

Table of Contents

Invited Papers

Data Warehouse Scenarios for Model Management	1
<i>Philip A. Bernstein and Erhard Rahm</i> <i>(Microsoft Corporation, USA)</i>	
Reflections on Computer Science and Information Systems Research	16
<i>Salvatore T. March (Vanderbilt University, USA)</i>	
From Entities and Relationships to Social Actors and Dependencies	27
<i>John Mylopoulos, Ariel Fuxman (University of Toronto, Canada),</i> <i>and Paolo Giorgini (University of Trento, Italy)</i>	

Database Integration

A Pragmatic Method for the Integration of Higher-Order Entity-Relationship Schemata	37
<i>Thomas Lehmann (Volkswagen AG, Germany) and</i> <i>Klaus-Dieter Schewe (Massey University, New Zealand)</i>	
Explicit Modeling of the Semantics of Large Multi-layered Object-Oriented Databases	52
<i>Christoph Koch, Zolt Kovacs, Jean-Marie Le Goff</i> <i>(CERN, Switzerland), Richard McClatchey (Univ. West of England,</i> <i>UK), and Paolo Petta (Austrian Research Institute for</i> <i>Artificial Intelligence, Austria) and Tony Solomonides</i> <i>(Univ. West of England, UK)</i>	
Declarative Mediation in Distributed Systems	66
<i>Sergey Melnik (Stanford University, USA)</i>	

Temporal and Active Database Modeling

Temporal Constraints for Object Migration and Behavior Modeling Using Colored Petri Nets	80
<i>Hideki Sato (Aichi Gakusen University, Japan) and</i> <i>Akifumi Makinouchi (Kyushu University, Japan)</i>	
SQL ST : A Spatio-Temporal Data Model and Query Language	96
<i>Cindy Xinmin Chen and Carlo Zaniolo (University of California,</i> <i>Los Angeles, USA)</i>	

TBE: Trigger-By-Example 112
Dongwon Lee, Wenlei Mao, and Wesley W. Chu
(University of California, Los Angeles, USA)

Database and Data Warehouse Design Techniques

Decomposition by Pivoting and Path Cardinality Constraints 126
Sven Hartmann (Universität Rostock, Germany)

IS=DBS+Interaction: Towards Principles of Information System Design . . 140
Dina Goldin (University of Massachusetts, Boston, USA),
Srinath Srinivasa, and Bernhard Thalheim
(Brandenburgische Technische Universität, Germany)

A Viewpoint-Based Framework for Discussing the Use of Multiple
Modelling Representations 154
Nigel Stanger (University of Otago, New Zealand)

Practical Approach to Selecting Data Warehouse Views Using Data
Dependencies 168
Gillian Dobbie and Tok Wang Ling (National University of Singapore,
Singapore)

Analysis Patterns and Ontologies

Semantic Analysis Patterns 183
Eduardo B. Fernandez and Xiaohong Yuan
(Florida Atlantic University, USA)

Tool Support for Reuse of Analysis Patterns – A Case Study 196
Petia Wohed (Stockholm University/Royal Institute of Technology,
Sweden)

Ontological Analysis of Taxonomic Relationships 210
Nicola Guarino (LADSEB/CNR, Italy) and Christopher Welty
(Vassar College, USA)

Web-Based Information Systems

A Conceptual Model for the Web 225
Mengchi Liu (University of Regina, Canada) and Tok Wang Ling
(National University of Singapore, Singapore)

Adapting Materialized Views after Redefinition in Distributed
Environments 239
Zohra Bellahsene (LIRMM, France)

On Warehousing Historical Web Information	253
<i>Yinyan Cao, Ee-Peng Lim, and Wee-Keong Ng</i> (<i>Nanyang Technological University, Singapore</i>)	

Business Process Modeling

On Business Process Model Transformations	267
<i>Wasim Sadiq and Maria E. Orlowska</i> (<i>The University of Queensland, Australia</i>)	
Towards Use Case and Conceptual Models through Business Modeling	281
<i>J. García Molina, M. José Ortín, Begoña Moros, Joaquín Nicolás,</i> <i>and Ambrosio Toval (Universidad de Murcia, Spain)</i>	
A Conceptual Modeling Framework for Multi-agent Information Systems . .	295
<i>Ricardo M. Bastos (Pontifícia Universidade Católica do Rio Grande</i> <i>do Sul, Brazil) and José Palazzo M. de Oliveira</i> (<i>Universidade Federal do Rio Grande do Sul, Brazil</i>)	

Conceptual Modeling and XML

Object Role Modelling and XML-Schema	309
<i>Linda Bird, Andrew Goodchild (The University of Queensland,</i> <i>Australia), and Terry Halpin (Microsoft Corporation, USA)</i>	
Constraints-Preserving Transformation from XML Document Type	
Definition to Relational Schema	323
<i>Dongwon Lee and Wesley W. Chu (University of California,</i> <i>Los Angeles, USA)</i>	
X-Ray – Towards Integrating XML and Relational Database Systems	339
<i>Gerti Kappel, Elisabeth Kapsammer, Stefan Rausch-Schott, and</i> <i>Werner Retschitzegger (University of Linz, Austria)</i>	

Engineering and Multimedia Application Modeling

A Conceptual Model for Remote Data Acquisition Systems	354
<i>Txomin Nieva and Alain Wegmann (Swiss Federal Institute of</i> <i>Technology, Switzerland)</i>	
A Modeling Language for Design Processes in Chemical Engineering	369
<i>Markus Eggersmann, Claudia Krobb, and Wolfgang Marquardt</i> (<i>RWTH Aachen, Germany</i>)	
VideoGraph: A Graphical Object-Based Model for Representing and	
Querying Video Data	383
<i>Duc A. Tran, Kien A. Hua, and Khanh Vu</i> (<i>University of Central Florida, USA</i>)	

Object-Oriented Modeling

Object-Oriented Modelling in Practice: Class Model Perceptions in the ERM Context	397
<i>Steve Hitchman (USA)</i>	
ROVER: A Framework for the Evolution of Relationships	409
<i>Kajal T. Claypool, Elke A. Rundensteiner, and George T. Heineman (Worcester Polytechnic Institute, USA)</i>	
Improving the Reuse Possibilities of the Behavioral Aspects of Object-Oriented Domain Models	423
<i>Monique Snoeck and Geert Poels (Katholieke Universiteit Leuven, Belgium)</i>	

Applying Object-Oriented Technology

Algebraic Database Migration to Object Technology	440
<i>Andreas Behm, Andreas Geppert, and Klaus R. Dittrich (University of Zurich, Switzerland)</i>	
A Layered Software Specification Architecture	454
<i>M. Snoeck, S. Poelmans, and G. Dedene (Katholieke Universiteit Leuven, Belgium)</i>	
A Reuse-Based Object-Oriented Framework Towards Easy Formulation of Complex Queries	470
<i>Chabane Oussalah and Abdelhak Seriai (Université de Nantes, France)</i>	

Quality in Conceptual Modeling

Evaluating the Quality of Reference Models	484
<i>Vojislav B. Mišić (The Hong Kong University of Science and Technology, Hong Kong) and J. Leon Zhao (University of Arizona, USA)</i>	
Measures for Assessing Dynamic Complexity Aspects of Object-Oriented Conceptual Schemes	499
<i>Geert Poels and Guido Dedene (Katholieke Universiteit Leuven, Belgium)</i>	
Measuring the Quality of Entity Relationship Diagrams	513
<i>Marcela Genero, Luis Jiménez, and Mario Piattini (University of Castilla-La Mancha, Spain)</i>	

Application Design Using UML

Behavior Consistent Inheritance in UML	527
<i>Markus Stumptner (Technische Universität Wien, Austria) and Michael Schrefl (University of South Australia, Australia)</i>	
The Viewpoint Abstraction in Object-Oriented Modeling and the UML ...	543
<i>Renate Motschnig-Pitrik (University of Vienna, Austria)</i>	
XML Conceptual Modeling Using UML	558
<i>Rainer Conrad, Dieter Scheffner, and J. Christoph Freytag (Humboldt-Universität zu Berlin, Germany)</i>	

DAMA International Industrial Abstracts

Metadata Engineering for Corporate Portals Using XML	572
<i>Peter Aiken (Virginia Commonwealth University, USA), and Kathi Hogshead Davis (Northern Illinois University, USA)</i>	
The Role of Information Resource Management in Managing a Corporate Portal	574
<i>Arvind D. Shah (Performance Development Corporation, USA)</i>	
The Five-Tier Five-Schema Concept	575
<i>Michael H. Brackett (President, DAMA International)</i>	
Documenting Meta Data Transformations	577
<i>Alex Friedgan (Data Cartography, Inc., USA)</i>	
Advanced Data Model Patterns	579
<i>David C. Hay (Essential Strategies, Inc., USA)</i>	
Information Quality at Every Stage of the Information Chain	580
<i>Elaine Strickleth (Acton Burnell, Inc., USA)</i>	
A Fact-Oriented Approach to Business Rules	582
<i>Terry Halpin (Microsoft Corporation, USA)</i>	
Personalized Digests of Sports Programs Using Intuitive Retrieval and Semantic Analysis	584
<i>Takako Hashimoto, Yukari Shiota, Atsushi Iizawa, and Hideko S. Kunii (Information Broadcasting Laboratories, Inc. and Ricoh Company, Ltd., Japan)</i>	
Author Index	587

Conceptual Modeling - ER 2000

19th International Conference on Conceptual Modeling,

Salt Lake City, Utah, USA, October 9-12, 2000

Proceedings

Laender, A.H.F.; Liddle, S.W.; Storey, V. (Eds.)

2000, XIX, 589 p., Softcover

ISBN: 978-3-540-41072-0