



DBKDA 2011

The Third International Conference on Advances in Databases, Knowledge, and
Data Applications

January 23-28, 2011 - St. Maarten,

The Netherlands Antilles

DBKDA 2011 Editors

Friedrich Laux, Reutlingen University, Germany

Lena Strömbäck, Linköpings Universitet, Sweden

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2011) by International Academy, Research, and Industry Association (IARIA)
Please refer to the Copyright Information page.

Printed by Curran Associates, Inc. (2012)

International Academy, Research, and Industry Association (IARIA)
412 Derby Way
Wilmington, DE 19810

Phone: (408) 893-6407
Fax: (408) 527-6351

petre@iaria.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

DBKDA 1: DATA QUALITY AND UNCERTAINTY

Trusted Data in IBM's Master Data Management	1
<i>Przemyslaw Pawluk, Jarek Gryz, Stephanie Hazlewood, Paul Van Run</i>	
A Field Analysis of Relational Database Schemas in Open-source Software	9
<i>Fabien Coelho, Alexandre Aillos, Samuel Pilot, Shamil Valeev</i>	
The Use of Data Cleansing in Mobile Devices	16
<i>Maria Del Pilar Angeles, Francisco Garcia-Ugalde, David Alcudia-Aguilera</i>	

DBKDA 2: DATA QUERY, ACCESS, MINING, AND CORRELATION

Remote Comparison of Database Tables	23
<i>Fabien Coelho</i>	
An Approach for Distributed Streams Mining Using Combination of Naïve Bayes and Decision Trees	29
<i>Meng Zhang, Guojun Mao</i>	
Systems Biology Warehousing: Challenges and Strategies toward Effective Data Integration	34
<i>Thomas Triplet, Gregory Butler</i>	
Studying the Impact of Partition on Data Reduction for Very Large Spatio-temporal Datasets	41
<i>Nhien An Le Khac, Martin Bue, M-Tahar Kechadi</i>	

DBKDA 3: DATA PRIVACY

Hybrid DCT-CT Digital Image Adaptive Watermarking	47
<i>Bijan Fadaeenia, Nasim Zarei</i>	
A Secure Database System Using Homomorphic Encryption Schemes	54
<i>Youssef Gahi, Mouhcine Guennoun, Khalil El-Khatib</i>	
SQRM: An Effective Solution to Suspicious Users in Database	59
<i>Hua Dai, Xiaolin Qin, Guineng Zheng, Ziyue Li</i>	

DBKDA 4: DATABASES AND OTHER DOMAINS

Exploring the Essence of an Object-relational Impedance Mismatch - A Novel Technique Based on Equivalence in the Context of a Framework	65
<i>Christopher Ireland, David Bowers, Michael Newton, Kevin Waugh</i>	
Symbolic Representation and Reasoning for Rectangles with Superposition	71
<i>Takako Konishi, Kazuko Takahashi</i>	
New Fuzzy Multi-class Methode to Train SVM Classifier	77
<i>Taoufik Guernine, Kacem Zeroual</i>	
MAXCLIQUE Problem Solved Using SQL	83
<i>Jose Torres-Jimenez, Nelson Rangel-Valdez, Himer Avila-George, Loreto Gonzalez-Hernandez</i>	

DBKDA 5: XML-DRIVEN DATA, KNOWLEDGE, DATABASES I

Managing and Processing Office Documents in Oracle XML Database	89
<i>Sabina Petride, Asha Tarachandani, Nipun Agarwal, Sam Idicula</i>	
An Algorithm for Clustering XML Data Stream Using Sliding Window	96
<i>Guojun Mao, Mingxia Gao, Wenji Yao</i>	
Societal View on Knowledge Representation and Management: A Case Study of an ICT Consulting Company	102
<i>Cheng-Chieh Huang, Ching-Cha Hsieh</i>	

DBKDA 6: XML-DRIVEN DATA, KNOWLEDGE, DATABASES II

Exploring Statistical Information for Applications-Specific Design and Evaluation of Hybrid XML Storage	108
<i>Lena Strömbäck, Valentina Ivanova, David Hall</i>	
Transforming XPath Expressions into Relational Algebra Expressions With Kleene Closure	114
<i>Yangjun Chen</i>	
Large Software Component Repositories into Small Index Files	122
<i>Marcos P. Paixão, Leila Silva, Talles Brito, Gledson Elias</i>	

DBKDA 7: DATA MANAGEMENT

Intelligent Database Flexible Querying System by Approximate Query Processing	128
<i>Oussama Tlili, Minyar Sassi, Habib Ounelli</i>	
IMA: Identification of Multi-author Student Assignment Submissions Using a Data	136
<i>Kathryn Burn-Thornton, Tim Burman</i>	
A Representation of Certain Answers for Views and Queries with Negation	142
<i>Victor Felea</i>	
Formation of Triads in Mobile Telecom Network	148
<i>Saravanan Mohan, Naren Krishna</i>	

DBKDA 8: DATABASES TECHNOLOGIES

Ambients of Persistent Concurrent Objects	155
<i>Suad Alagic, Akinori Yonezawa</i>	
Modeling Temporal Databases and Temporal Constraints	162
<i>Mohamed Mkaouar, Mohamed Moalla, Rafik Bouaziz</i>	
Optimal Query Operator Materialization Strategy for Hybrid Databases	169
<i>Martin Grund, Jens Krueger, Matthias Kleine, Alexander Zeier, Hasso Plattner</i>	
From Synchronous Corpus to Monitoring Corpus, LIVAC: The Chinese Case	175
<i>Benjamin K. Tsou, Andy C. Chin, Oi Yee Kwong</i>	

DBKDA 9: ADVANCES IN FUNDAMENTALS ON DATABASES

Efficient Access to Non-Sequential Elements of a Search Tree	181
<i>Lubomir Stanchev</i>	
An Optimistic Transaction Model for a Disconnected Integration Architecture	186
<i>Tim Lessner, Fritz Laux, Thomas Connolly, Cherif Branki, Malcolm Crowe, Martti Laiho</i>	
A Concept for a Compression Scheme of Medium-Sparse Bitmaps	192
<i>Andreas Schmidt, Mirko Beine</i>	
Merging Differential Updates in In-Memory Column Store	196
<i>Jens Krueger, Martin Grund, Johannes Wust, Alexander Zeier, Hasso Plattner</i>	
Author Index	