THE 15TH EAST EUROPEAN CONFERENCE ON ADVANCES IN DATABASES AND INFORMATION SYSTEMS (ADBIS 2011)

September 20-23, 2011
Vienna, Austria
ORGANISERS

The ADBIS 2011 is jointly organised by the

Institute of Software Technology and Interactive Systems, Information & Software Engineering Group

Technische Universität Wien
Vienna University of Technology

and the Austrian Computer Society (OCG)
# ADBIS 2011

## PROGRAMME GUIDE

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ORGANIZING COMMITTEE

General Chair
A Min Tjoa, Vienna University of Technology, Austria

PC Co-Chairs
Johann Eder, Alps Adria University Klagenfurt, Austria
Maria Bielikova, Slovak University of Technology Bratislava, Slovakia

Workshop Co-Chairs
Tadeusz Morzy, University of Technology Poznan, Poland
Klaus-Dieter Schewe, Software Competence Center Hagenberg, Austria
Robert Wrembel, University of Poznan, Poland

Doctoral Consortium Chairs
Rainer Manthey, University of Bonn, Germany
Boris Novikov, St-Petersburg University, Russia

ADBIS Steering Committee Chair
Leonid Kalinichenko, Russian Academy of Science, Russia

Organization Co-Chairs
A Min Tjoa, Vienna University of Technology, Austria
Nick A. Tahamtan, Vienna University of Technology, Austria
The conference venue is the Vienna University of Technology (TU Wien). The conference is being held in the MAIN building. The exact address of the conference location is:

TU Wien – Main Building
Karlsplatz 13
1040 Wien

The venue is located near the center of Vienna, easily reachable through the subway station KARLSPLATZ (subway lines U1, U2, and U4). The venue can also be reached by tram lines 62 and 65 (stop „Resselgasse“) and bus line 59A (stop „Bärenmühldurchgang“). Here a picture of the Main building:
GENERAL INFORMATION

Registration
The registration desk is located in the main building on the ground floor. Registration is possible on every day of the conference starting 8:00 a.m.

Wireless (WLAN)
The conference venue is covered by a wireless local area network (WLAN) (except for the lunch area). Your access data is handed out to you upon registration.

Name Badges
Conference attendees are required to wear their badges while in the conference area and during social events, in order to facilitate identification of registered participants.

Speakers & Presentations
Speakers are requested to contact the Session Chair or Technical Assistant before their session. Presentations should be copied to the presentation computers in the break before the respective session at the latest.

Information & Contact
Notice-boards and an information desk are located near the registration area at the Main Building.
Lunch

Lunch is included in the registration fee and is served in the Mensa, which is located in FREIHAUS building (about 50 meters away from the main building).

Here a picture of the Freihaus.
**ROOM ASSIGNMENTS**

The conference sessions are held in the following rooms:

Festsaal - Main Building, Stiege I, 1st Floor

Boecklsaal – Main Building, Stiege I, 1st Floor

HS 14A - Main Building, Stiege III, 3rd Floor

HS 15 - Main Building, Stiege III, 3rd Floor

Please refer to the maps on the following pages for locating the rooms and mind the signs.
Lageplan: Festsaal, TU Wien,
A-1040 Wien, Karlsplatz 13, Hauptgebäude, 1. Obergeschoß, Stiege I

Übersichtsplan: TU Wien

Detailplan: Hauptgebäude

1. Obergeschoß

Festsaal

Erdgeschoß

Symbollegende siehe unter www.wegweiser.ac.at/symbollegende.html
SOCIAL EVENTS

CONFERENCE BANQUET

Wednesday 21.09.2011, Stift Klosterneuburg

Please bring the Dinner Invitations handed out upon Registration!

Meeting point for the bus transfer to Klosterneuburg will be announced during the conference.

Klosterneuburg was founded in 1114 by Leopold III, Margrave of Austria and his wife Agnes. It became a house of Augustinian Canons in 1133.

This foundation is one of the oldest and richest of its kind in Austria and owns much of the land upon which the north-western suburbs of Vienna stand.

The impressive building complex, the greater part of which was constructed between 1730 and 1834, stands on a hill rising directly from the banks of the Danube.

Stift Klosterneuburg
CONFERENCE RECEPTION

Thursday 22.09.2011, Vienna City Hall (Rathaus)

Please bring the Reception Invitations handed out upon Registration!

A walk to the Rathaus will take you along the Ringstraße, Emperor Franz Josef’s circular boulevard surrounding the inner city of Vienna. Crossing Karlsplatz, the tour starts at the Opera House and passes along many of Vienna’s main attractions: the Hofburg Palace (the president’s residence), the Burg garden, Kunst-historisches Museum (Museum of Fine Arts), Natur-historisches Museum (Museum of Natural History), the Parliament and the Burgtheater, finally traversing the Rathauspark, the garden of Vienna’s City Hall. If you prefer faster transfer, you can take tram line 1 or D at the Opera and go to Burgtheater, which is facing the City Hall.
CONFERENCE PROGRAM

Location: Main Building of the University of Technology Vienna
Karlsplatz 13, 1040 Wien, Austria

Tuesday 20.09.2011

9:00-9:30 Opening

9:30-10:30 Session 1 Keynote

Session Chair: Leonid Kalinichenko

Georg Gottlob
Ontological Query Answering via Rewriting

10:30-11:00 Coffee Break

11:00-12:30 Session 2A: Session Query Processing 1

Session Chair: Rainer Manthey

M. Benter, S. Böttcher, R. Hartel
Mixing Bottom-Up and Top-Down XPath Query Evaluation

D. Christopeit, M. Böhlen, C.-K. Kanne, A. Mazeika
Querying Versioned Software Repositories

K. Patroumpas, T. Sellis
Subsuming Multiple Sliding Windows for Shared Stream Computation
Session 2B: Business Process Management

Session Chair: Amirezza Nick Tahamtan

C. Combi, M. Gambini, S. Migliorini
Towards Structured Business Process Modeling Languages

G. Pozzi, S. Morasca, A. Antonini, A. Ferreira Mello
Software Measures for Business Processes

C. Combi, S. Degani
Seamless (and Temporal) Conceptual Modeling of Business Process Information

12:30-14:00 Lunch Break

14:00-15:30 Session 3A: Data Warehousing 1

Session chair: Tadeusz Morzy

N. Hanusse, S. Maabout, R. Tofan
Revisiting the Partial Data Cube Materialization

J. Aligon, M. Golfarelli, P. Marcel, S. Rizzi, E. Turricchia
Mining Preferences from OLAP Query Logs for Proactive Personalization

P. Darcy, B. Stantic, A. Sattar
A Novel Integrated Classifier for Handling Data Warehouse Anomalies

Session 3B: Workflow

Session Chair: Carlo Combi

S. Schick, H. Meyer, A. Heuer
Enhancing Workflow Data Interaction Patterns by a Transaction Model
K. Bouchbout, Z. Alimazighi  
*Inter-Organizational Business Processes Modelling Framework*

Y. Li, O. Boucelma  
*A CPN Provenance Model of Workflow: Towards Diagnosis in the Cloud*

15:30-16:00  Coffee Break

16:00-17:30  **Session 4A: Data Warehousing 2**

Session Chair: Alfredo Cuzzocrea

J. Terry, B. Stantic, P. Terenziani, A. Sattar  
*Variable Granularity Space Filling Curve for Indexing Multidimensional Data*

K. Kaczmarski, T. Rudny  
*MOLAP Cube Based on Parallel Scan Algorithm*

S. Wittmer, T. Lauer, A. Datta  
*Real-Time Computation of Advanced Rules in OLAP Databases*

**Session 4B: Information Systems**

Session Chair: Pavol Navrat

C. I. Sidló  
*Entity Resolution with Heavy Indexing*

Z. Harsányi, M. Repta, V. Rozinajová  
*Innovative Mashup Development: Utilizing Visual Information about Application Programming Interfaces*

M. Liebisch  
*Accessing Functional Aspects with Pure SQL - Lessons Learned*
Wednesday 21.09.2011

9:00-10:30  **Session 5 Keynote**

Session Chair: A Min Tjoa

**Monika Henzinger**  
*Sponsored Search Auctions or How Web Search Engines Make Money*

10:30-11:00  Coffee Break

11:00-12:30  **Session 6A: DB Systems**

Session Chair: Barbara Catania

**I. Koltsidas, S. Viglas**  
*Designing a Flash-Aware Two-Level Cache*

**C. Tilgner, B. Glavic, M. Boehlen, C.-C. Kanne**  
*Declarative Serializable Snapshot Isolation*

**I. Epimakhov, A. Hameurlain, T. Dillon, F. Morvan**  
*Resource Scheduling Methods for Query Optimization in Data Grid Systems*

**Session 6B: Doctoral Consortium 1**

Session Chairs: Rainer Manthey, Boris Novikov

12:30-14:00  Lunch Break
14:00-15:30  **Session 7A: Spatial Data**

Session Chair: Yannis Manolopoulos

**B. Catania, M. T. Pinto, P. Podesta, D. Pomerano**  
*A Recommendation Technique for Spatial Data*

**G. Trajcevski, A. Yaagoub, P. Scheuermann**  
*Processing (Multiple) Spatio-Temporal Range Queries in Multicore Settings*

**G. Roumelis, M. Vassilakopoulos, A. Corral**  
*Performance Comparison of xBR-Trees and R*-Trees for Single Dataset Spatial Queries*

**Session 7B: Doctoral Consortium 2**

Session Chairs: Rainer Manthey, Boris Novikov

15:30-16:00  **Coffee Break**

16:00-17:30  **Session 8A: Query Processing 2**

Session Chair: Albertas Caplinskas

**O. Pivert, G. Smits, A. Hadjali, H. Jaudoin**  
*Efficient Detection of Minimal Failing Subqueries in a Fuzzy Querying Context*

**H. Jaudoin, O. Pivert**  
*Rewriting Fuzzy Queries Using Imprecise Views*

**N. Spyراتض، T. Sugibuchi، J. Yang**  
*Personalizing Queries over Large Data Tables*

**Session 8B: Doctoral Consortium 3**

Session Chairs: Rainer Manthey, Boris Novikov

19:00-23:00  **Conference Dinner Klosterneuburg**
Thursday 22.09.2011

9:00-10:30 Session 9 Keynote

Session Chair: Johann Eder

Marlon Dumas
On the Convergence of Data and Process Engineering

10:30-11:00 Coffee Break

11:00-12:30 Session 10A: Information Systems 1

Session Chair: Maria Bielikova

D. Schall, F. Skopik
An Analysis of the Structure and Dynamics of Large-Scale Q/A Communities

L. Dannecker, M. Böhm, W. Lehner, G. Hackenbroich
Forcasting Evolving Time Series of Energy Demand and Supply

C. Combi, M. Gambini, S. Migliorini
The NestFlow Interpretation of Workflow Control-Flow Patterns

Session 10 B: Security and Privacy

Session Chair: Hendrik Decker

A. Cuzzocrea, D. Saccà
A Constraint-Based Framework for Computing Privacy Preserving OLAP Aggregations on Data Cubes
S. Chester, B. Kapron, G. Ramesh, G. Srivastava, A. Thomo, S. Venkatesh
*K-Anonymization of Social Networks by Vertex Addition*

H. H. Nguyen, N. Harbi, J. Darmont
*An Efficient Fuzzy Clustering-Based Approach for Intrusion Detection*

12:30-14:00  Lunch Break

14:00-15:30  **Session 11A: Physical DB Design**

Session Chair: Boris Novikov

R. Bouchakri, L. Bellatreche
*On Simplifying Integrated Physical Database Design*

M. Brut, S. Laborie, A.-M. Manzat, F. Sedes
*Generic Information System Architecture for Distributed Multimedia Indexation and Management*

J. Patvarczki, N. Heffernan
*Automatic Physical Database Tuning Middleware for Web-Based Applications*

**Session 11B: Information Systems 2**

Session Chair: Robert Wrembel

K. Jannaschk, C. A. Rathje, B. Thalheim, F. Förster
*A Generic Database Schema for CIDOC-CRM Data Management*

S. Pohorec, M. Zorman
*Formalization of Unstructured Content to Semantic Form*
B. Perez, D. Correal
MENTA: A Quality Analysis Approach for Self-Adapting Systems

15:30-16:00 Coffee Break

16:00-17:30 Session 12A: Evolution, Integrity, Security

Session Chair: Andras Benczur

J. Maly, M. Necasky, I. Mlynkova
XML Documents Transformations as Schema Evolves

H. Decker
Partial Repairs that Tolerate Inconsistency

S. Sobieski, B. Zielinski
Modularisation in Maude of Parametrized RBAC for Row Level Access Control

Session 12B: Ontologies

Session Chair: Ladjel Bellatreche

W. Abramowicz, E. Bukowska, J. Dzikowski, A. Filipowska, M. Kaczmarek
Semantically Enabled Experts Finding System - Ontologies, Reasoning Approach and Web Interface Design

A. Simonet, M. Simonet
Information System Design Based on a Domain Ontology and Users Requirements

L. Kalinichenko, S. Stupnikov
OWL as Yet Another Data Model to be Integrated

19:00-22:00 Conference Reception at City Hall
Friday 23.09.2011

9:00-10:30  **Session 13A: Data Semantics**

Session Chair: François Bry

**A. Algergawy, S. Massmann, E. Rahm**  
*A Clustering-Based Approach for Large-Scale Ontology Matching*

**C. Niang, B. Bouchou, M. Lo, Y. Sam**  
*Automatic Building of an Appropriate Global Ontology*

**C. Debruyne, R. Meersman**  
*Semantic Interoperation between Business Information Systems by Evolving Ontologies through Formalized Social Processes*

**Session 13B: Queries**

Session Chair: Tadeusz Morzy

**P. Wisniewski, A. Szumowska, M. Burzanska, A. Boniewicz**  
*Hibernate the Recursive Queries - Defining the Recursive Queries Using Hibernate ORM*

**E. Hornicak, M. Ondreicka, J. Pokorny, P. Vojtas**  
*Multi-User Searching of Top-k Objects with Data on Remote Servers*

**A. Yarygina, B. Novikov, N. Vassilieva**  
*Processing Complex Similarity Queries: A Systematic Approach*

10:30-11:00  **Coffee Break**
11:00-12:00  **Session 14: System Issues**

Session Chair: Jaroslav Pokorny

**N. Cipriani, M. Großmann, H. Sanftmann, B. Mitschang**

*Design Considerations of a Flexible Data Stream Processing Middleware*

**K. Kaczmarski**

*Experimental B+-Tree for GPU*

12:00-12:30  Closing of the Conference
PC MEMBERS

Suad Alagic  University of Southern Maine, USA
Costin Badica  University of Craiova, Romania
Ladjel Bellatreche  Laboratoire d'Informatique Scientifique et Industrielle, France
Alberto Belussi  University of Verona, Italy
Andras Benczur  Hungarian Academy of Sciences, Hungary
Maria Bielikova  Slovak University of Technology in Bratislava, Slovakia
Omar Boucelma  Laboratoire des Sciences de l’Information et des Systemes, France
Stephane Bressan  National University of Singapore, Singapore
Dumitru Dan Burdescu  University of Craiova, Romania
Albertas Caplinskas  Institute of Mathematics and Informatics, Lithuania
Barbara Catania  Universita’ di Genova, Italy
Wojciech Cellary  Technical University of Poznan, Poland
Alfredo Cuzzocrea  Italian National Research Council, Italy
Schahram Dustdar  Vienna University of Technology, Austria
Pedro Furtado  Universidade de Coimbra, Portugal
Jan Genci, Technical  University of Kosice, Slovakia
Matteo Golfarelli  University of Bologna, Italy
Giovanna Guerrini  Universita di Genova, Italy
Stephen Hegner  Umea University, Sweden
Mirjana Ivanovic  University of Novi Sad, Serbia
Leonid Kalinchenko  Institute of Informatics Problems of the Russian Academy of Science, Russia
Ahto Kalja  Kuerneetika Instituut, Estonia
Dimitris Karagiannis  University of Vienna, Austria
Panagiotis Karras  National University of Singapore, Singapore
Christian Koncilia  Alps Adria University Klagenfurt, Austria
Harald Kosch  University of Passau, Germany
Sergei Kuznetsov  University of Colorado, USA
Federica Mandreoli  University of Modena, Italy
Rainer Manthey  University of Bonn, Germany
Paolo Missier  The University of Manchester, UK
Alexandros Nanopoulos  University of Hildesheim, Germany
Pavol Navrat  Slovak University of Technology, Slovakia
Daniel Neagu  University of Bradford, UK
Nikolaj Nikitchenko  Nat. Univ. Kiev, Ukraine
Boris Novikov  St-Petersburg University, Russia
Thimios Panagos  Telcordia Applied Research, USA
Jaroslav Pokorny  Charles University in Prague, Czech Republic
Jołita Ralyte  University of Geneva, Switzerland
Stefano Rizzi  University of Bologna, Italy
Paolo Rosso  Universidad Politecnica de Valencia, Spain
Viera Rozinajova  Slovak University of Technology, Slovakia
Bela Stantic  Griffith University, Australia
Krzysztof Stencel,  The University of Warsaw, Poland
Janis Stirna  Royal Institute of Technology and Stockholm University, Sweden
Amirreza Nick Tahamtan  Vienna University of Technology, Austria
Manolis Terrovitis  Institute for the Management of Information Systems, Greece
Bernhard Thalheim  Christian-Albrechts-Universität zu Kiel, Germany
<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Stefan Trausan-Matu</td>
<td>Universitatea Politehnica Bucures, Romania</td>
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<td>Olegas Vasilecas</td>
<td>VGTU Faculty of Fundamental Sciences, Lithuania</td>
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<td>Panos Vassiliadis</td>
<td>University of Ioannina, Greece</td>
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<tr>
<td>Peter Vojtas</td>
<td>Charles University in Prague, Czech Republic</td>
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<tr>
<td>Tatjana Welzer</td>
<td>University of Maribor, Slovenia</td>
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<tr>
<td>Vladimir Zadorozhny</td>
<td>University of Pittsburgh, USA</td>
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<tr>
<td>Jaroslav Zendulka</td>
<td>Brno University of Technology, Czech Republic</td>
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