

# Table of Contents

Dynamic Obstacle Representations for Robot and Virtual Agent Navigation .....	1
<i>Eric Aaron and Juan Pablo Mendoza</i>	
Grounding Formulas with Complex Terms .....	13
<i>Amir Aavani, Xiongnan (Newman) Wu, Eugenia Ternovska, and David Mitchell</i>	
Moving Object Modelling Approach for Lowering Uncertainty in Location Tracking Systems .....	26
<i>Wegdan Abdelsalam, David Chiu, Siu-Cheung Chau, Yasser Ebrahim, and Maher Ahmed</i>	
Unsupervised Relation Extraction Using Dependency Trees for Automatic Generation of Multiple-Choice Questions .....	32
<i>Naveed Afzal, Ruslan Mitkov, and Atefeh Farzindar</i>	
An Improved Satisfiable SAT Generator Based on Random Subgraph Isomorphism .....	44
<i>Călin Anton</i>	
Utility Estimation in Large Preference Graphs Using A* Search .....	50
<i>Henry Bediako-Asare, Scott Buffett, and Michael W. Fleming</i>	
A Learning Method for Developing PROAFTN Classifiers and a Comparative Study with Decision Trees .....	56
<i>Nabil Belacel and Feras Al-Obeidat</i>	
Using a Heterogeneous Dataset for Emotion Analysis in Text .....	62
<i>Soumaya Chaffar and Diana Inkpen</i>	
Using Semantic Information to Answer Complex Questions .....	68
<i>Yllias Chali, Sadid A. Hasan, and Kaisar Imam</i>	
Automatic Semantic Web Annotation of Named Entities .....	74
<i>Eric Charton, Michel Gagnon, and Benoit Ozell</i>	
Learning Dialogue POMDP Models from Data .....	86
<i>Hamid R. Chinaei and Brahim Chaib-draa</i>	
Characterizing a Brain-Based Value-Function Approximator .....	92
<i>Patrick Connor and Thomas Trappenberg</i>	

Answer Set Programming for Stream Reasoning .....	104
<i>Thang M. Do, Seng W. Loke, and Fei Liu</i>	
A Markov Decision Process Model for Strategic Decision Making in Sailboat Racing.....	110
<i>Daniel S. Ferguson and Pantelis Elinas</i>	
Exploiting Conversational Features to Detect High-Quality Blog Comments .....	122
<i>Nicholas FitzGerald, Giuseppe Carenini, Gabriel Murray, and Shafiq Joty</i>	
Consolidation Using Context-Sensitive Multiple Task Learning.....	128
<i>Ben Fowler and Daniel L. Silver</i>	
Extracting Relations between Diseases, Treatments, and Tests from Clinical Data .....	140
<i>Oana Frunza and Diana Inkpen</i>	
Compact Features for Sentiment Analysis .....	146
<i>Lisa Gaudette and Nathalie Japkowicz</i>	
Instance Selection in Semi-supervised Learning .....	158
<i>Yuanquan Guo, Harry Zhang, and Xiaobo Liu</i>	
Determining an Optimal Seismic Network Configuration Using Self-Organizing Maps.....	170
<i>Machel Higgins, Christopher Ward, and Silvio De Angelis</i>	
Comparison of Learned versus Engineered Features for Classification of Mine Like Objects from Raw Sonar Images .....	174
<i>Paul Hollesen, Warren A. Connors, and Thomas Trappenberg</i>	
Learning Probability Distributions over Permutations by Means of Fourier Coefficients.....	186
<i>Ekhine Irurozki, Borja Calvo, and Jose A. Lozano</i>	
Correcting Different Types of Errors in Texts .....	192
<i>Aminul Islam and Diana Inkpen</i>	
Simulating the Effect of Emotional Stress on Task Performance Using OCC .....	204
<i>Dreama Jain and Ziad Kobti</i>	
Base Station Controlled Intelligent Clustering Routing in Wireless Sensor Networks .....	210
<i>Yifei Jiang and Haiyi Zhang</i>	
Comparison of Semantic Similarity for Different Languages Using the Google n-gram Corpus and Second-Order Co-occurrence Measures .....	216
<i>Colette Joubarne and Diana Inkpen</i>	

A Supervised Method of Feature Weighting for Measuring Semantic Relatedness .....	222
<i>Alistair Kennedy and Stan Szpakowicz</i>	
Anomaly-Based Network Intrusion Detection Using Outlier Subspace Analysis: A Case Study .....	234
<i>David Kershaw, Qigang Gao, and Hai Wang</i>	
Evaluation and Application of Scenario Based Design on Thunderbird .....	240
<i>Bushra Khawaja and Lisa Fan</i>	
Improving Phenotype Name Recognition .....	246
<i>Maryam Khordad, Robert E. Mercer, and Peter Rogan</i>	
Classifying Severely Imbalanced Data .....	258
<i>William Klement, Szymon Wilk, Wojtek Michalowski, and Stan Matwin</i>	
Simulating Cognitive Phenomena with a Symbolic Dynamical System .....	265
<i>Othalia Larue</i>	
Finding Small Backdoors in SAT Instances .....	269
<i>Zijie Li and Peter van Beek</i>	
Normal Distribution Re-Weighting for Personalized Web Search .....	281
<i>Hanze Liu and Orland Hoeber</i>	
Granular State Space Search .....	285
<i>Jigang Luo and Yiyu Yao</i>	
Comparing Humans and Automatic Speech Recognition Systems in Recognizing Dysarthric Speech .....	291
<i>Kinfe Tadesse Mengistu and Frank Rudzicz</i>	
A Context-Aware Reputation-Based Model of Trust for Open Multi-agent Environments .....	301
<i>Ehsan Mokhtari, Zeinab Noorian, Behrouz Tork Ladani, and Mohammad Ali Nematbakhsh</i>	
Pazesh: A Graph-Based Approach to Increase Readability of Automatic Text Summaries .....	313
<i>Nasrin Mostafazadeh, Seyed Abolghassem Mirroshandel, Gholamreza Ghassem-Sani, and Omid Bakhshandeh Babarsad</i>	
Textual and Graphical Presentation of Environmental Information .....	319
<i>Mohamed Mouine</i>	

Comparing Distributional and Mirror Translation Similarities for Extracting Synonyms .....	323
<i>Philippe Muller and Philippe Langlais</i>	
Generic Solution Construction in Valuation-Based Systems .....	335
<i>Marc Pouly</i>	
Cross-Lingual Word Sense Disambiguation for Languages with Scarce Resources .....	347
<i>Bahareh Sarrafzadeh, Nikolay Yakovets, Nick Cercone, and Aijun An</i>	
COSINE: A Vertical Group Difference Approach to Contrast Set Mining .....	359
<i>Mondelle Simeon and Robert Hilderman</i>	
Hybrid Reasoning for Ontology Classification .....	372
<i>Weihong Song, Bruce Spencer, and Weichang Du</i>	
Subspace Mapping of Noisy Text Documents .....	377
<i>Axel J. Soto, Marc Strickert, Gustavo E. Vazquez, and Evangelos Milios</i>	
Extending AdaBoost to Iteratively Vary Its Base Classifiers .....	384
<i>Érico N. de Souza and Stan Matwin</i>	
Parallelizing a Convergent Approximate Inference Method .....	390
<i>Ming Su and Elizabeth Thompson</i>	
Reducing Position-Sensitive Subset Ranking to Classification .....	396
<i>Zhengya Sun, Wei Jin, and Jue Wang</i>	
Intelligent Software Development Environments: Integrating Natural Language Processing with the Eclipse Platform .....	408
<i>René Witte, Bahar Sateli, Ninus Khamis, and Juergen Rilling</i>	
Partial Evaluation for Planning in Multiagent Expedition .....	420
<i>Y. Xiang and F. Hanshar</i>	
<b>Author Index</b> .....	433