

**RSCTC 2008**  
**The 6<sup>th</sup> International Conference on Rough Sets and Current Trends in Computing**  
**October 23 – 25, 2008**  
**Akron, Ohio, USA**  
**(Preliminary Program)**

	<b>October 23 (Thursday)</b>	
7:30 – 9:00	Registration	
9:00 – 9:10	Opening Session	
9:10 – 10:00	Keynote 1: Prof. Kacprzyk	
10:00 – 10:50	Keynote 2: Prof. Jain	
10:50 – 11:20	Coffee Break	
11:20 – 12:10	Industrial Talk 1: Dr. Srinivasan	
12:10 – 13:30	Lunch Break	
13:30 – 15:10	<p><b>Session RA1: Logical and Mathematical Foundations I</b></p> <ul style="list-style-type: none"> <li>• On Irreducible Descriptive Sets of Attributes for Information Systems <i>Mikhail Moshkov, Andrzej Skowron, Zbigniew Suraj</i></li> <li>• Dominance-Based Rough Set Approach and Bipolar Abstract Rough Approximation Spaces <i>Salvatore Greco, Benedetto Matarazzo, Roman Słowiński</i></li> <li>• Paraconsistent Logic Programs with Four-Valued Rough Sets <i>Jan Maluszynski, Andrzej Szalas, Aida Vitória</i></li> <li>• An Equivalent Definition of Rough Sets <i>Guilong Liu, James Kuodo Huang</i></li> </ul>	<p><b>Session RB1: Data Mining I</b></p> <ul style="list-style-type: none"> <li>• Inducing Better Rule Sets by Adding Missing Attribute Values <i>Jerzy W. Grzymala-Busse, Witold J. Grzymala-Busse</i></li> <li>• Rule Induction: Combining Rough Set and Statistical Approach <i>Wojciech Jaworski</i></li> <li>• Action Rules Discovery without Pre-Existing Classification Rules <i>Zbigniew Ras, Agnieszka Dardzinska</i></li> <li>• Hierarchical Learning in Classification of Structured Objects <i>Trung T. Nguyen</i></li> </ul>
15:10 – 15:40	Coffee Break	

15:40 – 17:45	<b>Session RA2: Data Analysis</b> <ul style="list-style-type: none"> <li>• Statistical Independence of Multi-Variates From the Viewpoint of Linear Algebra <i>Shusaku Tsumoto, Shoji Hirano</i></li> <li>• Rough Mereology in Classification of Data: Voting by Means of Residual Rough Inclusions <i>Lech Polkowski, Piotr Artiemjew</i></li> <li>• Rough Set Approach to Information Tables with Imprecise Decisions <i>Masahiro Inuiguchi, Bingjun Li</i></li> <li>• Computing Approximations of Dominance-Based Rough Sets by Bit-Vector Encodings <i>Chien-Chung Chan, Gwo-Hshiung Tzeng</i></li> <li>• A Framework for Multiagent Mobile Robotics: Spatial Reasoning Based on Rough Mereology in Player/Stage System <i>Lech Polkowski, Paweł Osmiałowski</i></li> </ul>	<b>Session RB2: Data Mining II</b> <ul style="list-style-type: none"> <li>• A Comparison of the LERS Classification System and Rule Management in PRSM <i>Jerzy W. Grzymala-Busse, Yiyu Yao</i></li> <li>• Similarity Relation in Classification Problems <i>Andrzej Janusz</i></li> <li>• Probabilistic Granule Analysis <i>Ivo Düntsch, Günther Gediga</i></li> <li>• Solving the Attribute Reduction Problem with Ant Colony Optimization <i>Hong Yu, Guoyin Wang, Fakuan Lan</i></li> <li>• Actor Critic Learning : A Near Set Approach <i>Shamama Anwar, K Sridhar Patnaik</i></li> </ul>
18:30 – 21:00	Reception Location: Bowling Alley	

	<b>October 24 (Friday)</b>	
7:30 – 9:00	Registration	
9:00 – 9:10		
9:10 – 10:00	Keynote 3: Prof. Zadeh	
10:00 – 10:50	Industrial Talk 2: Dr. Slezak	
10:50 – 11:20	Coffee Break	
11:20 – 12:10	Panel : “RS and SC Challenges in AI and KDD”	
12:10 – 13:30	Lunch Break	
13:30 – 15:10	<b>Session FA1: Logical and Mathematical Foundations II</b> <ul style="list-style-type: none"> <li>• A Note on Attribute Reduction in the Decision-Theoretic Rough Set Model <i>Yan Zhao, S.K.M. Wong, Yiyu Yao</i></li> <li>• An Interpretation of Belief Functions on Infinite Universes in the Theory of Rough</li> </ul>	<b>Session FB1: Data Mining III</b> <ul style="list-style-type: none"> <li>• Precision of Rough Set Clustering <i>Pawan Lingras, Min Chen, Duoqian Miao</i></li> <li>• A Dynamic Approach to Rough Clustering <i>Georg Peters, Richard Weber</i></li> <li>• Learning Patterns from Clusters using Reduct <i>Alka Arora, Shuchita Upadhyaya, Rajni Jain</i></li> </ul>

	<p>Sets <i>Wei-Zhi Wu, Ju-Sheng Mi</i></p> <ul style="list-style-type: none"> <li>• Some Remarks on Approximations of Arbitrary Binary Relations by Partial Orders <i>Ryszard Janicki</i></li> <li>• On Rough Equalities and Rough Equivalences of Sets <i>Bala Krushna Tripathy, Anirban Mitra, Jaladhar Ojha</i></li> </ul>	<ul style="list-style-type: none"> <li>• Feature Selection Based on the Rough Set Theory and Expectation-Maximization Clustering Algorithm <i>Farideh Fazayeli, Lipo Wang, Jacek Mandziuk</i></li> </ul>
15:10 – 15:40	Coffee Break	
15:40 – 17:45	<p><b>Session FA2: Decision Support Systems</b></p> <ul style="list-style-type: none"> <li>• Towards Approximation of Risk <i>Marcin Szczuka</i></li> <li>• Business Aviation Decision-Making using Rough Sets <i>Yu-Ping Ou Yang, How-Ming Shieh, Gwo-Hshiung Tzeng, Leon Yen, Chien-Chung Chan</i></li> <li>• A New Rough Sets Decision Method Based on PCA and Ordinal Regression <i>Dun Liu, Tianrui Li, Pei Hu</i></li> <li>• Rough Set Flow Graphs and Max-* Fuzzy Relation Equations in State Prediction Problems <i>Zofia Matusiewicz, Krzysztof Pancierz</i></li> <li>• Paraconsistent Case-Based Reasoning Applied to a Restoration of Electrical Power Substations <i>Helga Gonzaga Martins, Germano Lambert-Torres, Luiz Eduardo Borges da Silva, Claudio Inácio Almeida Costa, Maurilio Coutinho</i></li> </ul>	<p><b>Session FB2: Data Mining IV</b></p> <ul style="list-style-type: none"> <li>• A New Approach to Fuzzy-Rough Nearest Neighbour Classification <i>Richard Jensen, Chris Cornelis</i></li> <li>• Compact Rule Learner on Weighted Fuzzy Approximation Spaces for Class Imbalanced and Hybrid Data <i>Yang Liu, Boqin Feng, Guohua Bai</i></li> <li>• Outlier Detection Based on Granular Computing <i>Yuming Chen, Duoqian Miao, Ruizhi Wang</i></li> <li>• Implementing a Rule Generation Method Based on Secondary Differences of Two Criteria <i>Hidenao Abe, Shusaku Tsumoto</i></li> <li>• Lower and Upper Approximations of Rules in Non-Deterministic Information Systems <i>Hiroshi Sakai, Ryuji Ishibashi, Michinori Nakata</i></li> </ul>
18:30 – 21:00	Banquet Location: Martin Center	

	<b>October 25 (Saturday)</b>
7:30 – 9:00	Registration
9:00 – 9:10	
9:10 – 10:00	Panel: “Theories of Approximation”
10:00 – 10:30	Coffee Break

10:30 – 12:10	<b>Session SA1: Pattern Recognition and Image Processing I</b> <ul style="list-style-type: none"> <li>• Experiments with Rough Set Approach to Face Recognition <i>Xuguang Chen, Wojciech Ziarko</i></li> <li>• Evolutionary Algorithm for Fingerprint Images Filtration <i>Marcin Jedryka, Władysław Skarbek</i></li> <li>• Standard and Fuzzy Rough Entropy Clustering Algorithms in Image Segmentation <i>Dariusz Małyшко, Jarosław Stepaniuk</i></li> <li>• A Data Driven Emotion Recognition Method Based on Rough set Theory <i>Yong Yang, Guoyin Wang, Fei Luo, Zhenjing Li</i></li> </ul>	<b>Session SB1: BioInformatics</b> <ul style="list-style-type: none"> <li>• Shadowed Clustering for Speech Data and Medical Image Segmentation <i>Bishal Barman, Sushmita Mitra, Witold Pedrycz</i></li> <li>• Computational Intelligence Techniques Applied to Magnetic Resonance Spectroscopy Data of Human Brain Cancers <i>Alan J. Barton, Julio J. Valdes</i></li> <li>• A Hybrid Model for Aiding in Decision Making for the Neuropsychological Diagnosis of Alzheimer’s Disease <i>Ana Karoline Araújo de Castro, Plácido Rogério Pinheiro, Mirian Calópe Dantas Pinheiro</i></li> <li>• Natural versus Granular Computing: Classifiers from Granular Structures <i>Piotr Artiemjew</i></li> </ul>
12:10 – 13:30	Lunch Break	
13:30 – 15:10	<b>Session SA2: Pattern Recognition and Image Processing II</b> <ul style="list-style-type: none"> <li>• Efficient Mining of Jumping Emerging Patterns with Occurrence Counts for Classification <i>Łukasz Kobylinski, Krzysztof Walczak</i></li> <li>• Efficient Discovery of Top-K Minimal Jumping Emerging Patterns <i>Pawel Terlecki, Krzysztof Walczak</i></li> <li>• Hierarchical Tree for Dissemination of Polyphonic Noise <i>Rory Lewis, Wenxin Jiang, Amanda Cohen, Zbigniew Ras</i></li> <li>• Learning From Soft-Computing Methods on Abnormalities in Audio Data <i>Alicja Wieczorkowska</i></li> </ul>	
15:10 – 15:40	Coffee Break	
15:40 – 16:30	IRSS Business Meeting	
16:30	Conference End	