

Table of Contents

Keynotes

Blighted Virtual Neighborhoods and Other Threats to Online Social Experiences	1
<i>Richard A. DeMillo</i>	
Cloud Computing	3
<i>George Wang</i>	
Beyond Search: Web-Scale Business Analytics	5
<i>Alexander Löser</i>	

Tutorials

Storyboarding – High-Level Engineering of Web Information Systems ...	7
<i>Hui Ma, Klaus-Dieter Schewe, and Bernhard Thalheim</i>	
Web Queries: From a Web of Data to a Semantic Web	9
<i>François Bry, Tim Furche, and Klara Weiland</i>	
Toward a Unified View of Data and Services	11
<i>Sonia Bergamaschi and Andrea Maurino</i>	

Web Computing

Maximizing Utility for Content Delivery Clouds	13
<i>Mukaddim Pathan, James Broberg, and Rajkumar Buyya</i>	
Aggregation of Document Frequencies in Unstructured P2P Networks	29
<i>Robert Neumayer, Christos Doukeridis, and Kjetil Nørvg</i>	
Processes Are Data: A Programming Model for Distributed Applications	43
<i>Alexander Böhm and Carl-Christian Kanne</i>	

Industrial Session I

OfficeObjects Service Broker – An Intelligent Service Integration Platform	57
<i>Michał Gajewski, Witold Staniszkis, and Jakub Strychowski</i>	

PSILOC World Traveler: Overcoming the Challenges of Adopting
Wide-Scale Mobile Solutions 59
 Michał Sieczko

ETSI Industry Specification Group on Autonomic Network Engineering
for the Self-managing Future Internet(ETSI ISG AFI) 61
 Ranganai Chaparadza, Laurent Ciavaglia, Michał Wódczak,
 Chin-Chou Chen, Brian A. Lee, Athanassios Liakopoulos,
 Anastasios Zafeiropoulos, Estelle Mancini, Ultan Mulligan,
 Alan Davy, Kevin Quinn, Benoit Radier, Nancy Alonistioti,
 Apostolos Kousaridas, Panagiotis Demestichas, Kostas Tsagkaris,
 Martin Vigoureux, Laurent Vreck, Mick Wilson, and Latif Ladid

Tagging

Facing Tagging Data Scattering 63
 Oscar Díaz, Jon Iturrioz, and Cristóbal Arellano

Clustering of Social Tagging System Users: A Topic and Time Based
Approach 75
 Vassiliki Koutsonikola, Athena Vakali, Eirini Giannakidou, and
 Ioannis Kompatsiaris

Spectral Clustering in Social-Tagging Systems 87
 Alexandros Nanopoulos, Hans-Henning Gabriel, and
 Myra Spiliopoulou

Semantics

Semantic Weaving for Context-Aware Web Service Composition 101
 Li Li, Dongxi Liu, and Athman Bouguettaya

Multi-synchronous Collaborative Semantic Wikis 115
 Charbel Rahhal, Hala Skaf-Molli, Pascal Molli, and Stéphane Weiss

Facing the Technological Challenges of Web 2.0: A RIA Model-Driven
Engineering Approach 131
 Francisco Valverde and Oscar Pastor

Search I

Intent-Based Categorization of Search Results Using Questions from
Web Q&A Corpus 145
 Soungwoong Yoon, Adam Jatowt, and Katsumi Tanaka

TermCloud for Enhancing Web Search 159
 Takehiro Yamamoto, Satoshi Nakamura, and Katsumi Tanaka

Visualization

Seeing Past Rivals: Visualizing Evolution of Coordinate Terms over Time	167
<i>Hiroaki Ohshima, Adam Jatowt, Satoshi Oyama, and Katsumi Tanaka</i>	
A Novel Visualization Method for Distinction of Web News Sentiment	181
<i>Jianwei Zhang, Yukiko Kawai, Tadahiko Kumamoto, and Katsumi Tanaka</i>	
Visually Lossless HTML Compression	195
<i>Przemysław Skibiński</i>	

Search II

Enhancing Web Search by Aggregating Results of Related Web Queries	203
<i>Lin Li, Guandong Xu, Yanchun Zhang, and Masaru Kitsuregawa</i>	
Extracting Structured Data from Web Pages with Maximum Entropy Segmental Markov Model	219
<i>Susan Mengel and Yaoquin Jing</i>	
Blog Ranking Based on Bloggers' Knowledge Level for Providing Credible Information	227
<i>Shinsuke Nakajima, Jianwei Zhang, Yoichi Inagaki, Tomoaki Kusano, and Reym Nakamoto</i>	

Web Services

Multi-source Remote Sensing Images Data Integration and Sharing Using Agent Service	235
<i>Binge Cui, Xin Chen, Pingjian Song, and Rongjie Liu</i>	
An Integrated Declarative Approach to Web Services Composition and Monitoring	247
<i>Ehtesham Zahoore, Olivier Perrin, and Claude Godart</i>	
Formal Identification of Right-Grained Services for Service-Oriented Modeling	261
<i>Yukyong Kim and Kyung-Goo Doh</i>	

Trust and Uncertainty

Start Trusting Strangers? Bootstrapping and Prediction of Trust	275
<i>Florian Skopik, Daniel Schall, and Schahram Dustdar</i>	

Finding Comparative Facts and Aspects for Judging the Credibility of Uncertain Facts	291
<i>Yusuke Yamamoto and Katsumi Tanaka</i>	

Query Evaluation on Probabilistic RDF Databases	307
<i>Hai Huang and Chengfei Liu</i>	

Recommendation and Quality of Service

Recommending Improvements to Web Applications Using Quality-Driven Heuristic Search	321
<i>Stephane Vaucher, Samuel Boclinville, Houari Sahraoui, and Naji Habra</i>	

A Web Recommender System for Recommending, Predicting and Personalizing Music Playlists	335
<i>Zeina Chedrawy and Syed Sibte Raza Abidi</i>	

Verification of Composite Services with Temporal Consistency Checking and Temporal Satisfaction Estimation	343
<i>Azlan Ismail, Jun Yan, and Jun Shen</i>	

User Interfaces

Adaptive Rich User Interfaces for Human Interaction in Business Processes	351
<i>Stefan Pietschmann, Martin Voigt, and Klaus Meißner</i>	

Personalizing the Interface in Rich Internet Applications	365
<i>Irene Garrigós, Santiago Meliá, and Sven Casteleyn</i>	

Towards Improving Web Search: A Large-Scale Exploratory Study of Selected Aspects of User Search Behavior	379
<i>Hiroaki Ohshima, Adam Jatowt, Satoshi Oyama, Satoshi Nakamura, and Katsumi Tanaka</i>	

Web Understanding

An Architecture for Open Cross-Media Annotation Services	387
<i>Beat Signer and Moira C. Norrie</i>	

Video Search by Impression Extracted from Social Annotation	401
<i>Satoshi Nakamura and Katsumi Tanaka</i>	

Single Pattern Generating Heuristics for Pixel Advertisements	415
<i>Alex Knoop, Victor Boskamp, Adam Wojciechowski, and Flavius Frasincar</i>	

Industrial Session II

Generation of Specifications Forms through Statistical Learning for a Universal Services Marketplace	429
<i>Kivanc Ozonat</i>	
An Urban Planning Web Viewer Based on AJAX	443
<i>Miguel R. Luaces, David Trillo Pérez, J. Ignacio Lamas Fonte, and Ana Cerdeira-Pena</i>	
Data Center Hosting Services Governance Portal and Google Map-Based Collaborations	455
<i>Jih-Shyr Yih and Yew-Huey Liu</i>	

Exploiting Structured Information on the Web

Focused Search in Digital Archives	463
<i>Junte Zhang and Jaap Kamps</i>	
Automated Ontology-Driven Metasearch Generation with Metamorph	473
<i>Wolfgang Holzinger, Bernhard Krüpl, and Robert Baumgartner</i>	
Integrated Environment for Visual Data-Level Mashup Development ...	481
<i>Adam Westerski</i>	

Systems

Concept of Competency Examination System in Virtual Laboratory Environment	489
<i>Przemysław Różewski and Emma Kusztna</i>	
Integrating a Usability Model into Model-Driven Web Development Processes	497
<i>Adrian Fernandez, Emilio Insfran, and Silvia Abrahão</i>	
Entry Pairing in Inverted File	511
<i>Hoang Thanh Lam, Raffaele Perego, Nguyen Thoi Minh Quan, and Fabrizio Silvestri</i>	

Data Mining and Querying

STC+ and NM-STC: Two Novel Online Results Clustering Methods for Web Searching	523
<i>Stella Kopidaki, Panagiotis Papadakos, and Yannis Tzitzikas</i>	

Spatio-Temporal-Thematic Analysis of Citizen Sensor Data: Challenges and Experiences 539
Meenakshi Nagarajan, Karthik Gomadam, Amit P. Sheth, Ajith Ranabahu, Raghava Mutharaju, and Ashutosh Jadhav

Visual Mining of Web Logs with DataTube2 555
Florian Sureau, Frederic Plantard, Fatma Bouali, and Gilles Venturini

Querying and Workflow

Keys in XML: Capturing Identification and Uniqueness 563
Michael Karlinger, Millist Vincent, and Michael Schrefl

Query Expansion Based on Query Log and Small World Characteristic 573
Yujuan Cao, Xueping Peng, Zhao Kun, Zhendong Niu, Gx Xu, and Weiqiang Wang

E-Biology Workflows with CALVIN 581
Markus Held, Wolfgang Blochinger, and Moritz Werning

Architecture

Security Policy Definition Framework for SOA-Based Systems 589
Bartosz Brodecki, Piotr Sasak, and Michał Szychowiak

Engineering Accessibility in Web Content Management System Environments 597
Juan Miguel López, Afra Pascual, and Antoni Granollers

Author Index 605