

Contents

Keynotes, Tutorials and Expert Papers

Advances in Rough and Soft Clustering: Meta-Clustering, Dynamic Clustering, Data-Stream Clustering	3
<i>Pawan Lingras and Matt Triff</i>	
Clinical Narrative Analytics Challenges	23
<i>Ernestina Menasalvas, Alejandro Rodriguez-Gonzalez, Roberto Costumero, Hector Ambit, and Consuelo Gonzalo</i>	
Modern ICT and Mechatronic Systems in Contemporary Mining Industry . . .	33
<i>Wojciech Moczulski, Piotr Przysławka, Marek Sikora, and Radosław Zimroz</i>	
Rough Sets of Zdzisław Pawlak Give New Life to Old Concepts. A Personal View	43
<i>Lech T. Polkowski</i>	
Rough Set Approaches to Imprecise Modeling	54
<i>Masahiro Inuiguchi</i>	
Rule Set Complexity for Incomplete Data Sets with Many Attribute-Concept Values and “Do Not Care” Conditions.	65
<i>Patrick G. Clark, Cheng Gao, and Jerzy W. Grzymala-Busse</i>	

Rough Sets, Approximation and Granulation

Rough Sets Are ϵ -Accessible	77
<i>Mohamed Quafafou</i>	
Refinements of Orthopairs and IUML-algebras	87
<i>Stefano Aguzzoli, Stefania Boffa, Davide Ciucci, and Brunella Gerla</i>	
Rough Approximations Induced by Orthocomplementations in Formal Contexts	97
<i>Tong-Jun Li, Wei-Zhi Wu, and Shen-Ming Gu</i>	
On Optimal Approximations of Arbitrary Relations by Partial Orders	107
<i>Ryszard Janicki</i>	
On Approximation of Relations by Generalized Closures and Generalized Kernels	120
<i>Agnieszka D. Bogobowicz and Ryszard Janicki</i>	

Ordered Information Systems and Graph Granulation	131
<i>John G. Stell</i>	

Rough Sets, Non-Determinism and Incompleteness

A Rough Perspective on Information in Extensive Form Games	145
<i>Georg Peters</i>	
Towards Coordination Game Formulation in Game-Theoretic Rough Sets . . .	155
<i>Yan Zhang and Jing Tao Yao</i>	
Probabilistic Estimation for Generalized Rough Modus Ponens and Rough Modus Tollens	166
<i>Ning Yao, Duoqian Miao, Zhifei Zhang, and Guangming Lang</i>	
Definability in Incomplete Information Tables	177
<i>Mengjun Hu and Yiyu Yao</i>	
Rough Sets by Indiscernibility Relations in Data Sets Containing Possibilistic Information.	187
<i>Michinori Nakata and Hiroshi Sakai</i>	
Matrix-Based Rough Set Approach for Dynamic Probabilistic Set-Valued Information Systems	197
<i>Yanyong Huang, Tianrui Li, Chuan Luo, and Shi-jinn Horng</i>	

Rough Sets and Three-way Decisions

Variance Based Determination of Three-Way Decisions Using Probabilistic Rough Sets.	209
<i>Nouman Azam and Jing Tao Yao</i>	
Utilizing DTRS for Imbalanced Text Classification	219
<i>Bing Zhou, Yiyu Yao, and Qingzhong Liu</i>	
A Three-Way Decision Clustering Approach for High Dimensional Data . . .	229
<i>Hong Yu and Haibo Zhang</i>	
Three-Way Decisions Based Multi-label Learning Algorithm with Label Dependency	240
<i>Feng Li, Duoqian Miao, and Wei Zhang</i>	
A Decision-Theoretic Rough Set Approach to Multi-class Cost-Sensitive Classification	250
<i>Guojian Deng and Xiuyi Jia</i>	

Research on Cost-Sensitive Method for Boundary Region in Three-Way Decision Model	261
<i>Yanping Zhang, Gang Wang, Jie Chen, Liandi Fang, Shu Zhao, Ling Zhang, and Xiangyang Wang</i>	
Determining Thresholds in Three-Way Decisions with Chi-Square Statistic	272
<i>Cong Gao and Yiyu Yao</i>	
Optimistic Decision-Theoretic Rough Sets in Multi-covering Space	282
<i>Caihui Liu and Meizhi Wang</i>	

Fuzziness and Similarity in Knowledge Representation

Interpretations of Lower Approximations in Inclusion Degrees	297
<i>Wei-Zhi Wu, Chao-Jun Chen, and Xia Wang</i>	
Multigranulation Rough Sets in Hesitant Fuzzy Linguistic Information Systems	307
<i>Chao Zhang, De-Yu Li, and Yan-Hui Zhai</i>	
Multi-granularity Similarity Measure of Cloud Concept	318
<i>Jie Yang, Guoyin Wang, and Xukun Li</i>	
Multi-adjoint Concept Lattices, Preferences and Bousi Prolog.	331
<i>M. Eugenia Cornejo, Jesús Medina, Eloísa Ramírez-Poussa, and Clemente Rubio-Manzano</i>	
Modified Generalized Weighted Fuzzy Petri Net in Intuitionistic Fuzzy Environment	342
<i>Sibasis Bandyopadhyay, Zbigniew Suraj, and Piotr Grochowalski</i>	

Machine Learning and Decision Making

Similarity-Based Classification with Dominance-Based Decision Rules	355
<i>Marcin Szeląg, Salvatore Greco, and Roman Słowiński</i>	
Representative-Based Active Learning with Max-Min Distance.	365
<i>Fu-Lun Liu, Fan Min, Liu-Ying Wen, and Hong-Jie Wang</i>	
Fuzzy Multi-label Classification of Customer Complaint Logs Under Noisy Environment	376
<i>Tirthankar Dasgupta, Lipika Dey, and Ishan Verma</i>	
Some Weighted Ranking Operators with Interval Valued Intuitionistic Fuzzy Information Applied to Outsourced Software Project Risk Assessment	386
<i>Zhen-hua Zhang, Yong Hu, Zhao Chen, Shenguo Yuan, and Kui-xi Xiao</i>	

Formal Analysis of HTM Spatial Pooler Performance Under Predefined Operation Conditions	396
<i>Marcin Pietroń, Maciej Wielgosz, and Kazimierz Wiatr</i>	
Performance Comparison to a Classification Problem by the Second Method of Quantification and STRIM	406
<i>Yuya Kitazaki, Tetsuro Saeki, and Yuichi Kato</i>	
Outlier Detection and Elimination in Stream Data – An Experimental Approach	416
<i>Mateusz Kalisch, Marcin Michalak, Piotr Przystalka, Marek Sikora, and Łukasz Wróbel</i>	
Ranking and Clustering	
Exploiting Group Pairwise Preference Influences for Recommendations	429
<i>Kunlei Zhu, Jiajin Huang, and Ning Zhong</i>	
Discrete Group Search Optimizer for Community Detection in Social Networks	439
<i>Moustafa Mahmoud Ahmed, Mohamed M. Elwakil, Aboul Ella Hassanien, and Ehab Hassanien</i>	
Social Web Videos Clustering Based on Ensemble Technique	449
<i>Vinath Mekthanavanh and Tianrui Li</i>	
Learning Latent Features for Multi-view Clustering Based on NMF	459
<i>Mengjiao He, Yan Yang, and Hongjun Wang</i>	
A Semantic Overlapping Clustering Algorithm for Analyzing Short-Texts . . .	470
<i>Lipika Dey, Kunal Ranjan, Ishan Verma, and Abir Naskar</i>	
Derivation and Application of Rules and Trees	
On Behavior of Statistical Indices in Incremental Context	483
<i>Shusaku Tsumoto and Shoji Hirano</i>	
Linguistic Variables Construction in Information Table	493
<i>Shusaku Tsumoto and Shoji Hirano</i>	
Multi-objective Search for Comprehensible Rule Ensembles	503
<i>Jerzy Błaszczyński, Bartosz Prusak, and Roman Słowiński</i>	
On NIS-Apriori Based Data Mining in SQL	514
<i>Hiroshi Sakai, Chenxi Liu, Xiaoxin Zhu, and Michinori Nakata</i>	
Classification for Inconsistent Decision Tables	525
<i>Mohammad Azad and Mikhail Moshkov</i>	

Derivation and Application of Feature Subsets

Feature Selection in Decision Systems with Constraints	537
<i>Sinh Hoa Nguyen and Marcin Szczuka</i>	
Governance of the Redundancy in the Feature Selection Based on Rough Sets' Reducts	548
<i>Marek Grzegorowski</i>	
Attribute Reduction in Multi-source Decision Systems	558
<i>Yanting Guo and Weihua Xu</i>	
Matrix Algorithm for Distribution Reduction in Inconsistent Ordered Information Systems	569
<i>Xiaoyan Zhang and Ling Wei</i>	
Consistency Driven Feature Subspace Aggregating for Ordinal Classification	580
<i>Jerzy Błaszczyński, Jerzy Stefanowski, and Roman Słowiński</i>	
Author Index	591

Rough Sets

International Joint Conference, IJCRS 2016, Santiago de Chile, Chile, October 7–11, 2016, Proceedings

Flores, V.; Gomide, F.; Janusz, A.; Meneses, C.; Miao, D.; Peters, G.; Ślęzak, D.; Wang, G.; Weber, R.; Yao, Y. (Eds.)

2016, XVII, 592 p. 122 illus., Softcover

ISBN: 978-3-319-47159-4