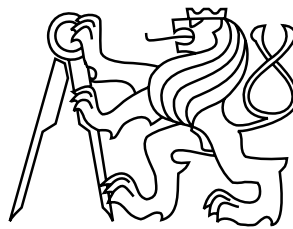


Czech Technical University in Prague, FEE, Dept. of Computer Science & Eng.
VŠB–TU Ostrava, FEECS, Department of Computer Science
Charles University in Prague, MFF, Department of Software Engineering
Czech Society for Cybernetics and Informatics

Proceedings of the Dateso 2009 Workshop

Databases, Texts
DATESO
Specifications, and Objects
2009

<http://www.cs.vsb.cz/dateso/2009/>
<http://www.ceur-ws.org/>



April 15 – 17, 2009
Špindlerův Mlýn – Patejdlova bouda

DATESO 2009
© K. Richta, J. Pokorný, V. Snášel, editors

This work is subject to copyright. All rights reserved. Reproduction or publication of this material, even partial, is allowed only with the editors' permission.

Copyright ©2009 for the individual papers by the papers' authors. Copying permitted for private and academic purposes. Re-publication of material from this volume requires permission by the copyright owners.

Technical editor:
Pavel Strnad, strnap1@fel.cvut.cz

Page count: 178
Impression: 50
Edition: 1st
First published: 2009

This proceedings was typeset by PDFL^AT_EX.
Cover design by Markéta Růžičková
Printed and bound in Prague, Czech Republic by Česká technika - nakladatelství
ČVUT.

Published by Czech Technical University in Prague
Faculty of Electrical Engineering
Department of Computer Science and Engineering

Preface

DATESO 2009, the international workshop on current trends on Databases, Information Retrieval, Algebraic Specification and Object Oriented Programming, was held on April 15 – 17, 2009 in Špindlerův Mlýn – Patejdlova bouda. This was the 9th annual workshop organized by Department of Computer Science and Engineering FEL ČVUT Praha, and Department of Software Engineering MFF UK Praha, and Department of Computer Science VŠB-Technical University Ostrava, and working group on Informatics and Society of Czech Society for Cybernetics and Informatics. The DATESO workshops aim for strengthening connections between these various areas of Computer science. The proceedings of DATESO 2009 are also available at DATESO Web site <http://www.cs.vsb.cz/dateso/2009/>, and CEUR Workshop Proceeding pages <http://www.ceurws.org/> (ISSN 1613-0073).

The Program Committee selected 14 papers from 21 submissions, based on two independent reviews.

We wish to express our sincere thanks to all the authors who submitted papers, the members of the Program Committee, who reviewed them on the basis of originality, technical quality, and presentation. We are also thankful to the Organizing Committee for preparation of workshop and its proceedings. Special thanks belong to Czech Society for Cybernetics and Informatics for its support of publishing this issue.

March, 2009

K. Richta, J. Pokorný, V. Snášel (Eds.)

Steering Committee

Karel Richta	Czech Technical University, Prague
Jaroslav Pokorný	Charles University, Prague
Václav Snášel	VŠB-Technical University of Ostrava, Ostrava

Program Committee

Karel Richta (chair)	Charles University and Czech Technical University, Prague
Jaroslav Pokorný	Charles University, Prague
Václav Snášel	VŠB-Technical University of Ostrava, Ostrava
Irena Mlýnková	Charles University, Prague
Vojtěch Svátek	University of Economics, Prague
Peter Vojtáš	Charles University, Prague
Tomáš Skopal	Charles University, Prague
Dušan Húsek	Inst. of Computer Science, Academy of Sciences, Prague
Michal Krátký	VŠB-Technical University of Ostrava, Ostrava
Pavel Moravec	VŠB-Technical University of Ostrava, Ostrava
Pavel Loupal	Czech Technical University, Prague
Jan Stoklasa	Czech Technical University, Prague
Pavel Strnad	Czech Technical University, Prague

Organizing Committee

Pavel Loupal (chair)	Czech Technical University, Prague
Jan Stoklasa	Czech Technical University, Prague
Pavel Strnad	Czech Technical University, Prague

Table of Contents

Speeding Up Shortest Path Search in Public Transport Networks	1
<i>Vladislav Martínek, Michal Žemlička</i>	
From Web Pages to Web Communities	13
<i>Miloš Kudělka, Václav Snášel, Zdeněk Horák, Aboul Ella Hassanien</i>	
Compression of the Stream Array Data Structure	23
<i>Radim Bača, Martin Pawlas</i>	
Benchmarking Coding Algorithms for the R-tree Compression	32
<i>Jiří Walder, Michal Krátký, Radim Bača</i>	
Translation of Ontology Retrieval Problem into Relational Queries	44
<i>Jaroslav Pokorný, Jana Pribolová, Peter Vojtáš</i>	
Various aspects of user preference learning and recommender systems	56
<i>Alan Eckhardt</i>	
Using Top Trees For Easy Programming of Tree Algorithms	68
<i>Michal Vajbar</i>	
Dimension Reduction Methods for Iris Recognition	80
<i>Pavel Moravec, Václav Snášel</i>	
Five-Level Multi-Application Schema Evolution	90
<i>Martin Nečaský, Irena Mlýnková</i>	
Tequila - a query language for the Semantic Web	105
<i>Jakub Galgonek</i>	
The BPM to UML activity diagram transformation using XSLT	119
<i>Ondřej Macek, Karel Richta</i>	
XML- λ Type System and Data Model Revealed	130
<i>Pavel Loupal</i>	
Combination of TA- and MD-algorithm for Efficient Solving of Top-K Problem according to User's Preferences	142
<i>Matúš Ondreička, Jaroslav Pokorný</i>	
Efficiency Improvement of Narrow Range Query Processing in R-tree	154
<i>Peter Chovanec, Michal Krátký</i>	
Author Index	166