

# Table of Contents

## Invited Talks

Semantic Web Application Modeling .....	1
<i>Erich Neuhold</i>	
Oh, so That Is What You Meant! The Interplay of Data Quality and Data Semantics .....	3
<i>Stuart Madnick</i>	
Enterprise Information Integration – XML to the Rescue! .....	14
<i>Michael J. Carey</i>	
Workflow Using AURL and Agents .....	15
<i>James J. Odell</i>	

## Systems and Data Integration

Statistical Analysis as Methodological Framework for Data(base) Integration .....	17
<i>Evguenia Altareva, Stefan Conrad</i>	
QoM: Qualitative and Quantitative Schema Match Measure .....	31
<i>Naiyana Tansalarak, Kajal Claypool</i>	
The Uni-level Description: A Uniform Framework for Representing Information in Multiple Data Models .....	45
<i>Shawn Bowers, Lois Delcambre</i>	

## Workflows, Patterns, and Ontologies

Temporal Conceptual Modelling of Workflows .....	59
<i>Carlo Combi, Giuseppe Pozzi</i>	
Towards a Logical Model for Patterns .....	77
<i>Stefano Rizzi, Elisa Bertino, Barbara Catania, Matteo Golfarelli, Maria Halkidi, Manolis Terrovitis, Panos Vassiliadis, Michalis Vazirgiannis, Euripides Vrachnos</i>	
Designing Foundational Ontologies .....	91
<i>Luc Schneider</i>	

## Metamodeling and Methodology

An OPM-Based Metamodel of System Development Process . . . . .	105
<i>Dov Dori, Iris Reinhartz-Berger</i>	
A Unified Approach for Software Policy Modeling: Incorporating Implementation into a Modeling Methodology . . . . .	118
<i>Junho Shim, Seungjin Lee, Chisu Wu</i>	
Deriving Use Cases from Business Process Models . . . . .	131
<i>Jan L.G. Dietz</i>	

## Views and XQuery Approaches

Order-Sensitive View Maintenance of Materialized XQuery Views . . . . .	144
<i>Katica Dimitrova, Maged El-Sayed, Elke A. Rundensteiner</i>	
Automatic Generation of XQuery View Definitions from ORA-SS Views . . . . .	158
<i>Ya Bing Chen, Tok Wang Ling, Mong Li Lee</i>	
Automaton Meets Query Algebra: Towards a Unified Model for XQuery Evaluation over XML Data Streams . . . . .	172
<i>Jinhui Jian, Hong Su, Elke A. Rundensteiner</i>	
Querying Heterogeneous XML Sources through a Conceptual Schema . . . .	186
<i>Sandro Daniel Camillo, Carlos Alberto Heuser, Ronaldo dos Santos Mello</i>	

## Web Application Modeling and Development

Analysis of Web Services Composition Languages: The Case of BPEL4WS . . . . .	200
<i>Petia Wohed, Wil M.P. van der Aalst, Marlon Dumas, Arthur H.M. ter Hofstede</i>	
Extending Conceptual Models for Web Based Applications . . . . .	216
<i>Phillipa Oaks, Arthur H.M. ter Hofstede, David Edmond, Murray Spork</i>	
Development of Web Applications from Web Enhanced Conceptual Schemas . . . . .	232
<i>Joan Fons, Vicente Pelechano, Manoli Albert, Óscar Pastor</i>	

Extending Hypertext Conceptual Models with Process-Oriented Primitives .....	246
<i>Marco Brambilla</i>	

## Requirements and Evolution

Requirement Engineering Meets Security: A Case Study on Modelling Secure Electronic Transactions by VISA and Mastercard .....	263
<i>Paolo Giorgini, Fabio Massacci, John Mylopoulos</i>	

Goal-Based Business Modeling Oriented towards Late Requirements Generation .....	277
<i>Hugo Estrada, Alicia Martínez, Óscar Pastor</i>	

Strategy for Database Application Evolution: The DB-MAIN Approach .....	291
<i>Jean-Marc Hick, Jean-Luc Hainaut</i>	

## Data Warehousing and OLAP

A UML Based Approach for Modeling ETL Processes in Data Warehouses .....	307
<i>Juan Trujillo, Sergio Luján-Mora</i>	

A General Model for Online Analytical Processing of Complex Data .....	321
<i>Jian Pei</i>	

An Interpolated Volume Model for Databases .....	335
<i>Tianqiu Wang, Simone Santini, Amarnath Gupta</i>	

## Conceptual Modeling Foundations

Integrity Constraints Definition in Object-Oriented Conceptual Modeling Languages .....	349
<i>Antoni Olivé</i>	

Conceptual Treatment of Multivalued Dependencies .....	363
<i>Bernhard Thalheim</i>	

Entity Types Derived by Symbol-Generating Rules .....	376
<i>Jordi Cabot, Antoni Olivé, Ernest Teniente</i>	

## Data Mining

DAISY, an RER Model Based Interface for RDB to ILP .....	390
<i>Keiko Shimazu, Atsuhito Momma, Koichi Furukawa</i>	

## XVIII Table of Contents

Context-Based Data Mining Using Ontologies .....	405
<i>Sachin Singh, Pravin Vajirkar, Yugyung Lee</i>	

Mining Typical Preferences of Collaborative User Groups .....	419
<i>Su-Jeong Ko, Jiawei Han</i>	

## Innovative Approaches to Conceptual Modeling

Conceptual Modeling of Concurrent Systems through Stepwise Abstraction and Refinement Using Petri Net Morphisms .....	433
<i>Boleslaw Mikolajczak, Zuyan Wang</i>	

Taxonomy-Based Conceptual Modeling for Peer-to-Peer Networks .....	446
<i>Yannis Tzitzikas, Carlo Meghini, Nicolas Spyratos</i>	

EITH – A Unifying Representation for Database Schema and Application Code in Enterprise Knowledge Extraction .....	461
<i>Mark S. Schmalz, Joachim Hammer, MingXi Wu, Oguzhan Topsakal</i>	

## Queries

A Heuristic-Based Methodology for Semantic Augmentation of User Queries on the Web.....	476
<i>Andrew Burton-Jones, Veda C. Storey, Vijayan Sugumaran, Sandeep Purao</i>	

On Analysing Query Ambiguity for Query Refinement: The Librarian Agent Approach .....	490
<i>Nenad Stojanovic</i>	

A Declarative XML-RL Update Language .....	506
<i>Mengchi Liu, Li Lu, Guoren Wang</i>	

## Schema and Ontology Integration

Resolving Structural Conflicts in the Integration of XML Schemas: A Semantic Approach .....	520
<i>Xia Yang, Mong Li Lee, Tok Wang Ling</i>	

Operators and Classification for Data Mapping in Semantic Integration .....	534
<i>Anca Dobre, Farshad Hakimpour, Klaus R. Dittrich</i>	

Querying and Integrating Ontologies Viewed as Conceptual Schemas ....	548
<i>Dimitri Theodoratos, Theodore Dalamagas</i>	

## Industrial Abstracts

A Comparison of Frameworks for Enterprise Architecture Modeling . . . . .	562
<i>Richard Martin, Edward Robertson</i>	
Bless the ODS . . . . .	565
<i>Michael Bryan, Ali M. Tafreshi</i>	
Modeling Reactive Behavior in ORM . . . . .	567
<i>Terry Halpin, Gerd Wagner</i>	
Developing Complex Systems with Object-Process Methodology Using OPCAT . . . . .	570
<i>Dov Dori, Iris Reinhartz-Berger, Arnon Sturm</i>	
Conceptual Data Models for Engineering Information Modeling and Formal Transformation of EER and EXPRESS-G . . . . .	573
<i>Z.M. Ma, Shiyong Lu, Farshad Fotouhi</i>	
AXIS: A XML Schema Integration System . . . . .	576
<i>Bipin Sakamuri, Sanjay Madria, K. Passi, Eric Chaudhry, Mukesh Mohania, S. Bhowmick</i>	
Episode-Based Conceptual Mining of Large Health Collections . . . . .	579
<i>Tatiana Semenova</i>	
<b>Author Index . . . . .</b>	<b>583</b>

Conceptual Modeling -- ER 2003

22nd International Conference on Conceptual  
Modeling, Chicago, IL, USA, October 13-16, 2003,  
Proceedings

Song, I.-Y.; Liddle, S.W.; Ling, T.W.; Scheuermann, P.  
(Eds.)

2003, XVIII, 586 p., Softcover

ISBN: 978-3-540-20299-8