Welcome Message from the WI 2010 Conference Chair and Program Chair

WI 2010 and IAT 2010 Conference Organization

WI 2010 Program Committee Members

WI 2010 Non-Program Committee Reviewers

WI 2010 and IAT 2010 Joint Invited Talks

Wikipedia and How to Use It for Semantic Document Representation
Ian Witten

Game Theory for Security: Lessons Learned from Deployed Applications
Milind Tambe

The Sensor Web: Unpredictable, Noisy and Loaded with Errors
Alan Smeaton

Issues on Preference-Modelling and Personalization in Information Retrieval
Pasi Gabriella

Why Robots Are More Than Just Agents
Maria Gini

WI Foundations

Bees Swarm Optimization Based Approach for Web Information Retrieval
Habiba Drias and Hadia Mosteghanemi

Approximate Representations in the Medical Domain
Lawrence J. Mazlack
<table>
<thead>
<tr>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using Web-Intelligence for Excavating the Emerging Meaning of Target-Concepts</td>
<td>22</td>
</tr>
<tr>
<td>Yair Neuman, Gabi Kedma, Yohai Cohen, and Ophir Nave</td>
<td></td>
</tr>
<tr>
<td>A Computational Cognitive Model for Simulating Heuristics Retrieval in Human Problem Solving</td>
<td>26</td>
</tr>
<tr>
<td>Rifeng Wang, Lijuan Wang, Haiyan Zhou, and Jie Xiang</td>
<td></td>
</tr>
<tr>
<td>Stochastic Simulation of Web Users</td>
<td>30</td>
</tr>
<tr>
<td>Pablo E. Román and Juan D. Velásquez</td>
<td></td>
</tr>
<tr>
<td>World Wide Wisdom Web (W4)</td>
<td>34</td>
</tr>
<tr>
<td>Expertise Matching via Constraint-Based Optimization</td>
<td></td>
</tr>
<tr>
<td>Wenbin Tang, Jie Tang, and Chenhao Tan</td>
<td></td>
</tr>
<tr>
<td>Enabling Self-Organising Service Level Management with Automated Negotiation</td>
<td>42</td>
</tr>
<tr>
<td>Lei Liu and Hartmut Schmeck</td>
<td></td>
</tr>
<tr>
<td>Integrating Provenance Information in Reservoir Engineering</td>
<td>46</td>
</tr>
<tr>
<td>Jing Zhao, Na Chen, Karthik Gomadam, and Viktor Prasanna</td>
<td></td>
</tr>
<tr>
<td>Web Information Retrieval and Filtering</td>
<td>50</td>
</tr>
<tr>
<td>How to Improve Your Google Ranking: Myths and Reality</td>
<td></td>
</tr>
<tr>
<td>Ao-Jan Su, Y. Charlie Hu, Aleksandar Kuzmanovic, and Cheng-Kok Koh</td>
<td></td>
</tr>
<tr>
<td>Image Set Classification Using Multi-layer Multiple Instance Learning with Application to Cannabis Website Classification</td>
<td>58</td>
</tr>
<tr>
<td>Nianhua Xie, Haibin Ling, and Weiming Hu</td>
<td></td>
</tr>
<tr>
<td>Towards Fully Distributed and Privacy-Preserving Recommendations</td>
<td>66</td>
</tr>
<tr>
<td>via Expert Collaborative Filtering and RESTful Linked Data</td>
<td></td>
</tr>
<tr>
<td>Jae-wook Ahn and Xavier Amatriain</td>
<td></td>
</tr>
<tr>
<td>Niche Product Retrieval in Top-N Recommendation</td>
<td>74</td>
</tr>
<tr>
<td>Mi Zhang and Neil Hurley</td>
<td></td>
</tr>
<tr>
<td>Language Models and Topic Models for Personalizing Tag Recommendation</td>
<td>82</td>
</tr>
<tr>
<td>Ralf Krestel and Peter Fankhauser</td>
<td></td>
</tr>
<tr>
<td>Making the Most of a Web Search Session</td>
<td>90</td>
</tr>
<tr>
<td>Benno Stein and Matthias Hagen</td>
<td></td>
</tr>
<tr>
<td>Lightweight Clustering Methods for Webspam Demotion</td>
<td>98</td>
</tr>
<tr>
<td>Thomas Largillier and Sylvain Peyronnet</td>
<td></td>
</tr>
<tr>
<td>MapMarker: Extraction of Postal Addresses and Associated Information for General Web Pages</td>
<td>105</td>
</tr>
<tr>
<td>Chia-Hui Chang and Shu-Ying Li</td>
<td></td>
</tr>
<tr>
<td>CentralMatch: A Fast and Accurate Method to Identify Blog-Duplicates</td>
<td>112</td>
</tr>
<tr>
<td>Heejin Park, Sang-Chul Lee, Soon-Haeng Lee, and Sang-Wook Kim</td>
<td></td>
</tr>
<tr>
<td>Collaborative Web Search Utilizing Experts’ Experiences</td>
<td>120</td>
</tr>
<tr>
<td>Jingyu Sun, Xueli Yu, and Ning Zhong</td>
<td></td>
</tr>
</tbody>
</table>
Multimodal Image Annotation Using Non-negative Matrix Factorization .......................................................... 128
   Jaafar BenAbdallah, Juan C. Caicedo, Fabio A. Gonzalez, and Olfa Nasraoui

Improving Collaborative Filtering in Social Tagging Systems for the Recommendation of Scientific Articles .......................................................... 136
   Denis Parra-Santander and Peter Brusilovsky

Improving Privacy-Preserving NBC-Based Recommendations by Preprocessing .................................................. 143
   Alper Bilge and Huseyin Polat

Towards a Self-Regulating Process of Pairwise Comparison in AHP .......................................................... 148
   Arash Niknafs, Nasrollah Moghaddam Charkari, Seyed Mohammad Hosseini Nasab, and Ali akbar Niknafs

Ranking Approaches for Microblog Search .......................................................................................... 153
   Rinkesh Nagmoti, Ankur Teredesai, and Martine De Cock

Group-Level Analysis by Extracting Semantic Relations from Query Graph .................................................. 158
   Bin Wu, Tian Zhu, Weiduo Wang, Qi Ye, and Bai Wang

Predicting Web Search Hit Counts .................................................................................................. 162
   Tian Tian, James Geller, and Soon Ae Chun

On Using Query Logs for Static Index Pruning .................................................................................. 167
   Hoang Thanh Lam, Raffaele Perego, and Fabrizio Silvestri

Probabilistic Modeling of User-Generated Reviews .................................................................................. 171
   Richong Zhang and Thomas Tran

Let’s Trust Users—It is Their Search .................................................................................................. 176
   Pavel Kalinov, Bela Stantic, and Abdul Sattar

Visual Content Structures for Wrapper Induction in Building Metasearch Systems .................................................. 180
   Jyh-Jong Tsay, Chin-Wen Tsay, and Xin-Jie Wang

Relations Expansion: Extracting Relationship Instances from the Web .................................................. 184
   Haibo Li, Yutaka Matsuo, and Mitsuru Ishizuka

Using Web Technologies for Integrative Drug Discovery ........................................................................... 188
   Qian Zhu, Sashikiran Challa, Prajakta Purohit, Yuying Sun, Michael S. Lajiness, David J. Wild, and Ying Ding

An Efficient Method for Tagging a Query with Category Labels Using Wikipedia towards Enhancing Search Engine Results ........................................................................... 192
   Milad Alemzadeh and Fakhri Karray

Using Relational Similarity between Word Pairs for Latent Relational Search on the Web .................................................. 196
   Nguyen Tuan Duc, Danushka Bollegala, and Mitsuru Ishizuka

Personalized Search Based on a User-Centered Recommender Engine .................................................. 200
   Leyla Zhuhadar and Olfa Nasraoui
Reducing the Cold-Start Problem in Content Recommendation through Opinion Classification .......................................................... 204
  Damien Poirier, Françoise Fessant, and Isabelle Tellier
Impact of One-Timer/N-Timer Object Classification on the Performance of Web Cache Replacement Algorithms .................................................. 208
  Saloua Messaoud Abid and Habib Youssef
A Framework for Co-classification of Articles and Users in Wikipedia ........................................................................................................ 212
  Lei Liu and Pang-Ning Tan

**Semantics and Ontology Engineering**

WEST: Weighted-Edge Based Similarity Measurement Tools for Word Semantics .................................................................................................................. 216
  Liang Dong, Pradip K. Srimani, and James Z. Wang
Linked Open Social Signals ......................................................................................................................................................................................... 224
  Pablo N. Mendes, Alexandre Passant, Pavan Kapanipathi, and Amit P. Sheth
  Bin Chen, Ying Ding, Huijun Wang, David J. Wild, Xiao Dong, Yuyin Sun, Qian Zhu, and Madhuvanthi Sankaranarayanan
Query Answering in Fuzzy Description Logics with Data Type Support ...................................................................................................................... 240
  Jingwei Cheng, Z.M. Ma, and Yu Wang
F-Logic#: Loosely Coupling F-Logic Rules and Ontologies ................................................................................................................................. 248
  Stijn Heymans, Roman Korf, Michael Erdmann, Jörg Pührer, and Thomas Eiter
Semi-automatic Acquisition of Semantic Descriptions of Processes in the Web ........................................................................................................ 256
  Julia Hoxha and Sudhir Agarwal
Ontology-Based Specific and Exhaustive User Profiles for Constraint Information Fusion for Multi-agents ................................................................................................................................. 264
  Xiaohui Tao, Yuefeng Li, Raymond Y.K. Lau, and Shlomo Geva
Boosting Biomedical Entity Extraction by Using Syntactic Patterns for Semantic Relation Discovery .................................................................................................................. 272
  Svitlana Volkova, Doina Caragea, William H. Hsu, John Drouhard, and Landon Fowles
Learning a Large Scale of Ontology from Japanese Wikipedia ................................................................................................................................. 279
  Susumu Tamagawa, Shinya Sakurai, Takuya Tejima, Takeshi Morita, Noriaki Izumi, and Takahira Yamaguchi
Semantic Graph Based Document-Indexing Strategy for MEDLINE ......................................................................................................................... 287
  William P. Taylor and James Z. Wang
Learning in Presence of Ontology Mapping Errors .............................................................................................................................................. 291
  Neeraj Koul and Vasant Honavar
TOK: A Meta-model and Ontology for Heterogeneous Terminological, Linguistic and Ontological Knowledge Resources .................................................................................................. 297
  Nizar Ghoula, Gilles Falquet, and Jacques Guyot
SemPIF: A Semantic Meta-policy Interchange Format for Multiple Web Policies ................................................................. 302

Yuh-Jong Hu and Harold Boley

A Hybrid Approach of Personalized Web Information Retrieval ................................................................. 308

Namita Mittal, Richi Nayak, M.C. Govil, and K.C. Jain

User-Centered Evaluation Model for Ontology Selection ........................................................................ 314

Sunju Oh and Heon Y. Yeom

Domain-Specific Backlinking Services in the Web of Data ........................................................................ 318

Manuel Salvadores, Gianluca Correndo, Martin Szomszor, Yang Yang, Nick Gibbins,
Ian Millard, Hugh Glaser, and Nigel Shadbolt

Towards Axiomatizing the Semantics of UML Activity Diagrams: A Situation-Calculus Perspective . 324

Xing Tan and Michael Gruninger

A Scalable Indexing Mechanism for Ontology-Based Information Integration ........................................... 328

Yingjie Li, Abir Qasem, and Jeff Heflin

Ranking Ontologies Using Verified Entities to Facilitate Federated Queries ............................................ 332

Neda Alipanah, Piyush Srivastava, Pallabi Parveen, and Bhavani Thuraisingham

The KGRAM Abstract Machine for Knowledge Graph Querying .................................................................... 338

Olivier Corby and Catherine Faron Zucker

Web Mining and Farming

Improving Diversity of Focused Summaries through the Negative Endorsements of Redundant Facts . 342

Palakorn Achananuparp, Xiaohua Hu, Lifan Guo, Tingting He, Yuan An, and Zhoujun Li

Automatically Grouping Questions in Yahoo! Answers ................................................................................. 350

Yajie Miao, Lili Zhao, Chuiping Li, and Jie Tang

Mining Fine Grained Opinions by Using Probabilistic Models and Domain Knowledge .................................. 358

Qingliang Miao, Qiudan Li, and Daniel Zeng

Coauthor Network Topic Models with Application to Expert Finding .......................................................... 366

Jia Zeng, William K. Cheung, Chun-hung Li, and Jiming Liu

The Effects of Query Bursts on Web Search ................................................................................................. 374

Ilija Subašić and Carlos Castillo

Hierarchical Cost-Sensitive Web Resource Acquisition for Record Matching ............................................ 382

Yee Fan Tan and Min-Yen Kan

A Hybrid Approach to Data Clustering Analysis with K-Means and Enhanced Ant-Based Template Mechanism .................................................................................................................. 390

Wei Zhang, Carl K. Chang, Hen-I Yang, and Hsin-yi Jiang

DSP: Robust Semi-supervised Dimensionality Reduction Using Dual Subspace Projections ...................... 398

Su Yan, Sofien Bouaziz, and Dongwon Lee
Probabilistic Metrics for Soft-Clustering and Topic Model Validation .................................................................406
Eduardo H. Ramirez, Ramon Brena, Davide Magatti, and Fabio Stella

Tag Allocation Model: Model Noisy Social Annotations by Reason Finding ............................................................413
Xiance Si and Maosong Sun

Text Clustering via Term Semantic Units .................................................................................................................417
Liping Jing, Jiali Yun, Jian Yu, and Houkuan Huang

Organization of Information for the Web Using Hierarchical Fuzzy Clustering Algorithm Based on Co-occurrence Networks ........................................................................................................421
Faraz Zaidi and Guy Melançon

Incorporating Seasonality into Search Suggestions Derived from Intranet Query Logs ..........................................................................................................................................................................................425
Stephen Dignum, Udo Kruschwitz, Maria Fasli, Yunhyong Kim, Dawei Song, Ulises Cerviño Beresi, and Anne de Roeck

Modeling Users’ Information Goal Transitions and Satisfaction Judgment: Understanding the Full Search Process .................................................................431
Shandian Zhe, Tian Xia, and Xueqi Cheng

Generating a Context-Aware Sentiment Lexicon for Aspect-Based Product Review Mining ..............................................435
Jürgen Broß and Heiko Ehrig

Stakeholder Mining and Its Application to News Comparison .................................................................................440
Tatsuya Ogawa, Qiang Ma, and Masatoshi Yoshikawa

Parsing Publication Lists on the Web .......................................................................................................................444
Kai-Hsiang Yang and Jan-Ming Ho

ACO Based Approach and Integrating Information Retrieval Technologies in Selecting Bitmap Join Indexes .................................................................................................................................448
Habiba Drias and Ibtissem Frihi

Exploring Special Items in Multimedia News Based on a Stakeholder Model ..........................................................452
Ling Xu, Qiang Ma, and Masatoshi Yoshikawa

A Categorized Sentiment Analysis of Chinese Reviews by Mining Dependency in Product Features and Opinions from Blogs ........................................................................................................456
Hung-Yu Kao and Zi-Yu Lin

Estimating News Coverage of Web Search Results .................................................................................................460
Adam Jatowt, Yukiko Kawai, and Katsumi Tanaka

Product Feature Mining with Nominal Semantic Structure .....................................................................................464
Tian-jie Zhan and Chun-hung Li

Social Networks and Ubiquitous Intelligence

Exploiting Puzzle Diversity in Puzzle Selection for ESP-Like GWAP Systems .........................................................468
Yu-Song Syu, Hsiao-Hsuan Yu, and Ling-Jyh Chen
Identifying Cohesive Subgroups and Their Correspondences in Multiple Related Networks .......................................................................................................................... 476  
Prakash Mandayam-Comar, Pang-Ning Tan, and Anil K. Jain

Characteristics Estimation of Information Sources by Information Diffusion Analysis .......................................................................................................................... 484  
Kazuhiro Kazama, Miyuki Imada, and Keiichiro Kashiwagi

Predicting the Future with Social Media .............................................................................................................. 492  
Sitaram Asur and Bernardo A. Huberman

Discovering Research Communities by Clustering Bibliographical Data ........................................................................................ 500  
Fabrice Muhlenbach and Stéphane Lallich

MQuery: Fast Graph Query via Semantic Indexing for Mobile Context .......................................................................................................................... 508  
Yuan Zhang, Ning Zhang, Jie Tang, Jinghai Rao, and Wenbin Tang

Modeling Ontology of Folksonomy with Latent Semantics of Tags .......................................................................................... 516  
Ali Daud, Juanzi Li, Lizhu Zhou, Lei Zhang, Ying Ding, and Faqir Muhammad

Communication Structure Discovery via Information Asymmetry in an Organizational Social Network .......................................................................................................................... 524  
Cheng-Te Li and Shou-De Lin

Asset-Mapping Approaches to Web-Based Collaborative Innovation .......................................................................................................................... 528  
Donald Cowan, Paulo Alencar, Fred McGarry, Carlos Lucena, and Ingrid Nunes

Investigating Homophily in Online Social Networks .......................................................................................................................... 533  
Halil Bisgin, Nitin Agarwal, and Xiaowei Xu

Ant-Based Simulation of Opinion Spreading in Online Social Networks .......................................................................................................................... 537  
Carolin Kaiser, Johannes Kröckel, and Freimut Bodendorf

Empirical Analysis and Multiple Level Views in Massive Social Networks .......................................................................................................................... 541  
Qi Ye, Bin Wu, Yuan Gao, and Bai Wang

Topic Detection for Discussion Threads with Domain Knowledge .......................................................................................................................... 545  
Mingliang Zhu, Weiming Hu, and Ou Wu

Web Agents

Effective Web Service Selection via Communities Formed by Super-Agents .......................................................................................................................... 549  
Yao Wang, Jie Zhang, and Julita Vassileva

Intelligent Agents System for Evacuation Processes Modeling .......................................................................................................................... 557  
Robert A. Kosinski and A. Grabowski

Feedback Dynamic Algorithms for Preemptable Job Scheduling in Cloud Systems .......................................................................................................................... 561  
Jiayin Li, Meikang Qiu, Jianwei Niu, Wenzhong Gao, Ziliang Zong, and Xiao Qin
Web Services

Web Service Selection for Multiple Agents with Incomplete Preferences ...........................................................565
  Hongbing Wang, Jie Zhang, Cheng Wan, Shizhi Shao, Robin Cohen, Junjie Xu, and Peicheng Li
Business Process Decomposition Based on Service Relevance Mining .............................................................573
  Zicheng Huang, Jimpeng Huai, Xudong Liu, and Jiangjun Zhu
Learning Task Specific Web Services Compositions with Loops and Conditional Branches from Example Executions .................................................................581
  Harini Veeraraghavan, Roman Vacull, and Manuela Veloso
Similarity-Based Bayesian Learning from Semi-structured Log Files for Fault Diagnosis of Web Services .................................................................589
  Xu Han, Zhongzhi Shi, Wenzia Niu, Kunrong Chen, and Xinghua Yang
Improving Web Service Survivability via Gracefully Degraded Substitution ..........................................................597
  Marlon Dumas, Yong Yang, and Liang Zhang

Intelligent Human/Web Interaction

Impacts of Analysts’ Cognitive Styles on the Analytic Process .............................................................................601
  Eugene Santos Jr., Hien Nguyen, Fei Yu, Deqing Li, and John T. Wilkinson
Mapping Features to Context Information: Supporting Context Variability for Context-Aware Pervasive Applications ........................................................................611
  Zakwan Jaroucheh, Xiaodong Liu, and Sally Smith
Towards Understanding How Personality, Motivation, and Events Trigger Web User Activity ...........................615
  Konstantinos N. Vavliakis, Andreas L. Symeonidis, and Pericles A. Mitkas
Web Intelligence in Tourism: User Modeling and Recommender System ..........................................................619
  Bruno Coelho, Constantino Martins, and Ana Almeida

Web Support Systems

An Approach to Model and Predict the Popularity of Online Contents with Explanatory Factors ..........................623
  Jong Gun Lee, Sue Moon, and Kavé Salamatian
Finding Resources and Collaborators within Digital Collections ....................................................................631
  Darina Dicheva and Christo Dichev
Research Interests: Their Dynamics, Structures and Applications in Web Search Refinement ................................639
  Yi Zeng, Erzhong Zhou, Yulin Qin, and Ning Zhong
Visualizing Blog Archives to Explore Content- and Context-Related Interdependencies ..................................647
  Justus Bross, Patrick Schilf, and Christoph Meinel
Improving AbraQ: An Automatic Query Expansion Algorithm ........................................................................653
  Glen Robertson and Xiaoying Gao
Knowledgeable Explanations for Recommender Systems ................................................................. 657
   Markus Zanker and Daniel Ninaus

**Intelligent E-Technology**

An Adaptive Model for Probabilistic Sentiment Analysis ................................................................. 661
   Xiaohui Yu, Yang Liu, and Aijun An

The Ethicality of Web Crawlers ............................................................................................................... 668
   Yang Sun, Isaac G. Councill, and C. Lee Giles

Efficient and Correct Trust Propagation Using CloseLook ................................................................. 676
   Grzegorz Wierzowiecki and Adam Wierzbicki

A Strong Authentication Protocol Based on Portable One–Time Dynamic URLs ........................................ 682
   E. Galán, J.C. Hernández-Castro, A. Alcaide, and A. Ribagorda

Agent-Based Online Quality Measurement Approach in Cloud Computing Environment .......................................... 686
   Zhenyu Liu, Tiejiang Liu, Tun Lu, Lizhi Cai, and Genxing Yang

Reachability Analysis in Privacy-Preserving Perturbed Graphs ............................................................. 691
   Xiaoyun He, Jaideep Vaidya, Basit Shafiq, Nabil Adam, and Xiaodong Lin

**Industry Track**

SONAR: Towards User-centric Social Network Analysis and Visualization ........................................... 695
   Christian Hütter, Björn-Oliver Hartmann, Klemens Böhm, Till Heistermann,
   Kevin-Simon Kohlmeyer, Reno Reckling, Martin Reiche, and David Soria Parra

**Demonstration Track**

MuzkMesh: Interlinking Semantic Music Data ...................................................................................... 699
   Mayank Singhi, Ying Ding, and Yuyin Sun

**WI 2010 Author Index** .................................................................................................................... 703
2010 IEEE/WIC/ACM International Conference on Intelligent Agent Technology

IAT 2010

Table of Contents

Welcome Message from the IAT 2010 Conference Chair and Program Chair

IAT 2010 and WI 2010 Conference Organization

IAT 2010 Program Committee Members

IAT 2010 Non-Program Committee Reviewers

IAT 2010 and WI 2010 Joint Invited Talks

Wikipedia and How to Use It for Semantic Document Representation ..............................................1
  Ian Witten

Game Theory for Security: Lessons Learned from Deployed Applications ............................................2
  Milind Tambe

The Sensor Web: Unpredictable, Noisy and Loaded with Errors ..............................................................3
  Alan Smeaton

Issues on Preference-Modelling and Personalization in Information Retrieval ........................................4
  Pasi Gabriella

Why Robots are More Than Just Agents ..................................................................................................5
  Maria Gini
Autonomy-Oriented Computing (AOC)
An Agent-Based Modeling Approach to Investigate Emergent Patterns in Ecological Systems .................................................................6
  Jacintha Ellers, Mark Hoogendoorn, and David Wendt
Towards Efficient Equilibria of Combinations of Network-Formation and Interaction Strategies ........................................................................14
  Björn-Oliver Hartmann and Klemens Böhm
Distributed Advice-Seeking on an Evolving Social Network ........................................................................................................24
  Golriz Rezaei, Jens Pfau, and Michael Kirley
Nash Welfare Allocation Problems: Concrete Issues ..........................................................................................................................32
  Antoine Nongaillard, Philippe Mathieu, and Patricia Everaere
Selecting Operator Queries Using Expected Myopic Gain ..................................................................................................................40
  Robert Cohn, Michael Maxim, Edmund Durfee, and Satinder Singh
Collaborative Function Approximation in Social Multiagent Systems ......................................................................................................48
  Dominik Dahlem and William Harrison
Understanding the Behaviour of Reactive Robots in a Patrol Task by Analysing Their Trajectories ........................................................................56
  Swagat Kumar, Nguyen Huy Thach, and Einoshin Suzuki
Particle Swarm Optimization Based Hierarchical Agglomerative Clustering ..........................................................................................64
  Shafiq Alam, Gillian Dobbie, Patricia Riddle, and M. Asif Naeem
Enhancing Cultural Learning under Environmental Variability Using Layered Heterogeneous Sociometry-Based Networks ............................69
  Mostafa Z. Ali, Robert G. Reynolds, and Rose Ali
A Multi-heuristic Cooperative Ant Colony System for Optimizing Elimination Ordering of Bayesian Networks ....................................................75
  Xuchu Dong, Dantong Ouyang, Yuxin Ye, Haihong Yu, and Yonggang Zhang
Incentivising Cooperation between Agents for Content Sharing ........................................................................................................79
A New Approach in Cooperative Decision Making in Multi-agent Systems Inspired by Human Visual Cortex ..................................................85
  Maryam Esmaeili and Alberto Vancheri

Autonomous Knowledge and Information Agents
Collaborative Learning of Ontology Fragments by Co-operating Agents ..............................................................................................89
  Heather S. Packer, Nicholas Gibbins, and Nicholas R. Jennings
Predictive Analytics Using a Blackboard-Based Reasoning Agent ..........................................................................................................97
  Jia Yue, Anita Raja, and William Ribarsky
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent Systems Modeling and Methodology</td>
<td></td>
</tr>
<tr>
<td>An Agent Model for Decision Making Based upon Experiences Applied in</td>
<td></td>
</tr>
<tr>
<td>the Domain of Fighter Pilots</td>
<td></td>
</tr>
<tr>
<td>Mark Hoogendoorn, Robbert-Jan Merk, and Jan Treur</td>
<td>101</td>
</tr>
<tr>
<td>External Coordination Media in Capacity-Constrained Multiagent Systems</td>
<td></td>
</tr>
<tr>
<td>Thomas Kemmerich and Hans Kleine Büning</td>
<td>109</td>
</tr>
<tr>
<td>The Impacts of Diffusion Kernels on Recognition-Primed Multi-agent</td>
<td></td>
</tr>
<tr>
<td>Decision Making</td>
<td></td>
</tr>
<tr>
<td>Xiaocong Fan and Meng Su</td>
<td>117</td>
</tr>
<tr>
<td>Design and Evaluation of Explainable BDI Agents</td>
<td></td>
</tr>
<tr>
<td>Maaike Harbers, Karel van den Bosch, and John-Jules Meyer</td>
<td>125</td>
</tr>
<tr>
<td>A Rich Communication Model in Opportunistic Decentralized Decision</td>
<td></td>
</tr>
<tr>
<td>Making</td>
<td></td>
</tr>
<tr>
<td>Aurélie Beynier and Abdel-Illah Mouaddib</td>
<td>133</td>
</tr>
<tr>
<td>An Algorithm for Multi-robot Planning: SGInfiniteVI</td>
<td></td>
</tr>
<tr>
<td>Mohamed Amine Hamila, Emmanuelle Grislin-le Strugeon, Rene Mandiau,</td>
<td>141</td>
</tr>
<tr>
<td>and Abdel-Illah Mouaddib</td>
<td></td>
</tr>
<tr>
<td>Time-Critical Decision Making in Interactive Dynamic Influence Diagram</td>
<td></td>
</tr>
<tr>
<td>Yifeng Zeng and Yanping Xiang</td>
<td>149</td>
</tr>
<tr>
<td>Multiagent Meta-level Control for a Network of Weather Radars</td>
<td></td>
</tr>
<tr>
<td>Shanjun Cheng, Anita Raja, and Victor Lesser</td>
<td>157</td>
</tr>
<tr>
<td>Epsilon-Subjective Equivalence of Models for Interactive Dynamic Influence Diagrams</td>
<td></td>
</tr>
<tr>
<td>Prashant Doshi, Muthukumaran Chandrasekaran, and Yifeng Zeng</td>
<td>165</td>
</tr>
<tr>
<td>Learning Personal Agents with Adaptive Player Modeling in Virtual Worlds</td>
<td></td>
</tr>
<tr>
<td>YiLin Kang and Ah-Hwee Tan</td>
<td>173</td>
</tr>
<tr>
<td>An Agent Model for Analysis of Human Performance Quality</td>
<td></td>
</tr>
<tr>
<td>Michel C.A. Klein, Rianne M. van Lambalgen, and Jan Treur</td>
<td>181</td>
</tr>
<tr>
<td>How Fast Can a BDI Agent Respond?</td>
<td></td>
</tr>
<tr>
<td>Huiliang Zhang, Chunyan Miao, Shell Ying Huang, Zhiqi Shen, and Xudong Luo</td>
<td>189</td>
</tr>
<tr>
<td>Efficient Value Function Approximation with Unsupervised Hierarchical</td>
<td></td>
</tr>
<tr>
<td>Categorization for a Reinforcement Learning Agent</td>
<td></td>
</tr>
<tr>
<td>Yongjia Wang and John E. Laird</td>
<td>197</td>
</tr>
<tr>
<td>Coalition Formation Strategies for Self-Interested Agents in Task Oriented Domains</td>
<td></td>
</tr>
<tr>
<td>Thomas Génin and Samir Aknine</td>
<td>205</td>
</tr>
<tr>
<td>Coordination of Temporal Plans for the Reactive and Proactive Goals</td>
<td></td>
</tr>
<tr>
<td>Muhammad Adnan Hashmi and Amal El Fallah Seghrouchni</td>
<td>213</td>
</tr>
<tr>
<td>Modular JADE Agents Design and Implementation Using ASEME</td>
<td></td>
</tr>
<tr>
<td>Nikolaos Spanoudakis and Pavlos Moraitis</td>
<td>221</td>
</tr>
</tbody>
</table>
Selecting Behavior on Repeated Local Effect Functions ................................................................. 229
  Kazuho Igoshi and Takao Miura
Concept Learning Games: The Game of Query and Response ........................................................... 234
  Nima Mirbakhsh, Arman Didandeh, and Mohsen Afsharchi
An Organizational Design for Adaptive Sensor Networks ...................................................................... 239
  Walamitien H. Oyenan, Scott A. DeLoach, and Gurdip Singh
Intelligent Agents in Mobile Vehicular Ad-Hoc Networks: Leveraging Trust
Modeling Based on Direct Experience with Incentives for Honesty ...................................................... 243
  Umar Farooq Minhas, Jie Zhang, Thomas Tran, and Robin Cohen
A Biologically-Inspired Cognitive Agent Model Integrating Declarative Knowledge and Reinforcement Learning ............................................................................................................ 248
  Ah-Hwee Tan and Gee-Wah Ng
Motivated Learning for Goal Selection in Goal Nets ............................................................................... 252
  Huiliang Zhang, Zhiqi Shen, Chunyan Miao, and Xudong Luo
Exploration and Exploitation in Adaptive Trust-Based Decision Making
in Dynamic Environments ...................................................................................................................... 256
  Mark Hoogendoorn, S. Waqar Jaffry, and Jan Treur
Round Tripping in Component Based Software Development ............................................................... 261
  Yves Wautelet, Sodany Kiv, Vi Tran, and Manuel Kolp
Monitoring Agent Communication in Soft Real-Time Environments ......................................................... 265
  Andreas L. Symeonidis and Pericles A. Mitkas
Social Reinforcement Learning for Changing Environments .................................................................... 269
  Juan A. Garcia-Pardo, J. Soler, and C. Carrascosa
DIRACT: Agent-Based Interactive Storytelling ......................................................................................... 273
  Yundong Cai, Zhiqi Shen, Chunyan Miao, and Ah-Hwee Tan
Empathy and Placebo for Autonomous Agents ...................................................................................... 277
  Julien Saunier, Hazaël Jones, and Domitile Lourdeaux
Prediction of Humans’ Activity for Learning the Behaviors of Electrical Appliances in an Intelligent Ambient Environment ................................................................................................................ 283
  Javier Gil-Quijano and Nicolas Sabouret

Distributed Problem Solving

A Distributed and Concurrent Framework for Facilitating Cooperation
in Dynamic Environments ...................................................................................................................... 287
  Toktam Ebadi, Maryam Purvis, and Martin Purvis
Multi-HDCS: Solving DisCSPs with Complex Local Problems Cooperatively ........................................ 295
  David Lee, Inés Arana, Hatem Ahriz, and Kit Hui
A Voting-Based Agent System for Course Selection in E-Learning .................................................. 303
  Ali M. Aseere, Enrico H. Gerding, and David E. Millard
Autonomous Auctions and Negotiation

Characterization of Revenue Monotonicity in Combinatorial Auctions ................................................................. 383
Taiki Todo, Atsushi Iwasaki, and Makoto Yokoo

Reducing Untruthful Manipulation in Envy-Free Pareto Optimal Resource Allocation .............................................. 391
Roie Zivan, Miroslav Dudík, Steven Okamoto, and Katia Sycara

An Approach to Scalable Multi-issue Negotiation: Decomposing the Contract Space Based on Issue Interdependencies ................................................................. 399
Katsuhide Fujita, Takayuki Ito, and Mark Klein

An Interaction-Oriented Model of Customer Behavior for the Simulation of Supermarkets ........................................... 407
Yoann Kubera, Philippe Mathieu, and Sébastien Picault

Trustworthiness Tendency Incremental Extraction Using Information Gain ................................................................. 411
Joana Urbano, Ana Paula Rocha, and Eugénio Oliveira

Applications

Enhancing the Interoperability between Multiagent Systems and Service-Oriented Architectures through a Model-Driven Approach ................................................................. 415
Christian Hahn, Sven Jacobi, and David Raber

Behavior Design of Game Character’s Agent ........................................................................................................ 423
Tony Dujardin and Jean-Christophe Routier

Using a Social Orientation Model for the Evolution of Cooperative Societies ................................................................. 431
Kan-Leung Cheng, Inon Zuckerman, Ugur Kuter, and Dana Nau

An Agent-Based Model for the Interplay of Information and Emotion in Social Diffusion ................................................................. 439
Mark Hoogendoorn, Jan Treur, C. Natalie van der Wal, and Arlette van Wissen

Multimodal Spectral Metrics with Discrete Finite Automata for Predicting Epileptic Seizures ................................................................. 445
Rory A. Lewis and Andrew M. White

The Agent-Based Hedge Fund ............................................................................................................................. 449
Rui Pedro Barbosa and Orlando Belo

Virtual Agent Perception in Multi-agent Based Simulation Systems ................................................................................ 453
T. Steel, D. Kuiper, and R.Z. Wenkstern

An Intelligent Agent-Based Model for Future Personal Information Markets ................................................................. 457
Abdulsalam Yassine, Ali Asghar Nazari Shirehjini, Shervin Shirmohammadi, and Thomas T. Tran

Modeling Dynamic Groups for Agent-Based Pedestrian Crowd Simulations ................................................................. 461
Fasheng Qiu and Xiaolin Hu

Event Study Approach for Validating Agent-Based Trading Simulations ......................................................................... 465
Shih-Fen Cheng
A Framework for Developing Agent-Based Distributed Applications ..........................................................470

*Michel Oey, Sander van Splunter, Elth Ogston, Martijn Warnier, and Frances M.T. Brazier*

Reasoning with Imprecise Context Using Improved Dempster-Shafer Theory .............................................475

*Chang Hoon Lyu, Min Seok Choi, Zhong Yuan Li, and Hee Yong Youn*

**Industry Track**

Integration of Multiagent Systems and Service Oriented Architectures in the Steel Industry ............................................................479

*Sven Jacobi, Christian Hahn, and David Raber*

Agent Technologies for Space Applications: The DAFA Experience ............................................................483

*Francesco Amigoni, Andrea Brambilla, Michèle Lavagna, Rick Blake, Ian le Duc, Jonathan Page, Oliver Page, Sonia de la Rosa Steinz, Robin Steel, and Quirien Wijnands*

**IAT 2010 Author Index** ..................................................................................................................................490
# Table of Contents

**WI-IATW 2010 Workshops Preface** ........................................................................................................................................................................... xiv

The 3rd Workshop on Collective Intelligence in Semantic Web and Social Networks Committee Members (CISWSN 2010) ........................................................................................................................................................................... xx

The 4th International Workshop on Intelligent E-Government and Emergency Management Committee Members (IEEM 2010) ........................................................................................................................................................................... xxi

International Workshop on Computational Social Networks Committee Members (IWCSN 2010) ........................................................................................................... xxii

International Workshop on Intelligent Web Interaction Committee Members (IWI 2010) ........................................................................................................................................................................... xxiv

The 10th International Workshop on Meta-Synthesis and Complex Systems Committee Members (MCS 2010) ........................................................................................................................................................................... xxv

Workshop on Natural Language Processing and Ontology Engineering Committee Members (NLPOE 2010) ........................................................................................................................................................................... xxvi

Workshop on Optimization-Based Data Mining and Web Intelligence Committee Members (ODMWI 2010) ........................................................................................................................................................................... xxvii

The 1st International Workshop on Opinion Mining for Business Intelligence Committee Members (OMBI 2010) ........................................................................................................................................................................... xxviii
The 3rd Workshop on Collective Intelligence in Semantic Web and Social Networks (CISWSN 2010)

Utilizing Dynamic Molecular Modelling Technique for Predicting Changes in Complex Social Networks .........................................................1

Krzysztof Juszczyszyn, Anna Musiał, Katarzyna Musiał, and Piotr Bródka

Individual Neighbourhood Exploration in Complex Multi-layered Social Network ....................................................................................5

Przemysław Kazienko, Piotr Bródka, and Katarzyna Musiał

Commentary-Based Social Network Analysis and Visualization of Hong Kong Singers .........................................................................................9

Janice Kwan-Wai Leung and Chun-Hung Li

Tracing Strength of Relationships in Social Networks ..........................................................................................................................13

Ivan Srba and Mária Bieliková
# The 4th International Workshop on Intelligent E-Government and Emergency Management (IEEM 2010)

A Hierarchical Description Framework of Decision Model for Multilevel Users

Xue-Long Chen, Yan-Zhang Wang, and Ning Wang ............................. 17

The Information Resource Integration in E-government Based on EAI

Li Liming, Zhang Peng, Wang Ning, and Wang Yanzhang ................. 21

Research on Organizational Collaboration Oriented OB4LAC in E-government

Huaiming Li, Shuai Yang, Ning Wang, and Yanzhang Wang .......... 25

A Security Framework for Audit and Manage Information System Security

Teresa Susana Mendes Pereira and Henrique Santos .................. 29

Construction of Emergency Plan Network Model Supporting for Multi-plan-based Application

Jiangnan Qiu, Hao Zhang, Rui Zhang, Qiuyan Zhong, and Ning Wang 33

Research on the Problem and Solution in Chinese E-government Development

Wang Ning, Chao Ke, Bai He, Zhong Qiuyan, and Wang Yanzhang ... 37

Chaotic Analysis on E-government System Development

Wang Yanzhang, Xiao Guirong, and Han Shengju ......................... 41

The Inter-organizational Business Collaboration Oriented Role Model for E-government

Ye Xin, Ma Junfeng, Wang Yanzhang, Zuo Chao, and Bing Xinhua .... 45

Research on Post Node Model in E-government

Zhang Peng, Xiao Junde, Wang Yanzhang, and Wang Keyi ............. 49

The Method of Case Retrieving in the Emergency Field Based on CBR

Qiuyan Zhong, Xiaonan Zhang, Su Guo, Xin Ye, and Jiangnan Qiu ... 53

# International Workshop on Computational Social Networks (IWCSN 2010)

A Tolerance Rough Set Based Overlapping Clustering for the DBLP Data

Gamila Obadi, Pavla Dráždišová, Lukáš Hlaváček, Jan Martinovič, and Václav Snášel ................................. 57

The Effect of Transitive Linking on Information Diffusion in Dynamic Acquaintance Networks

Takashi Ishikawa ........................................................................ 61

Use of E-mail Social Networks for Enterprise Benefit

Michal Laclavík, Štefan Dlugolinský, Marcel Kvassay, and Ladislav Hluchý .................................................. 67

Predicting Edges and Vertices in a Network

Walid K. Sharabati, Edward J. Wegman, and Yasmin H. Said ........ 71

User Segmentation Based on Finding Communities with Similar Behavior on the Web Site

Kateřina Slaninová, Radim Dolák, Martin Miškus, Jan Martinovič, and Václav Snášel ............................................. 75
Content Propagation Analysis of E-mail Communications .................................................................79
   Naoki Yoshinaga, Satoko Itaya, Rie Tanaka, Taku Konishi, Sinichi Doi, Keiji Yamada,
   and Peter Davis
Evolutionary Community Discovery from Dynamic Multi-relational CQA Networks .........................................................83
   Zhongfeng Zhang, Qiudan Li, and Daniel Zeng

**International Workshop on Intelligent Web Interaction (IWI 2010)**

Analysis of User Feedback Cost for Document Similarity Judgment .................................................................87
   Minghuang Chen, Seiji Yamada, and Yasufumi Takama
Treelicious: A System for Semantically Navigating Tagged Web Pages .........................................................91
   Matt Mullins and Perry Fizzano
An Investigation of Potency of eWOM Messages with a Focus on Subjective Rank Expressions .................................................................97
   Kazunori Fujimoto
HCX: A Distributed OSGi Based Web Interaction System for Sharing Health Records in the Cloud .........................................................102
   Sabah Mohammed, Daniel Servos, and Jinan Fiaidhi
An Interactive Tool for Constrained Clustering with Human Sampling .............................................................108
   Masayuki Okabe and Seiji Yamada
Careful Seeding Based on Independent Component Analysis for k-Means Clustering .................................................................112
   Takashi Onoda, Miho Sakai, and Seiji Yamada
An Approach to Create Persuasive Web Sites .........................................................................................116
   Makoto Orino and Yasuhiro Kitamura
Breaking News Detection and Tracking in Twitter ..................................................................................120
   Swit Phuvipadawat and Tsuyoshi Murata
Location-Based Semantic Matchmaking in Ubiquitous Computing ................................................................124
   Michele Ruta, Floriano Scioscia, Eugenio Di Sciascio, and Giacomo Piscitelli
Detecting Task-Based Query Sessions Using Collaborative Knowledge .........................................................128
User Navigation Behavior Mining Using Multiple Data Domain Description ..................................................132
   Li Xue, Ming Chen, Yun Xiong, and Yangyong Zhu

**The 10th International Workshop on Meta-Synthesis and Complex Systems (MCS)**

Visualized Clustering of Ideas for Group Argumentation ..................................................................................136
   Bin Luo and Xijin Tang
Possibility Degree Method for Ranking Intuitionistic Fuzzy Numbers ................................................................142
   Cui-Ping Wei and Xijin Tang
Collaborative Distribution Knowledge Service System Based on Task Context Aware ........................................146
   Liang Xiao and Yanli Pei
Simulation Data and Process Management System in the Development of Virtual Prototype ............................................... 152

Hang Yin, Yongming Gao, Hui Yan, and Jiejuan Wang

A Method Based on Grey Correlation Clustering for Improving the Hierarchy of Analytic Hierarchy Process ........................................ 156

Di Zhao, Hongfu Liu, and Hongyi Li

A Case Investigation on the Scaling Behaviors in Web Browsing ..................................................................................... 160

Gengsheng Zhao, Ning Zhang, Zhaoxing Liu, and Jiming Li

Problem Solving Framework and Case Study in Meta-synthesis Workshop ................................................................. 164

Xiaoji Zhou and Jingyuan Yu

Workshop on Natural Language Processing and Ontology Engineering (NLPOE 2010)

LiSTOMS: A Light-Weighted Self-Tuning Ontology Mapping System ................................................................. 168

Zhen Zhen, Junyi Shen, Jinwei Zhao, and Jianjun Qian

Automatic Identification of Chinese Multiword Chunk Based on CRF .................................................. 174

Ru Li, Lijun Zhong, Shuanghong Li, and Zezheng Zhang

Automated Error Detection of Vocabulary Usage in College English Writing ........................................ 178

Shi-Li Ge and Rou Song

Automatic Semantic Role Labeling for Chinese ........................................................................................................... 182

Ke Wang

The Chinese Noun Metaphors Knowledge Base and its Use in the Recognition of Metaphors ......................................................... 186

Zhimin Wang, Shiwen Yu, and Zhifang Sui

The Development of an NLP-Based Chinese Ontology Construction Platform ................................................. 190

Zhifang Sui, Yao Liu, Jun Zhao, and Hong Zhang

One Sense per N-gram ..................................................................................................................................................... 195

PengYuan Liu, Shui Liu, Shiqi Li, and ShiWen Yu

Workshop on Optimization-Based Data Mining and Web Intelligence (ODMWI 2010)

The Domain Knowledge Driven Intelligent Data Auditing Model .......................................................................................... 199

Jing Yu, Bin Xu, and Yong Shi

Web Intelligence Meets Extenics: New Frontiers of Innovation for Small and Middle Business ........................................................ 203

Xingsen Li, Aiguo Zhang, Jianling Duan, and Zhengxiang Zhu

Using Projection Gradient Method to Train Linear Support Vector Machines ............................................... 207

Lingfeng Niu and Yong Shi

Complex Event Processing for Object Tracking in Wireless Sensor Networks ................................................ 211

R. Bhargavi, V. Vaidehi, P.T.V. Bhuvaneswari, P. Balamurali, and Girish Chandra
Predicting Credit Card Holder Churn in Banks of China Using Data Mining and MCDM .................................................................................................................................215

Guoxun Wang, Liang Liu, Yi Peng, Guangli Nie, Gang Kou, and Yong Shi

A Knowledge Discovery Case Study of Software Quality Prediction: ISBSG Database ..................................................................................................................................................219

Xiao Wang, Yuehua Zhang, Lingling Zhang, and Yong Shi

A Cooperative Learning Algorithm for Multiclass Classification .................................................................................................................................223

Youshen Xia and Yu Ying

A New Weighted Ensemble Model for Detecting DoS Attack Streams .................................................................................................................................227

Jinghua Yan, Xiaochun Yun, Peng Zhang, Jianlong Tan, and Li Guo

An Optimised Design for Agent Capability Reuse .................................................................................................................................................................231

Hao Lan Zhang, Clement H.C. Leung, Xinghuo Yu, and Jing He

The 1st International Workshop on Opinion Mining for Business Intelligence (OMBI 2010)

Assessing the Quality of Opinion Retrieval Systems .................................................................................................................................................................235

Giambattista Amati, Giuseppe Amodeo, Valerio Capozio, Giorgio Gambosi, and Carlo Gaibisso

Mining Customer Feedbacks for Actionable Intelligence .................................................................................................................................................................239

Lipika Dey, Sk Mirajul Haque, and Nidhi Raj

An Unsupervised Snippet-Based Sentiment Classification Method for Chinese Unknown Phrases without Using Reference Word Pairs .................................................................................................................................................................243

Ting-Chun Peng and Chia-Chun Shih

Semi-supervised Learning for Opinion Detection .................................................................................................................................................................249

Ning Yu and Sandra Kübler


Semantic Structure Content for Dynamic Web Pages .................................................................................................................................................................253

Mamdouh Farouk and Mitsuru Ishizuka

Efficient Visualization of Content and Contextual Information of an Online Multimedia Digital Library for Effective Browsing .................................................................................................................................................................257

Surjeet Mishra, Amarendra Gorai, Tavleen Oberoi, and Hiranmay Ghosh

4s-reasoner: RDFS Backward Chained Reasoning Support in 4store .................................................................................................................................................................261

Manuel Salvadores, Gianluca Correndo, Tope Omitola, Nick Gibbins, Steve Harris, and Nigel Shadbolt
International Workshop on Web Personalization and Recommender Systems (WebPRES 2010)

A Decision Rule Method for Assessing the Completeness and Consistency of a Data Warehouse ............................................................................................................................................................................265
Nawaf Alkharboush and Yuefeng Li

Rule Extraction from Blog Using Inductive Logic Programming .........................................................................................................................269
Noriaki Chikara, Miyuki Koshimura, Hiroshi Fujita, and Ryuzo Hasegawa

An Evaluation Framework for Content Recommender Systems—The Industry Perspective .............................................................................................................273
Calin Ciordas and Jeroen Doumen

Ontology–Based Context–Dependent Personalization Technology .........................................................................................................................278
V. Gorodetsky, V. Samoylov, and S. Serebryakov

One Improved Collaborative Filtering Method Based on Information Transformation .........................................................................................................284
Zhaoxing Liu, Ning Zhang, and Jiming Li

Evaluation of Concept Space Rating Algorithm and Navigation Scheme .............................................................................................................288
Petr Šaloun and Zdenek Velart

Non-redundant Sequential Association Rule Mining and Application in Recommender Systems .............................................................................................................292
Hao Zang, Yue Xu, and Yuefeng Li


Towards Privacy Preserving Information Retrieval through Semantic Microaggregation .............................................................................................................296
Daniel Abril, Guillermo Navarro-Arribas, and Vicenç Torra

Search Engine Result Aggregation Using Analytical Hierarchy Process .............................................................................................................300
Arijit De, Elizabeth Diaz, and Vijay V. Raghavan

Analyzing the Effectiveness of Pruning and Grouping Methods Used in Literature-Based Discovery Tools .............................................................................................................304
Fatih Mehmet Gulec, Tahir Bicakci, Ebru Akcapinar Sezer, Hayri Sever, and Vijay V. Raghavan

Comparing Tag Clouds, Term Histograms, and Term Lists for Enhancing Personalized Web Search .............................................................................................................309
Orland Hoeber and Hanze Liu

Preprocessing of Slovak Blog Articles for Clustering .................................................................................................................................314
Tomas Kuzar and Pavol Navrat

Deploying Top-k Specific Patterns for Relevance Feature Discovery .................................................................................................................................318
Luepol Pipanmaekaporn, Yuefeng Li, and Shlomo Geva
Information Retrieval eXperience (IRX): Towards a Human-Centered Personalized Model of Relevance ................................................................. 322
   Frans van der Sluis, Egon L. van den Broek, and Betsy van Dijk

Bridging Semantic and Legacy Web Exploration: Orientation, Revisitation and Result Exploration Support ................................................................. 326
   Michal Tvarožek and Mária Bieliková

Pref Shop—A Web Shop with User Preference Search Capabilities ................................................................. 330
   Branislav Vaclav, Alan Eckhardt, and Peter Vojtáš

The 2nd International Workshop on Collaborative Agents - REsearch and Development (CARE 2010)

Multi-agent Coalition Formation for Distributed Area Coverage: Analysis and Evaluation ................................................................. 334
   Ke Cheng and Prithviraj Dasgupta

Collaboration in Network-Centric Warfare—Modeling Joint Fire Support Teams ................................................................. 338
   Christian Gerstner, Robert Siegfried, and Nane Kratzke

Intelligent Adherence Support to Manage Contractual Relationships ................................................................. 342
   Christian Guttmann, Kumari Wickramasinghe, Ian Edward Thomas, Michael Georgeff, and Heinz Schmidt

Isogonic Formation with Connectivity Preservation for a Team of Holonomic Robots in a Cluttered Environment ................................................................. 346
   Soheil Keshmiri and Shahram Payandeh

E-learning Computational Cloud (eLC2): Web Services Platform to Enhance Task Collaboration ................................................................. 350
   Sidhant Rajam, Ruth Cortez, Alexander Vazhenin, and Subhash Bhalla

Enhancing Patient-Centered Palliative Care with Collaborative Agents ................................................................. 356
   Ji Ruan, Wendy MacCaull, and Heather Jewers

The 4th International Workshop on Human Aspects in Ambient Intelligence: Agent Technology, Human-Oriented Knowledge, and Applications (HAI 2010)

Ambient Intelligence at the Beach ................................................................. 361
   Marc Böhlen and Joe Atkinson

Supporting Financial Decision Making by an Intelligent Agent Estimating Greed and Risk ................................................................. 365
   Tibor Bosse, Ghazanfar F. Siddiqui, and Jan Treur

Designing Pervasive Interactions for Ambient Guidance with Situated Flows ................................................................. 371
   Fahim Kawsar, Gerd Kortuem, and Bashar Altakrouri

Personalisation of Computational Models of Attention by Simulated Annealing Parameter Tuning ................................................................. 376
   Rianne van Lambalgen and Peter-Paul van Maanen
The Role of User Perceptions in Designing Ubiquitous Monitoring Systems ................................................. 382
    Stuart Moran and Keiichi Nakata

Intention Recognition with Event Calculus Graphs ............................................................................................ 386
    Fariba Sadri

**Workshop on Service Intelligence and Engineering (SIE 2010)**

Agent Evaluation Function Considering Airspace Dynamic Density ................................................................. 392
    Antonio Marcio Ferreira Crespo and Li Weigang

Security Assurance with Metamorphic Testing and Genetic Algorithm ............................................................ 397
    Guowei Dong, Shizhong Wu, Guisi Wang, Tao Guo, and Yonggang Huang

Enhancing the Performance of Metadata Service for Cloud Computing .......................................................... 402
    Myung Jin Hwang, Dae Gun Kim, and Hee Yong Youn

An Approach to Estimate Schema Quality of Web Service Composition ......................................................... 406
    Weihong Liu and Hongbing Wang

Homology Detection Based on Abstract Syntax Tree Combined Simple Semantics Analysis .................................. 410
    Shizhong Wu, Yongle Hao, Xinyu Gao, Baojiang Cui, and Ce Bian

**The 3rd Workshop on Logics for Intelligent Agents and Multi-agent Systems (WLIAMAS 2010)**

Risk Analysis in Access Control Systems Based on Trust Theories ................................................................. 415
    J. Ma, L. Logrippo, K. Adi, and S. Mankovski

Multi-agent Based Surveillance of Workflows ..................................................................................................... 419
    Emmanuel Sardis, Vasileios Anagnostopoulos, and Theodora Varvarigou

Predictive Sub-goal Analysis in a General Game Playing Agent .......................................................................... 423
    Xin Xin Sheng and David Thuente

**The 3rd WI-IAT Doctoral Workshop (WI-IAT DW 2010)**

Improving Human-Agent Conversations by Accessing Contextual Knowledge from Wikipedia .......................... 428
    Alexa Breuing

Utilization of Dynamic Reducts to Improve Performance of the Rule-Based Similarity Model for Highly-Dimensional Data ................................................................. 432
    Andrzej Janusz

Constructing Collaborative Online Communities for Visualizing Spimes ......................................................... 436
    Timothy Maciag and Daryl H. Hepting

Automatic Ontology Constructor for Indonesian Language .............................................................................. 440
    Gloria Virginia and Nguyen Hung Son

Determining Relevant Product Information Sources ............................................................................................ 444
    Matthias Wauer

**WI-IATW 2010 Author Index** ......................................................................................................................... 448