

Kim Viborg Andersen
John Debenham
Roland Wagner (Eds.)

LNCS 3588

Database and Expert Systems Applications

16th International Conference, DEXA 2005
Copenhagen, Denmark, August 2005
Proceedings

DEXA 2005

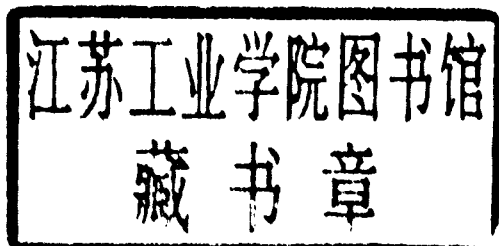


Springer

Kim Viborg Andersen · John Debenham
Roland Wagner (Eds.)

Database and Expert Systems Applications

16th International Conference, DEXA 2005
Copenhagen, Denmark, August 22-26, 2005
Proceedings



Springer

Volume Editors

Kim Viborg Andersen
Copenhagen Business School
Njalsgade 80, 2300 Copenhagen S, Denmark
E-mail: kva.inf@cbs.dk

John Debenham
University of Technology, Sydney
P.O. Box 123, Broadway, NSW 2007, Australia
E-mail: debenham@it.uts.edu.au

Roland Wagner
University of Linz
Altenbergerstr. 69, 4040 Linz, Austria
E-mail: rrwagner@faw.uni-linz.ac.at

Library of Congress Control Number: 2005930886

CR Subject Classification (1998): H.2, H.4, H.3, H.5, I.2, J.1

ISSN 0302-9743
ISBN-10 3-540-28566-0 Springer Berlin Heidelberg New York
ISBN-13 978-3-540-28566-3 Springer Berlin Heidelberg New York

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, re-use of illustrations, recitation, broadcasting, reproduction on microfilms or in any other way, and storage in data banks. Duplication of this publication or parts thereof is permitted only under the provisions of the German Copyright Law of September 9, 1965, in its current version, and permission for use must always be obtained from Springer. Violations are liable to prosecution under the German Copyright Law.

Springer is a part of Springer Science+Business Media
springeronline.com

© Springer-Verlag Berlin Heidelberg 2005
Printed in Germany

Typesetting: Camera-ready by author, data conversion by Scientific Publishing Services, Chennai, India
Printed on acid-free paper SPIN: 11546924 06/3142 5 4 3 2 1 0

Preface

DEXA 2005, the 16th International Conference on Database and Expert Systems Applications, was held at the Copenhagen Business School, Copenhagen, Denmark, from August 22 to 26, 2005. The success of the DEXA series has partly been due to the way in which it has kept abreast of recent developments by spawning specialized workshops and conferences each with its own proceedings. In 2005 the DEXA programme was co-located with the 7th International Conference on Data Warehousing and Knowledge Discovery [DaWaK 2005], the 6th International Conference on Electronic Commerce and Web Technologies [EC-Web 2005], the 4th International Conference on Electronic Government [EGOV 2005], the 2nd International Conference on Trust, Privacy, and Security in Digital Business [TrustBus 2005], the 2nd International Conference on Industrial Applications of Holonic and Multi-agent Systems [HoloMAS 2005], as well as 19 specialized workshops.

These proceedings are the result of a considerable amount of hard work. Beginning with the preparation of submitted papers, the papers went through the reviewing process. This process was supported by online discussion between the reviewers to determine the final conference program. The authors of accepted papers revised their manuscripts to produce this fine collection. DEXA 2005 received 390 submissions, and from those the Program Committee selected the 92 papers in these proceedings. This year the reviewing process generated more than 1000 referee reports. The hard work of the authors, the referees and the Program Committee is gratefully acknowledged.

Profound thanks go to those institutions that actively supported this conference and made it possible. These are:

- Copenhagen Business School
- Danish Ministry of Science, Technology and Innovation
- DEXA Association
- Austrian Computer Society
- Research Institute for Applied Knowledge Processing (FAW)

The success and reputation of the DEXA series and DEXA 2005 would not have been possible without a high level of organization. Our thanks go to Andreas Dreiling (FAW, University of Linz) and Monika Neubauer (FAW, University of Linz). And our special thanks go to Gabriela Wagner, manager of the DEXA organization, and manager of the whole DEXA 2005 event. The editors express their great appreciation for her tireless dedication over the past 16 years which has established the high reputation that DEXA enjoys today, and made DEXA 2005 a major event.

June 2005

John Debenham
Roland R. Wagner

Program Committee

General Chairperson

Kim Viborg Andersen, Copenhagen Business School, Denmark

Conference Program Chairpersons

John Debenham, University of Technology, Sydney, Australia

Roland R. Wagner, FAW, University of Linz, Austria

Workshop Chairpersons

A Min Tjoa, Technical University of Vienna, Austria

Roland R. Wagner, FAW, University of Linz, Austria

Program Committee

Witold Abramowicz, Poznan University of Economics, Poland

Michel Adiba, IMAG — Laboratoire LSR, France

Hamideh Afsarmanesh, University of Amsterdam, The Netherlands

Ala Al-Zobaidie, University of Greenwich, UK

Walid G. Aref, Purdue University, USA

Ramazan S. Aygun, University of Alabama in Huntsville, USA

Leonard Barolli, Fukuoka Institute of Technology (FIT), Japan

Kurt Bauknecht, Universität Zürich, Switzerland

Trevor Bench-Capon, University of Liverpool, UK

Elisa Bertino, Università di Milano, Italy

Bishwaranjan Bhattacharjee, IBM TJ Watson Research Center, USA

Sourav S Bhowmick, Nanyang Technological University, Singapore

Christian Böhm, University of Munich, Germany

Omran Bukhres, Purdue University School of Science, USA

Luis Camarinah-Matos, New University of Lisbon, Portugal

Antonio Cammelli, CNR, Italy

Malu Castellanos, Hewlett-Packard Laboratories, USA

Tiziana Catarci, Università di Roma "La Sapienza", Italy

Aaron Ceglar, Flinders University of South Australia, Australia

Wojciech Cellary, University of Economics at Poznan, Poland

Elizabeth Chang, Curtin University, Australia

Sudarshan S. Chawathe, University of Maryland, USA

Ming-Syan Chen, National Taiwan University, Taiwan

Rosine Cicchetti, IUT, University of Marseille, France
 Carlo Combi, Università degli Studi di Verona, Italy
 Isabel Cruz, University of Illinois at Chicago, USA
 Misbah Deen, University of Keele, UK
 Elisabetta Di Nitto, Politecnico di Milano, Italy
 Nina Edelweiss, Universidade Federal do Rio Grande do Sul, Brazil
 Johann Eder, University of Klagenfurt, Austria
 Amr El Abbadi, University of California, USA
 Gregor Engels, University of Paderborn, Germany
 Tomoya Enokido, Rissho University, Japan
 Peter Fankhauser, Fraunhofer IPSI, Germany
 Ling Feng, University of Twente, The Netherlands
 Eduardo Fernandez, Florida Atlantic University, USA
 Simon Field, Matching Systems Ltd., Switzerland
 Burkhard Freitag, University of Passau, Germany
 Mariagrazia Fugini, Politecnico di Milano, Italy
 Antonio L. Furtado, University of Rio de Janeiro, Brazil
 Manolo Garcia-Solaco, IS Consultant, USA
 Georges Gardarin, University of Versailles, France
 Alexander Gelbukh, CIC, Instituto Politecnico Nacional (IPN), Mexico
 Parke Godfrey, York University, Toronto Canada
 Paul Grefen, Eindhoven University of Technology, The Netherlands
 William Grosky, University of Michigan, USA
 Le Gruenwald, University of Oklahoma, USA
 Abdelkader Hameurlain, University of Toulouse, France
 Wook-Shin Han, Kyungpook National University, Korea
 Igor T. Hawryszkiewicz, University of Technology, Sydney, Australia
 Wynne Hsu, National University of Singapore, Singapore
 Mohamed Ibrahim, University of Greenwich, UK
 H.-Arno Jacobsen, University of Toronto, Canada
 Gerti Kappel, Vienna University of Technology, Austria
 Dimitris Karagiannis, University of Vienna, Austria
 Randi Karlsen, University of Tromsø, Norway
 Rudolf Keller, Zühlke Engineering AG, Switzerland
 Latifur Khan, University of Texas at Dallas, USA
 Myoung Ho Kim, KAIST, Korea
 Masaru Kitsuregawa, Tokyo University, Japan
 Gary J. Koehler, University of Florida, USA
 John Krogstie, SINTEF, Norway
 Petr Kroha, Technische Universität Chemnitz-Zwickau, Germany
 Josef Küng, FAW, University of Linz, Austria
 Lotfi Lakhal, University of Marseille, France
 Christian Lang, IBM TJ Watson Research Center, USA
 Jiri Lazansky, Czech Technical University, Czech Republic
 Young-Koo Lee, University of Illinois, USA
 Mong Li Lee, National University of Singapore, Singapore
 Michel Leonard, Université de Genève, Switzerland

Tok Wang Ling, National University of Singapore, Singapore
Volker Linnemann, University of Luebeck, Germany
Mengchi Liu, Carleton University, Canada
Peri Loucopoulos, UMIST, UK
Sanjai Kumar Madria, University of Missouri-Rolla, USA
Akifumi Makinouchi, Kyushu University, Japan
Vladimir Marik, Czech Technical University, Czech Republic
Simone Marinai, University of Florence, Italy
Heinrich C. Mayr, University of Klagenfurt, Austria
Subhasish Mazumdar, New Mexico Tech, USA
Dennis McLeod, University of Southern California, USA
Elisabeth Metais, CNAM, France
Mukesh Mohania, IBM-IRL, India
Reagan Moore, San Diego Supercomputer Center, USA
Tadeusz Morzy, Poznan University of Technology, Poland
Noureddine Mouaddib, University of Nantes, France
Günter Müller, Universität Freiburg, Germany
Erich J. Neuhold, GMD-IPSI, Germany
Wilfred Ng, University of Science & Technology, Hong Kong, China
Matthias Nicola, IBM Silicon Valley Lab, USA
Shojiro Nishio, Osaka University, Japan
Gultekin Ozsoyoglu, Case Western Reserve University, USA
Georgios Pangalos, University of Thessaloniki, Greece
Dimitris Papadias, University of Science & Technology, Hong Kong, China
Stott Parker, University of California, Los Angeles, USA
Oscar Pastor, Universidad Politecnica de Valencia, Spain
Jignesh M. Patel, University of Michigan, USA
Verónica Peralta, Universidad de la Republica, Uruguay
Günter Pernul, University of Regensburg, Germany
Evaggelia Pitoura, University of Ioannina, Greece
Alexandra Poulouvassilis, University of London, UK
Gerald Quirchmayr, Univ. of Vienna, Austria and Univ. of South Australia, Australia
Fausto Rabitti, CNUCE-CNR, Italy
Wenny Rahayu, La Trobe University, Australia
Isidro Ramos, Technical University of Valencia, Spain
P. Krishna Reddy, International Institute of Information Technology, India
Werner Retschitzegger, University of Linz, Austria
Norman Revell, Middlesex University, UK
Sally Rice, University of South Australia, Australia
Colette Rolland, University of Paris I, Sorbonne, France
Elke Rundensteiner, Worcester Polytechnic Institute, USA
Domenico Sacca, University of Calabria, Italy
Arnaud Sahuguët, Bell Laboratories, Lucent Technologies, USA
Simonas Saltenis, Aalborg University, Denmark
Marinette Savonnet, Université de Bourgogne, France
Erich Schweighofer, University of Vienna, Austria
Ming-Chien Shan, Hewlett-Packard Laboratories, USA

Keng Siau, University of Nebraska-Lincoln, USA
Giovanni Soda, University of Florence, Italy
Uma Srinivasan, CSIRO, Australia
Bala Srinivasan, Monash University, Australia
Olga Stepankova, Czech Technical University, Czech Republic
Zbigniew Struzik, University of Tokyo, Japan
Makoto Takizawa, Tokyo Denki University, Japan
Katsumi Tanaka, Kyoto University, Japan
Zahir Tari, University of Melbourne, Australia
Stephanie Teufel, University of Fribourg, Switzerland
Jukka Teuhola, University of Turku, Finland
Bernd Thalheim, Technical University of Cottbus, Germany
Jean-Marc Thevenin, University of Toulouse, France
Helmut Thoma, IBM Global Services, Basel, Switzerland
A Min Tjoa, Technical University of Vienna, Austria
Roland Traunmüller, University of Linz, Austria
Aphrodite Tsalgatidou, University of Athens, Greece
Susan Urban, Arizona State University, USA
Genoveva Vargas-Solar, LSR-IMAG, France
Krishnamurthy Vidyasankar, Memorial Univ. of Newfoundland, Canada
Pavel Vogel, TU München, Germany
Kyu-Young Whang, KAIST, Korea
Michael Wing, Middlesex University, UK
Vilas Wuwongse, Asian Institute of Technology, Thailand
Arkady Zaslavsky, Monash University, Australia

External Reviewers

Claudio Muscogiuri
Rodolfo Stecher
Patrick Lehti
Holger Kirchner
Aware Stewart
Predrag Knezevic
Bhaskar Mehta
Soloviev Sergei
Claudia Lucia Roncancio
Bruno Defude
Edgard Benitez
José Hilario Canós
Artur Boronat
José Carsí
Patricio Letelier
Wee Hyong Tok
Hanyu Li
Young-ho Park
Jung Hoon Lee
Ki Hoon Lee
Kyriakos Mouratidis
Hui Zhao
Xiang Lian
Ying Yang
Alexander Markowetz
Yiping Ke
James Cheng
An Lu
Lin Deng
Ho-Lam Lau
Woong-Kee Loh
Jae-Gil Lee
Jarogniew Rykowski
Krzysztof Walczak
Wojciech Wiza
Krzysztof Banaśkiewicz
Dariusz Ceglarek
Agata Filipowska
Tomasz Kaczmarek
Karol Wieloch

Marek Wiśniewski
Simon Msanjila
Irina Neaga
Pedro J. Valderas
Tsutomu Terada
Angela Bonifati
Eugenio Cesario
Alfredo Cuzzocrea
Filippo Furfaro
Andrea Gualtieri
Antonella Guzzo
Massimo Ruffolo
Cristina Sirangelo
Domenico Ursino
Sarita Bassil
Bo Xu
Huiyong Xiao
Feng Yaokai
Yi Ma
Noel Novelli
Choudur Lakshminarayan
Matthias Beck
Gerhard Bloch
Claus Dzierstek
Tobias Geis
Michael Guppenberger
Markus Lehmann
Petra Schwaiger
Wolfgang Völkl
Franz Weitzl
Anna-Brith Jakobsen
Gianpaolo Cugola
Paolo Selvini
Jan Goossenaerts
Maurice van Keulen
Hajo Reijers
Pascal van Eck
Richard Brinkman
Alex Norta
Dimitre Kostadinov

Lydia Silva
Artur Boronat
José Hilario Canós
Pepe Carsí
Patricio Letelier
Diego Milano
Stephen Kimani
Enrico Bertini
Giuseppe Santucci
Monica Scannapieco
Silvia Gabrielli
Ling ChenQiankun Zhao
Erwin Leonardi
Yang Xiao
Ning Liao
Mamoun Awad
Ashraful Alam
Ping Wu
Shyam Anthony
Nagender Bandi
Fatih Emekci
Ahmed Metwally
Masatake Nakanishi
Changqing Li

Ioana Stanoi
Lipyeow Lim
Milind Naphade
Lars Rosenhainer
Jörg Gilberg
Wolfgang Dobmeier
Torsten Priebe
Christian Schläger
Norbert Meckl
Christos Ilioudis
Jacek Fraczek
Juliusz Jezierski
Robert Wrembel
Mikolaj Morzy
Jelena Tesic
Hiram Calvo-Castro
Hector Jimenez-Salazar
Sofia Galicia-Haro
Grigori Sidorov
George Athanasopoulos
Panagiotis Bouros
Eleni Koutrouli
George-Dimitrios Kapos
Thomi Pilioura

Table of Contents

How to Design a Loose Inter-organizational Workflow? An Illustrative Case Study <i>Lotfi Bouzguenda</i>	1
Recovering from Malicious Attacks in Workflow Systems <i>Yajie Zhu, Tai Xin, Indrakshi Ray</i>	14
Towards Mining Structural Workflow Patterns <i>Walid Gaaloul, Karim Baïna, Claude Godart</i>	24
Avoiding Error-Prone Reordering Optimization During Legal Systems Migration <i>Youlin Fang, Heng Wang, Dongqing Yang</i>	34
Automated SuperSQL Query Formulation Based on Statistical Characteristics of Data <i>Jun Nemoto, Motomichi Toyama</i>	44
Distribution Rules for Array Database Queries <i>Alex van Ballegooij, Roberto Cornacchia, Arjen P. de Vries, Martin Kersten</i>	55
Efficient Processing of Distributed Top- <i>k</i> Queries <i>Hailing Yu, Hua-Gang Li, Ping Wu, Divyakant Agrawal, Amr El Abbadi</i>	65
Evaluating Mid-(<i>k</i> , <i>n</i>) Queries Using B ⁺ -Tree <i>Dongseop Kwon, Taewon Lee, Sukho Lee</i>	75
On Effective E-mail Classification via Neural Networks <i>Bin Cui, Anirban Mondal, Jialie Shen, Gao Cong, Kian-Lee Tan</i>	85
An Adaptive Spreading Activation Scheme for Performing More Effective Collaborative Recommendation <i>Peng Han, Bo Xie, Fan Yang, Rui-Min Shen</i>	95
Feature Selection by Ordered Rough Set Based Feature Weighting <i>Qasem A. Al-Radaideh, Md Nasir Sulaiman, Mohd Hasan Selamat, Hamidah Ibrahim</i>	105

XIV Table of Contents

A Full-Text Framework for the Image Retrieval Signal/Semantic Integration

Mohammed Belkhatir, Philippe Mulhem, Yves Chiaramella 113

A New Algorithm for Content-Based Region Query in Multimedia Databases

Dumitru Dan Burdescu, Liana Stanescu 124

SM3+: An XML Database Solution for the Management of MPEG-7 Descriptions

Yang Chu, Liang-Tien Chia, Sourav S. Bhowmick 134

LocalRank: Ranking Web Pages Considering Geographical Locality by Integrating Web and Databases

Jianwei Zhang, Yoshiharu Ishikawa, Sayumi Kurokawa, Hiroyuki Kitagawa 145

My Portal Viewer: Integration System Based on User Preferences for News Web Sites

Yukiko Kawai, Daisuke Kanjo, Katsumi Tanaka 156

Web Query Expansion by WordNet

Zhiguo Gong, Chan Wa Cheang, Leong Hou U 166

Webified Video: Media Conversion from TV Programs to Web Content for Cross-Media Information Integration

Hisashi Miyamori, Katsumi Tanaka 176

A Caching Model for Real-Time Databases in Mobile Ad-Hoc Networks

Yanhong Li, Le Gruenwald 186

Adaptive Query Processing in Point-Transformation Schemes

Byunggu Yu 197

On the General Signature Trees

Yangjun Chen 207

Optimizing I/O Costs of Multi-dimensional Queries Using Bitmap Indices

Doron Rotem, Kurt Stockinger, Kesheng Wu 220

Environmental Noise Classification for Multimedia Libraries

Stéphane Bressan, Tan Boon Tiang 230

Quality-Aware Replication of Multimedia Data

Yi-Cheng Tu, Jingfeng Yan, Sunil Prabhakar 240

Rotation and Gray-Scale Invariant Classification of Textures Improved by Spatial Distribution of Features <i>Gouchol Pok, Keun Ho Ryu, Jyh-charn Lyu</i>	250
Zooming Cross-Media: A Zooming Description Language Coding LOD Control and Media Transition <i>Tadashi Araki, Hisashi Miyamori, Mitsuru Minakuchi, Ai Kato, Zoran Stejic, Yasushi Ogawa, Katsumi Tanaka</i>	260
A Histogram-Based Selectivity Estimator for Skewed XML Data <i>Hanyu Li, Mong Li Lee, Wynne Hsu</i>	270
Accelerating XML Structural Join by Partitioning <i>Nan Tang, Jeffrey Xu Yu, Kam-Fai Wong, Kevin Lü, Jianxin Li</i>	280
Efficient Dissemination of Filtered Data in XML-Based SDI <i>Jae-Ho Choi, Young-Jin Yoon, SangKeun Lee</i>	290
Efficient Processing of Ordered XML Twig Pattern <i>Jiaheng Lu, Tok Wang Ling, Tian Yu, Changqing Li, Wei Ni</i>	300
A Flexible Role-Based Delegation Model Using Characteristics of Permissions <i>Dong-Gue Park, You-Ri Lee</i>	310
Provable Data Privacy <i>Kilian Stoffel, Thomas Studer</i>	324
Formalizing the XML Schema Matching Problem as a Constraint Optimization Problem <i>Marko Smiljanić, Maurice van Keulen, Willem Jonker</i>	333
Evolving XML Schemas and Documents Using UML Class Diagrams <i>Eladio Domínguez, Jorge Lloret, Ángel L. Rubio, María A. Zapata</i> ...	343
Building XML Documents and Schemas to Support Object Data Exchange and Communication <i>Carlo Combi, Giuseppe Pozzi</i>	353
Intensional Encapsulations of Database Subsets via Genetic Programming <i>Aybar C. Acar, Amihai Motro</i>	365
Preferred Skyline: A Hybrid Approach Between SQLf and Skyline <i>Marlene Goncalves, María-Esther Vidal</i>	375

Resolution of Semantic Queries on a Set of Web Services <i>Jordi Paraire, Rafael Berlanga, Dolores M. Llidó</i>	385
Detecting Semantically Correct Changes to Relevant Unordered Hidden Web Data <i>Vladimir Kovalev, Sourav S. Bhowmick</i>	395
Design for All in Information Technology: A Universal Concern <i>Jenny Darzentas, Klaus Miesenberger</i>	406
An Efficient Scheme of Update Robust XML Numbering with XML to Relational Mapping <i>Hyunchul Kang, Young-Hyun Kim</i>	421
On Maintaining XML Linking Integrity During Update <i>Eric Pardede, J. Wenny Rahayu, David Taniar</i>	431
On the Midpoint of a Set of XML Documents <i>Alberto Abelló, Xavier de Palol, Mohand-Saïd Hacid</i>	441
Full-Text and Structural XML Indexing on B ⁺ -Tree <i>Toshiyuki Shimizu, Masatoshi Yoshikawa</i>	451
XML-Based e-Barter System for Circular Supply Exchange <i>Shuichi Nishioka, Yuri Yaguchi, Takahiro Hamada, Makoto Onizuka, Masashi Yamamuro</i>	461
Context-Sensitive Complementary Information Retrieval for Text Stream <i>Qiang Ma, Katsumi Tanaka</i>	471
Detecting Changes to Hybrid XML Documents Using Relational Databases <i>Erwin Leonardi, Sri L. Budiman, Sourav S. Bhowmick</i>	482
An Index-Based Method for Timestamped Event Sequence Matching <i>Sanghyun Park, Jung-Im Won, Jee-Hee Yoon, Sang-Wook Kim</i>	493
Time Parameterized Interval R-Tree for Tracing Tags in RFID Systems <i>ChaeHoon Ban, BongHee Hong, DongHyun Kim</i>	503
Efficient Algorithms for Constructing Time Decompositions of Time Stamped Documents <i>Parvathi Chundi, Rui Zhang, Daniel J. Rosenkrantz</i>	514

Querying by Sketch Geographical Databases and Ambiguities <i>Fernando Ferri, Patrizia Grifoni, Maurizio Rafanelli</i>	524
Foundations for Automated Trading — It's the Information That Matters <i>John Debenham</i>	534
Intensional Query Answering to XQuery Expressions <i>Simone Gasparini, Elisa Quintarelli</i>	544
Optimizing Sorting and Duplicate Elimination in XQuery Path Expressions <i>Mary Fernández, Jan Hidders, Philippe Michiels, Jérôme Siméon, Roel Vercammen</i>	554
SIOUX: An Efficient Index for Processing Structural XQueries <i>Georges Gardarin, Laurent Yeh</i>	564
Searching Multi-hierarchical XML Documents: The Case of Fragmentation <i>Alex Dekhtyar, Ionut E. Iacob, Srikanth Methuku</i>	576
Semantic Storage: A Report on Performance and Flexibility <i>Edgar R. Weippl, Markus Klemen, Manfred Linnert, Stefan Fenz, Gernot Goluch, A Min Tjoa</i>	586
Towards Truly Extensible Database Systems <i>Ralph Acker, Roland Pieringer, Rudolf Bayer</i>	596
Transaction Management with Integrity Checking <i>Davide Martinenghi, Henning Christiansen</i>	606
An Optimal Skew-insensitive Join and Multi-join Algorithm for Distributed Architectures <i>Mostafa Bamha</i>	616
Evaluation and NLP <i>Didier Nakache, Elisabeth Metais, Jean François Timsit</i>	626
Movies Recommenders Systems: Automation of the Information and Evaluation Phases in a Multi-criteria Decision-Making Process <i>Michel Plantié, Jacky Montmain, Gérard Dray</i>	633
On Building a DyQE - A Medical Information System for Exploring Imprecise Queries <i>Dennis Wollersheim, Wenny J. Rahayu</i>	645

A Proposal for a Unified Process for Ontology Building: UPON <i>Antonio De Nicola, Michele Missikoff, Roberto Navigli</i>	655
Transforming Software Package Classification Hierarchies into Goal-Based Taxonomies <i>Claudia Ayala, Xavier Franch</i>	665
Approximations of Concept Based on Multielement Bounds <i>Jianjiang Lu, Baowen Xu, Dazhou Kang, Yanhui Li, Peng Wang</i>	676
Query Expansion Using Web Access Log Files <i>Yun Zhu, Le Gruenwald</i>	686
An XML Approach to Semantically Extract Data from HTML Tables <i>Jixue Liu, Zhuoyun Ao, Ho-Hyun Park, Yongfeng Chen</i>	696
Automatic Generation of Semantic Fields for Resource Discovery in the Semantic Web <i>I. Navas, I. Sanz, J.F. Aldana, R. Berlanga</i>	706
JeromeDL - Adding Semantic Web Technologies to Digital Libraries <i>Sebastian Ryszard Kruk, Stefan Decker, Lech Zieborak</i>	716
Analysis and Visualization of the DX Community with Information Extracted from the Web <i>F.T. de la Rosa, M.T. Gómez-López, R.M. Gasca</i>	726
Learning Robust Web Wrappers <i>B. Fazzinga, S. Flesca, A. Tagarelli</i>	736
Control-Based Quality Adaptation in Data Stream Management Systems <i>Yi-Cheng Tu, Mohamed Hefeeda, Yuni Xia, Sunil Prabhakar, Song Liu</i>	746
Event Composition and Detection in Data Stream Management Systems <i>Mukesh Mohania, Dhruv Swamini, Shyam Kumar Gupta, Sourav Bhowmick, Tharam Dillon</i>	756
Automatic Parsing of Sports Videos with Grammars <i>Fei Wang, Kevin J. Lü, Jing-Tao Li, Jianping Fan</i>	766
Improved Sequential Pattern Mining Using an Extended Bitmap Representation <i>Chien-Liang Wu, Jia-Ling Koh, Pao-Ying An</i>	776

Dimension Transform Based Efficient Event Filtering for Symmetric Publish/Subscribe System <i>Botao Wang, Masaru Kitsuregawa</i>	786
Scalable Distributed Aggregate Computations Through Collaboration <i>Leonidas Galanis, David J. DeWitt</i>	797
Schemas and Queries over P2P <i>Pedro Furtado</i>	808
Threshold Based Declustering in High Dimensions <i>Ali Şaman Tosun</i>	818
XG: A Data-Driven Computation Grid for Enterprise-Scale Mining <i>Radu Sion, Ramesh Natarajan, Inderpal Narang, Wen-Syan Li, Thomas Phan</i>	828
A Rule System for Heterogeneous Spatial Reasoning in Geographic Information System <i>Haibin Sun, Wenhui Li</i>	838
Querying a Polynomial Object-Relational Constraint Database in Model-Based Diagnosis <i>M.T. Gómez-López, R.M. Gasca, C. Del Valle, F.T. de la Rosa</i>	848
A Three-Phase Knowledge Extraction Methodology Using Learning Classifier System <i>An-Pin Chen, Kuang-Ku Chen, Mu-Yen Chen</i>	858
A Replica Allocation Method Adapting to Topology Changes in Ad Hoc Networks <i>Hideki Hayashi, Takahiro Hara, Shojiro Nishio</i>	868
On a Collaborative Caching in a Peer-to-Peer Network for Push-Based Broadcast <i>Kazuhiko Maeda, Wataru Uchida, Takahiro Hara, Shojiro Nishio</i>	879
An Efficient Location Encoding Method Based on Hierarchical Administrative District <i>SangYoon Lee, Sanghyun Park, Woo-Cheol Kim, Dongwon Lee</i>	890
Personalized and Community Decision Support in eTourism Intermediaries <i>Chien-Chih Yu</i>	900