

# **2010 Second International Conference on Advances in Databases, Knowledge, and Data Applications**

**(DBKDA 2010)**

**Menuires, France  
11-16 April 2010**



**IEEE Catalog Number: CFP1086F-PRT**  
**ISBN: 978-1-4244-6081-6**

# 2010 Second International Conference on Advances in Databases, Knowledge, and Data Applications

## DBKDA 2010

### Table of Contents

Preface.....	ix
Organizing Committee.....	xi
Reviewers.....	xiii

---

#### DBKDA 1: Databases and Other Domains I

Analysis of the Quality of Life after an Endoscopic Thoracic Sympathectomy: A Business Intelligence Approach .....	1
<i>Diana Gonçalves, Maribel Yasmina Santos, and Jorge Cruz</i>	
Modeling Topological Relations between Uncertain Spatial Regions in Geo-spatial Databases: Uncertain Intersection and Difference Topological Model .....	7
<i>Ahed Alboody, Florence Sedes, and Jordi Inglada</i>	
Interoperable and Easy-to-Use Web Services for the Bioinformatics Community - A Case Study .....	16
<i>Mikael Åsberg and Lena Strömbäck</i>	

#### DBKDA 2: Databases and Other Domains II

Exploring the Use of Mixed Abstractions in SQL:1999 - A Framework-Based Approach .....	22
<i>Christopher Ireland, David Bowers, Michael Newton, and Kevin Waugh</i>	
Towards Social Network Extraction Using a Graph Database .....	28
<i>Rania Soussi, Marie-Aude Afaure, and Hajer Baazaoui</i>	
Optimistic Synchronization of Cooperative XML Authoring Using Tunable Transaction Boundaries .....	35
<i>Francis Gropengießer and Kai-Uwe Sattler</i>	

Sudoku Bit Arrangement for Combined Demosaicking and Watermarking in Digital Camera .....	41
<i>Pooya Monshizadeh Naini, Sied Mehdi Fakhraie, and Alireza Nasiri Avanaki</i>	

### **DBKDA 3: Databases Technologies I**

Implementing Optimistic Concurrency Control for Persistence Middleware Using Row Version Verification .....	45
<i>Martti Laiho and Fritz Laux</i>	
Comparison of Different Solutions for Solving the Optimization Problem of Large Join Queries .....	51
<i>Dušan Petković</i>	
Understanding Linked Open Data as a Web-Scale Database .....	56
<i>Michael Hausenblas and Marcel Karnstedt</i>	

### **DBKDA 4: Databases Technologies II**

Exploring Social Patterns in Mobile Data .....	62
<i>Parthan Kasarapu, M. Saravanan, and Prasad Garigipati</i>	
Intelligent Network Communications for Distributed Database Systems .....	69
<i>Ismail Omar Hababeh</i>	
Performance Evaluation of an Optimistic Concurrency Control Algorithm for Temporal Databases .....	75
<i>Achraf Makni and Rafik Bouaziz</i>	

### **DBKDA 5: Data Query, Access, Mining and Correlation I**

A New Algorithm for the Containment Problem of Conjunctive Queries with Safe Negation .....	82
<i>Victor Felea</i>	
Can Queries Help to Validate Database Design? .....	91
<i>Christian Kop</i>	
Trend-Based Similarity Search in Time-Series Data .....	97
<i>Martin Suntinger, Hannes Obweger, Josef Schiefer, Philip Limbeck, and Günther Raidl</i>	

### **DBKDA 6: Data Query, Access, Mining and Correlation II**

Efficient Maintenance of k-Dominant Skyline for Frequently Updated Database .....	107
<i>Md. Anisuzzaman Siddique and Yasuhiko Morimoto</i>	
SARI OpenRec – Empowering Recommendation Systems with Business Events .....	111
<i>Philip Limbeck, Martin Suntinger, and Josef Schiefer</i>	
Discovering Informative Syntactic Relationships between Named Entities in Biomedical Literature .....	120
<i>Annalisa Appice, Michelangelo Ceci, and Corrado Loglisci</i>	

## **DBKDA 7: Databases Content Processing**

Towards a Discovering Knowledge Comprehensible and Exploitable by the End-User .....	126
<i>Amel Grissa Touzi</i>	
An Alternative Extension of the FCM Algorithm for Clustering Fuzzy Databases .....	135
<i>Amel Grissa Touzi</i>	
Clustering Relational Database Entities Using K-means .....	143
<i>Farid Bourennani, Mouhcine Guennoun, and Ying Zhu</i>	
Categorization of News Articles: A Model Based on Discriminative Term Extraction Method .....	149
<i>Abhishek Sanwaliya, Kripa Shanker, and Subhas C. Misra</i>	

## **DBKDA 8: Data Management**

Scalable P2P Reconciliation Infrastructure for Collaborative Text Editing .....	155
<i>Mounir Tlili, Reza Akbarinia, Esther Pacitti, and Patrick Valduriez</i>	
Failure-Tolerant Transaction Routing at Large Scale .....	165
<i>Idrissa Sarr, Hubert Naacke, and Stéphane Gançarski</i>	
Phenomena-Based Management of Geotime-Tagged Contents on the Web .....	173
<i>Kyoung-Sook Kim, Koji Zettsu, Yutaka Kidawara, and Yasushi Kiyoki</i>	
Archiving with Athamas: A Framework for Optimized Handling of Domain Knowledge .....	179
<i>Eric R. Schendel and Ahmed M. Mahdy</i>	

## **DBKDA 9: XML-Driven Data, Knowledge and Databases**

Adaptation of Apriori to MapReduce to Build a Warehouse of Relations between Named Entities across the Web .....	185
<i>Jean-Daniel Cryans, Sylvie Ratté, and Roger Champagne</i>	
Service Oriented Tools for Medical Records Management and Versioning .....	190
<i>Afef Samet Ellouze, Rafik Bouaziz, and Ahmed Jmal</i>	
Indexing Semi-structured Data for Efficient Handling of Branching Path Expressions .....	197
<i>Talles Brito, Thiago Ribeiro, and Glédson Elias</i>	
XLeaf: Twig Evaluation with Skipping Loop Joins and Virtual Nodes .....	204
<i>Nils Grimsmo, Truls Amundsen Bjørklund, and Øystein Torbjørnsen</i>	
GN-DTD: Graphical Notations for Describing XML Documents .....	214
<i>Zurinahni Zainol and Bing Wang</i>	

## DBKDA 10: Knowledge and Decision Bases

Using Class-Based Reasoning to Improve the Accuracy of Symbolic Rules in a Hybrid Possibilistic Approach .....	222
<i>Myriam Bounhas and Khaled Mellouli</i>	
A Situational Resource Rating System .....	229
<i>Raphaël Thollot and Marie-Aude Aufaure</i>	
A Data Mining-Based Solution for Detecting Suspicious Money Laundering Cases in an Investment Bank .....	235
<i>Nhien An Le Khac, Sammer Markos, and M-Tahar Kechadi</i>	
Optimized Representation for Classifying Qualitative Data .....	241
<i>Martine Cadot and Alain Lelu</i>	
Towards an Automatic Detection of Sensitive Information in a Database .....	247
<i>Cédric du Mouza, Elisabeth Métais, Nadira Lammari, Jacky Akoka, Tatiana Aubonnet, Isabelle Comyn-Wattiau, Hammou Fadili, and Samira Si-Saïd Cherfi</i>	
<b>Author Index</b> .....	<b>253</b>