

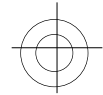


CIKM NAPA VALLEY 2008
ACM 17th CONFERENCE ON INFORMATION and KNOWLEDGE MANAGEMENT



**DATABASE
INFORMATION RETRIEVAL
KNOWLEDGE MANAGEMENT**

**OCTOBER 26-30, 2008
NAPA VALLEY, CALIFORNIA**



**WORKSHOP
PROCEEDINGS**



[Main Page](#)[BooksOnline'08](#)[DOLAP'08](#)[DTMBIO'08](#)[GIR'08](#)[iNEWS'08](#)[LSDS-IR'08](#)[ONISW'08](#)[PAIR'08](#)[PIKM'08](#)[SSM'08](#)[WICOW'08](#)[WIDM'08](#)

Sponsored by

SIGIR

Welcome to the CIKM 2008 Co-Located Workshops Proceedings on CD

These CD-proceedings are a cross-platform medium which allows Windows and Mac users to share the same directory structure and access a common set of files. To navigate this CD a graphical web browser is required. The full-text content on this disk is in Adobe PDF format. A version of Adobe Acrobat Reader is required to view the content. Please be sure you have the latest version and updates of [Adobe Acrobat Reader](#) installed.



Copyright © 2008 by the Association for Computing Machinery, Inc. (ACM). Permission to make digital or hard copies of portions of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyright for components of this work owned by others than ACM must be honored. Abstracting with credit is permitted. To copy otherwise, to republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. Request permission to republish from:

Publications Dept., ACM, Inc. Fax +1 (212) 869-0481 or permissions@acm.org

For other copying of articles that carry a code at the bottom of the first or last page, copying is permitted provided that the per-copy fee indicated in the code is paid through the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

Notice to Past Authors of ACM-Published Articles

ACM intends to create a complete electronic archive of all articles and/or other material previously published by ACM. If you have written a work that has been previously published by ACM in any journal or conference proceedings prior to 1978, or any SIG Newsletter at any time, and you do NOT want this work to appear in the ACM Digital Library, please inform permissions@acm.org, stating the title of the work, the author(s), and where and when published.

ISBN: 978-1-60558-250-4

Additional copies may be ordered prepaid from:
 ACM Order Department
 General Post Office
 P.O. Box 30777, New York, NY 10087-0777

ACM Order Number 605089

Foreword

It is our great pleasure to welcome you to the 11th ACM International Workshop on Data Warehousing and OLAP – DOLAP’08. This year’s workshop continues its tradition of being the premier forum where both researchers and practitioners can share their findings in theoretical foundations, current methodologies, practical experiences, and new research directions in the areas of data warehousing and on-line analytical processing. The mission of the workshop is to explore novel research directions and emerging application domains in the areas of data warehousing and OLAP, and identify new directions for future research and development. DOLAP gives researchers and practitioners a unique opportunity to share their perspectives with others interested in the various aspects of access control.

The call for papers attracted 29 submissions from 16 different countries. The program committee accepted 12 papers that cover a variety of topics, including performance optimization, multidimensional queries, multidimensional design and ETL, and tools for data warehousing and OLAP. The papers in the area of *performance optimization* address the compression of bitmap indexes, the fragmentation of XML data, and the order of transactions. The papers on *multidimensional queries* present novel methods for the aggregation of spatial measures, the improvement of the estimation accuracy of aggregates, and the management of aggregations by means of User Defined Functions. The papers on *multidimensional modeling and ETL* insight into the management of referential integrity violation, the solution of summarizability problems, and the generation of natural language representations for the ETL process requirements and operations. Finally, the papers on *tools for data warehousing and OLAP* deal with the recommendation of OLAP queries, the semantic annotation of measures, and the automatic translation of queries from the conceptual level to the actual implementation. We hope that these proceedings will serve as a valuable reference for warehousing and OLAP researchers and developers.

On behalf of the Program Committee we would like to thank all the authors of submitted papers for their interest in the workshop and the high quality of the submitted papers. We would also like to thank all the referees (both PC members and external reviewers) for their careful and dedicated work, both during the reviewing and the discussion phases. Working in cooperation with this program committee has been both a particular honour and a pleasure. Finally, we would like to express our gratitude to the members of the Organizing Committee of CIKM’08, the DOLAP Steering Committee and our sponsors for their support in organizing this workshop.

We hope that you will find this program interesting and thought-provoking and that the workshop will provide you with a valuable opportunity to share ideas with other researchers and practitioners from institutions around the world.

Il-Yeol Song
DOLAP’08 General Chair
Drexel University, USA

Alberto Abelló
DOLAP’08 Program Chair
Universitat Politècnica de Catalunya, Spain



Main Page
BooksOnline'08
DOLAP'08
DTMBIO'08
GIR'08
iNEWS'08
LSDS-IR'08
ONISW'08
PAIR'08
PIKM'08
SSM'08
WICOW'08
WIDM'08

DOLAP 2008 Table of Contents

Foreword

Il-Yeol Song (*Drexel University*)

Alberto Abelló (*Universitat Politècnica de Catalunya, Spain*)

Organization

Author Index

Session 1: Performance Optimization and Tuning

Histogram-Aware Sorting for Enhanced Word-Aligned Compression in Bitmap Indexes (Page 1)

Owen Kaser (*University of New Brunswick*)

Daniel Lemire (*Université du Québec à Montréal*)

Kamel Aouiche (*Université du Québec à Montréal*)

Data Mining-based Fragmentation of XML Data Warehouses (Page 9)

Hadj Mahboubi (*University of Lyon*)

Jérôme Darmont (*University of Lyon*)

Transaction Reordering with Application to Synchronized Scans (Page 17)

Gang Luo (*IBM T.J. Watson Research Center*)

Jeffrey F. Naughton (*University of Wisconsin-Madison*)

Curt J. Ellmann (*Teradata*)

Michael W. Watzke (*Teradata*)

Session 2: Multidimensional Modeling and Queries: Languages, Optimization, Processing

A Set of Aggregation Functions for Spatial Measures (Page 25)

Joel da Silva (*Federal University of Pernambuco*)

Valéria Cesário Times (*Federal University of Pernambuco*)

Ana Carolina Salgado (*Federal University of Pernambuco*)

Clenúbio Souza (*Federal University of Pernambuco*)

Robson do Nascimento Fidalgo (*Federal University of Pernambuco*)

Anjolina Grisi de Oliveira (*Federal University of Pernambuco*)

Improving Estimation Accuracy of Aggregate Queries on Data Cubes (Page 33)

Elaheh Pourabbas (*National Research Council*)

Arie Shoshani (*Lawrence Berkeley National Laboratory*)

Efficient OLAP with UDFs (Page 41)

Zhibo Chen (*University of Houston*)

Carlos Ordonez (*University of Houston*)

Session 3: Multidimensional Design and ETL

Estimating and Bounding Aggregations in Databases with Referential Integrity Errors (Page 49)

Javier García-García (*Universidad Nacional Autónoma de México*)

Carlos Ordonez (*University of Houston*)

Solving Summarizability Problems in Fact-Dimension Relationships for Multidimensional Models (Page 57)

Jose-Norberto Mazón (*University of Alicante*)

Jens Lechtenbörger (*University of Münster*)

Juan Trujillo (*University of Alicante*)

Natural Language Reporting for ETL Processes (Page 65)

Alkis Simitsis (*Hewlett Packard Laboratories*)

Dimitrios Skoutas (*National Technical University of Athens*)

Malú Castellanos (*Hewlett Packard Laboratories*)

Session 4: Tools for Data Warehousing and OLAP

A Framework for Recommending OLAP Queries (Page 73)

Arnaud Giacometti (*Université François Rabelais de Tours*)

Patrick Marcel (*Université François Rabelais de Tours*)

Elsa Negre (*Université François Rabelais de Tours*)

Semantic Enrichment of Strategic Datacubes (Page 81)

Claudia Diamantini (*Università Politecnica delle Marche*)

[\(Return to Top\)](#)

Domenico Potena (*Università Politecnica delle Marche*)

Bridging the Semantic Gap in OLAP Models: Platform-independent Queries (Page 89)

Jesús Pardillo (*University of Alicante*)

Jose-Norberto Mazón (*University of Alicante*)

Juan Trujillo (*University of Alicante*)

DOLAP 2008 Organization List

General Chair: Il-Yeol Song (*Drexel University, USA*)

Program Chair: Alberto Abelló (*Universitat Politècnica de Catalunya, Spain*)

Steering Committee: Karen Davis (*University of Cincinnati, USA*)
Joachim Hammer (*University of Florida, USA*)
Rokia Missaoui (*Université du Québec en Outaouais, Canada*)
Torben Bach Pedersen (*Aalborg University, Denmark*)
Stefano Rizzi (*University of Bologna, Italy*)
Il-Yeol Song (*Drexel University, USA*)
Dimitri Theodoratos (*New Jersey Inst. of Technology, USA*)
Juan Trujillo (*University of Alicante, Spain*)
Panos Vassiliadis (*University of Ioannina, Greece*)

Program Committee: Antonio Badia (*University of Louisville, USA*)
Omar Boussaïd (*Université du Lyon 2, France*)
Rick Cole (*ParAccel, USA*)
Alfredo Cuzzocrea (*University of Calabria, Italy*)
Karen Davis (*University of Cincinnati, USA*)
Antonios Deligiannakis (*University of Crete, Greece*)
Curtis Dyreson (*Utah State University, USA*)
Todd Eavis (*Concordia University, Canada*)
Helena Gallardas (*INESC-ID, Portugal*)
Matteo Golfarelli (*University of Bologna, Italy*)
Sergio Greco (*University of Calabria, Italy*)
Joachim Hammer (*University of Florida, USA*)
Manfred Jeusfeld (*Tilburg University, The Netherlands*)
Panos Kalnis (*National University of Singapore, Singapore*)
Myung Kim (*Ewha Womans University, Korea*)
Jens Lechtenbörger (*University of Münster, Germany*)
Wolfgang Lehner (*Dresden University of Technology, Germany*)
Tok Wang Ling (*National University of Singapore, Singapore*)
Sergio Luján-Mora (*University of Alicante, Spain*)
Patrick Martin (*Queen's University, Canada*)
Rokia Missaoui (*Université du Québec en Outaouais, Canada*)
Byung-Kwon Park (*Dong-A University, Korea*)
Torben Pedersen (*Aalborg University, Denmark*)
Jian Pei (*SUNY at Buffalo, USA*)
Juan Manuel Perez Martinez (*Universite Jaume I, Spain*)
Mario Piattini (*University of Castilla-La Mancha, Spain*)
Mirek Riedewald (*Cornell University, USA*)

Program Committee

(continued): Stefano Rizzi (*University of Bologna, Italy*)
Oscar Romero (*Universitat Politècnica de Catalunya*)
Markus Schneider (*University of Florida, USA*)
Alkis Simitsis (*HP Labs, USA*)
Spiros Skiadopoulos (*University of Peloponnese, Greece*)
Il-Yeol Song (*Drexel University, USA*)
Jens Otto Sørensen (*Energinet, Denmark*)
Dimitri Theodoratos (*New Jersey Institute of Technology, USA*)
Igor Timko (*Free University of Bozen-Bolzano, Italy*)
Juan Trujillo (*Universidad de Alicante, Spain*)
Panos Vassiliadis (*University of Ioannina, Greece*)
Robert Wrembel (*Poznan University of Technology, Poland*)
Man Lung Yiu (*Aalborg University, Denmark*)

External reviewers: Mehdi Adda
Filippo Furfaro
Ritu Khare
Maik Thiele
Christian Thomsen
Mingqiang Xue

Sponsors:

