Luo*
- Combining Prioritized Decisions in Classification, *Y. Bi*
- A Fuzzy Target Based Model for Multi-Criteria Decision Making, *H. Yan, V.-N. Huynh, Y. Nakamori*
- Modeling of Regret and Rejoicing Emotions on

Multicriteria Decision Analysis, *J. C. Leyva-Lopez*

10:20 Session F1-B: Applications - I

- Robust Parameter Decision- Making Based on Multidisciplinary Knowledge Model, *J. Hu, Y. Peng, G. Xiong*
- Embedding Deductive Capability in Knowledge Structure Diagrams, *H. F. Lai*
- Design of Agent-based Integrated u-Healthcare System supporting Heterogeneous Services, *D.-U. Kim, S.-P. Heo, G.-H. Lee, K.-H. Choi, D.-R. Shin*
- Inspection of the Effect of Route Information in Traffic Control by Multiagent Simulation, *K. Harada, M. Haro, K. Hirata*
- Decision Engine for Traffic Strategy Considering the Environmental Justice in Emission and ITS Information, *P. Junhwan, D. Nam, W. Kim*

12:00 Lunch time (in the university cafeteria)

13:10 Session F2-A: Vision

- Automatic Segmentation of Neoplastic Hepatic Disease Symptoms in CT Images, *M. Ciecholewski, M. R. Ogiela*
- Cognitive Categorization in Modeling Decision and Pattern Understanding, *L. Ogiela, R. Tadeusiewicz, M. R. Ogiela*
- Real Time Face Recognition System using PCA and DDT, *M.-A. Kang, J.-M. Kim*

13:10 Session F2-B: Non Additive Measure and Concept Lattices - I

- Multidimensional Fuzzy Integrals, *Y. Narukawa, V. Torra*
- A Version of Lebesgue Decomposition Theorem for Non-additive Measures, *J. Li, M. Yasuda, J. Li*

14:10 Break

14:20 Session F3-A: Robotics

- A Robust Localization Method for Mobile Robots Based on Ceiling Landmarks, *V. T. Nguyen, M. S. Jeong, S. M. Ahn, S. B. Moon, S. W. Baik*
- Multi-Robot Tracking using the Particle Filter and SOM in Robotic Space with Network Camera, *TS. Jin, HC. Kim, JM. Lee*
- An Investigation on Indoor Human's Behavior for Robot Application, *S.-J. Youn, K.-W. Oh*

14:20 Session F3-B: Non Additive Measure and Concept Lattices - II

- Lindig's Algorithm for Concept Lattices over Graded Attributes, *R. Belohlavek, B. De Baets, J. Outrata, V. Vychodil*
- Trees in Concept Lattices, *R. Belohlavek, B. De Baets, J. Outrata, V. Vychodil*
- An Axiomatization of Shapley Value of Games on Set Systems, *A. Honda, Y. Okazaki*

15:20 Coffee Break

16:00 Session F4-A: Decision Making - II

- A Multicriteria Fuzzy System using Residuated Implication Operators and Fuzzy Arithmetic, *S. Sandri, C. Sibertin-Blanc, V. Torra*
- Static and Dynamic Coalition Formation in Group-Choice Decision Making, *T. Wanyama*
- An Aggregation of Agents, Roles and Coalition Formation to Support Collaborative and Dynamic Organizations, *N. Houari, B. H. Far*
- Group Decision Making: From Consistency to Consensus, *F. Chiclana, F. Mata, S. Alonso, E. Herrera-Viedma, and L. Martinez*

16:00 Session F4-B: Soft Computing - I

- Modelling and Simulation of Fuzzy-Rule Based Systems, *W.-M. Lippe*
- A Multi-Supplier and Return-Policy Newsboy Model with Limited Budget and Minimum Service Level by Using GA, *P. C. Yang, H. M. Wee, S. L. Chung, S. H. Kang*
- An Evolutionary Algorithm with Diversified Crossover Operator for the Heterogeneous Probabilistic TSP, *Y.-H. Liu, R.-C. Jou, C.-C. Wang, C.-S. Chiu*

- Constrained Problem Optimization Based on Self-adaptive Particle Swarm Optimization with Novel Penalty Mechanisms, *D. Yang, J. Chen, N. Matsumoto*

17:20 Adjourn

18:30 Conference Dinner

Saturday, 18th August

9:00 Plenary talk

- **H. Bannai (U. Kyushu, Japan), Algorithms for String Pattern Discovery**

10:00 Coffee break

10:20 Session S1-A: Applications - II

- Fuzzy Extension of Estimations with Randomness: The Perception-based Approach, *Y. Yoshida*
- Resolution of Singularities and Stochastic Complexity of Complete Bipartite Graph-Type Spin Model in Bayesian Estimation, *M. Aoyagi, S. Watanabe*
- A Public-Key Protocol for Social Networks with Private Relationships, *J. Domingo-Ferrer*
- An Incentive-Based System for Information Providers Over Peer-to-Peer Mobile Ad-Hoc Networks, *J. Castellà-Roca, V. Daza, J. Domingo-Ferrer, J. A. Manjón, F. Sebée, A. Viejo*
- An Adaptive Fault Tolerance Running on Middleware for Situation-Aware, *E. N. Ko*

10:20 Session S1-B: Soft Computing - II

- Boltzmann Machine Incorporated Hybrid Neural Fuzzy System for Hardware/Software Partitioning in Embedded System Design, *Y. Huang, Y.S. Kim*
- Artificial Bee Colony (ABC) Optimization Algorithm for Training Feed-Forward Neural Networks, *D. Karaboga, B. Akay, C. Ozturk*
- Performance Enhancement of RBF Networks in Classification by Removing Outliers in the Training Phase, *T. Huynh, N. H. Vo, M.-T. T. Hoang, Y. Won*
- Temporal Difference-Based Adaptive Policies in Neuro-Dynamic Programming, *T. Iki, M. Horiguchi, M. Yasuda, M. Kurano*

12:00 Lunch time (in the university cafeteria)

13:10 Session S2-A: Decision Making - III

- Behavioral Analysis in Decision Making using Weather Information with the Fuzzy Target Based Decision Model, *A. Hiramatsu, V.-N. Huynh, Y. Nakamori*
- Evolving Coalitions of Task-Oriented Agents via Genetic Algorithms to Foster Self-Organization in Digital Business Ecosystems, *V. Georgescu*
- An Active Learning Method Based on Most Possible Misclassification Sampling Using Committee, *J. Long, J. Yin, E. Zhu*
- Modeling Decisions for the Time-Dependent Optimal Lane Configuration Policy with Queuing Theory and Mathematical Programming, *S. Kim*

13:10 Session S2-B: Natural Language

- Error Detection and Correction Based on Chinese Phonemic Alphabet in Chinese Text, *C.-M. Huang, M.-C. Wu, C.-C. Chang*
- Towards Automation of Data Understanding: Integration of Syntax and Semantics into Granular Structures of Data, *W. Homenda*
- Automatic Protein Name Recognition System Using Support Vector Machines, *YH. Jung, JM. Chae, KN. Park, SY. Chung*
- Construction of News Knowledge Expression by Applying Topic Maps Theory and Hierarchical Display Structure, *C.-M. Huang, C.-F. Liu*

14:40 Closing Session