2013 24th International Workshop on Database and Expert Systems Applications

(DEXA 2013)

Prague, Czech Republic
26-30 August 2013

IEEE Catalog Number: CFP13136-POD
ISBN: 978-1-4799-2139-3

2013 24th International Workshop on Database and Expert Systems Applications

DEXA 2013

Table of Contents

DEXA 2013 Preface x
DEXA 2013 Committees xi
ISSASim 2013 Preface xii
ISSASim 2013 Organizing Committee xiii
TIR 2013 Preface xiv
TIR 2013 Program Committee xv
BIOKDD 2013 Preface xvii
BIOKDD 2013 Program Committee xviii
WebS 2013 Preface xix
WebS 2013 Program Committee and Additional Reviewers xx
RSmeetDB 2013 Preface xxiii
RSmeetDB 2013 Program Committee xxv
IATEM 2013 Preface xxvi
IATEM 2013 Organization xxvii
CMS 2013 Preface xxix
CMS 2013 Program Committee xxx
ICT-GLOW 2013 Preface xxxi
ICT-GLOW 2013 Reviewers xxxii

ISSASiM 2013—Third International Workshop onInformation Systems for Situation Awareness and Situation Management

Session 1: Situation Awareness and Management for Location-Based Services

A Crowd-Sourcing Approach for Area-Wide On-Line Building Assessment Towards Earthquake Engineering 3
Erik Sonnleitner, Josef Küng, David Schäfer, and Helmut Wenzel

Hybrid Stop Discovery in Trajectory Records 9
Le Hung Tran, Tran Khanh Dang, and Nam Thoai

Utilizing Spatio-temporal Data Index for Location Privacy Protection 15
Tran Khanh Dang, Van Nghiem Nguyen, Dinh Long Vu, and Josef Küng

Session 2: Situation Awareness and Management for Disaster Management

Main Challenges in Using LOD in Emergency Management 21
Vuk Mijovic, Valentina Janev, and Sanja Vraneš

Risk Analytics for Estimating and Validating Magnitude of Earthquake Losses 26
A. Astoul, C. Filliter, A. Rau-Chaplin, K. Shridhar, B. Varghese, and N. Varshney

Emergency Control Cockpit 32
Kemal A. Delic and Jeff A. Riley

Mini Story Composition for Generic Workflows in Support of Disaster Management 36
Bernhard Thalheim and Marina Tropmann-Frick

TIR 2013—10th International Workshop onText-Based Information Retrieval

Session: Web Search and Similarity Measures

Word Semantic Similarity Based on Document's Title 43
Mohamed Said Hamani and Ramdane Maamri

A Parallel Comparator of Documents 48
Sonia Alouane Ksouri, Minyar Sassi Hidri, and Kamel Barkaoui

Instability in Search Engine Results: Lessons Learned in the Context of Horizon Scanning Applications 53
Marco A. Palomino, Tim Taylor, Geoff McBride, and Richard Owen

Session: Information Extraction

Managing Genetic Algorithm Parameters to Improve SegGen—A Thematic Segmentation Algorithm 58
Neslihan Sirin Saygili, Tankut Acarman, Tassadit Amghar, and Bernard Levrat

From Ambiguous Words to Key-Concept Extraction 63
Márius Šajgalík, Michal Barla, and Mária Bieliková

BIOKDD 2013—Fourth International Workshop onBiological Knowledge Discovery and Data Mining

Session 1

A Structural Equation Modeling Approach of the Toll-Like Receptor Signaling Pathway in Chronic Lymphocytic Leukemia 71
Athina Tsanousa, Lefteris Angelis, Stavroula Ntoufa, Nikos Papakonstantinou, and Kostas Stamatopoulos

Reducing the Space of Degenerate Patterns in Protein Remote Homology Detection 76
Matteo Comin and Davide Verzotto

Motalign: A Multiple Sequence Alignment Algorithm Based on a New Distance and a New Score Function 81
Ahmed Mokaddeml and Mourad Elloumi

Session 2

Undersampling Strategy Based on Clustering to Improve the Performance of Splice Site Classification in Human Genes 85
Cláudia Galarda Varassin, Alexandre Plastino, Helena C. da Gama Leitáo, and Bianca Zadrozny

Clinical Data Mining: Problems, Pitfalls and Solutions 90
Emanuel Weitschek, Giovanni Felici, and Paola Bertolazzi

Session 3

Application of Systematic Data Mining for Prediction of Biological Quality Indices 95
Uliana Bakhtina, Dirk Fleischer, and Kai Jannaschk

Evaluation of Protein-Protein Interaction Management Systems 100
Angeliki Rapti, Evangelos Theodoridis, and Athanasios Tsakalidis

Extending Diseasome by Integrating the Knowledge from Distributed Databases 105
Eshref Januzaj

WebS 2013—12th International Workshop onWeb Semantics and Web Intelligence

Decision Guidance for Optimizing Web Data Quality - A Recommendation Model for Completing Information Extraction Results 113
Christina Feilmayr

Semantic Registries for Heterogeneous Sensor Networks: Bridging the Semantic Gap for Collaborative Crises Management 118
Fernando Chaves, Jürgen Moßgraber, Manfred Schenk, and Ulrich Bügel

An Approach for Populating and Enriching Ontology-Based Repositories 123
Alda Canito, Paulo Maio, and Nuno Silva

A Linked Data Perspective for Collaboration in Mashup Development 128
Devis Bianchini, Valeria De Antonellis, and Michele Melchiori

Representing Texts as Contextualized Entity-Centric Linked Data Graphs 133
André Freitas, Seán O'Riain, Edward Curry, João C.P. da Silva, and Danilo S. Carvalho

RSmeetDB 2013—Third International Workshop onRecommender Systems Meet Databases

Session 1: Novel Algorithmic Approaches

Predicting Student Performance in Higher Education 141
Hana Bydžovská and Lubomír Popelínský

Rating Pattern Formation for Better Recommendation 146
Warat Chalermpornpong, Saranya Maneeroj, and Takasu Atsuhiro

Movie Recommendation Based on Graph Traversal Algorithms 152
Lubos Demovic, Eduard Fritscher, Jakub Kriz, Ondrej Kuzmik, Ondrej Proksa, Diana Vandlikova, Dusan Zelenik, and Maria Bielikova

Session 2: Knowledge Extraction and Knowledge Exploitation in Recommender Systems

Bridging the Gap between Citizens and Local Administrations with Knowledge-Based Service Bundle Recommendations 157
Claudio Baldassarre, Marco Cremaschi, and Matteo Palmonari

Towards Explaining Latent Factors with Topic Models in Collaborative Recommender Systems 162
Marco Rossetti, Fabio Stella, and Markus Zanker

IATEM 2013—Second International Workshop onIntelligent Agent Technology, Power Systems and Energy Markets

Session 1: Agent-Based Approaches in Power Systems

Reducing Electricity Consumption Peaks with Parametrised Dynamic Pricing Strategies Given Maximal Unit Prices 171
Nicolas Höning and Han La Poutré

Distributed Balancing of Wind Power Forecast Deviations by Intraday Trading and Internal Ex-ante Self-Balancing—A Modelling Approach 176
Richard Scharff and Mikael Amelin

Metalearner Based on Dynamic Neural Network for Strategic Bidding in Electricity Markets 184
Tiago Pinto, Tiago M. Sousa, Elisa Barreira, Isabel Praça, and Zita Vale

Session 2: Multi-agent Electricity Markets

Agent-Based Simulation of Retail Electricity Markets: Bilateral Trading Players 189
Fernando Lopes, Hugo Algarvio, and Helder Coelho

Agent-Based Simulation of Retail Electricity Markets: Bilateral Contracting with Demand Response 194
Fernando Lopes, Hugo Algarvio, Cristina Ilco, and Jorge Sousa

Electricity Markets Portfolio Optimization Using a Particle Swarm Approach 199
Nuno Guedes, Tiago Pinto, Zita Vale, Tiago M. Sousa, and Tiago Sousa

Session 3: Intelligent Energy Systems

Modeling User Behavior through Electricity Consumption Patterns 204
Jorge Martinez-Gil, Bernhard Freudenthaler, and Thomas Natschlaeger

Hydropower Bidding Strategies to Day-Ahead and Real-Time Markets: Different Approaches 209
Yelena Vardanyan, Lennart Söder, and Mikael Amelin

CMS 2013—Fourth International Workshop onCloud Computing, Models, and Services

Session 1: Services and Cloud Computing

Enabling Cooperation in an Inter-cloud Environment: An Agent-Based Approach 217
Sofiane Bendoukha, Daniel Moldt, and Thomas Wagner

FASOAD: A Framework for Agile Service-Oriented Architectures Development 222
Hamza Chehili, Lionel Seinturier, and Mahmoud Boufaida

Transition between Different Abstraction Levels in an Abstract State Machine (ASM) Ground Model 227
Jan Kubovy, Dagmar Auer, Josef Küng, and Mariam Rady

Session 2: Quality of Services

Quality of Experience, a Very Personal Experience! 231
Antoine Lavignotte, Christophe Gravier, Julien Subercaze, and Jacques Fayolle

Multi-layer QoS Monitoring in Private Clouds 236
Octavian Morariu, Theodor Borangiu, and Cristina Morariu

Parallelization of Algorithms for Linear Discrete Optimization Using ParaPhrase 241
Michael Roßbory and Werner Reisner

ICT-GLOW 2013—International Workshop onICT as Key Technology against Global Warming

Techno-economic Balance of Load-Adaptive Telecommunication Network Operation for Energy Efficiency Improvements 249
Christoph Lange and Heiko Lehmann

Energy-Efficient XML Stream Processing through Element-Skipping Parsing 254
Toshiyuki Amagasa, Mana Seino, and Hiroyuki Kitagawa

Semantic Modeling of the Emissions Trading System 259
Cecilia Camporeale, Antonio De Nicola, Vittorio Rosato, Maria Luisa Villani, and Umberto Ciorba

Author Index 264