Table of Contents

Invited Talks

Project Oxygen: Pervasive, Human-Centric Computing –
An Initial Experience ........................................... 1
  Larry Rudolph (MIT, USA)

Database Systems Architecture:
A Study in Factor-Driven Software System Design ............... 13
  Peter C. Lockemann (Universität Karlsruhe, Germany)

Evolution not Revolution:
The Data Warehousing Strategy at Credit Suisse Financial Services ...... 36
  Markus Tresch, Dirk Jonscher
  (Credit Suisse Financial Services, Switzerland)

Requirements Engineering

A Comparison and Evaluation of Data Requirement Specification
Techniques in SSADM and the Unified Process ....................... 46
  Peter Bielkowicz, Thein T. Tun
  (London Guildhall University, England)

From User Requirements to User Interfaces: A Methodological Approach .. 60
  Juan Sánchez Díaz, Oscar Pastor López, Juan J. Fons
  (Valencia University of Technology, Spain)

The ADORA Approach to Object-Oriented Modeling of Software ........ 76
  Martin Glinz, Stefan Berner, Stefan Joos, Johannes Ryser,
  Nancy Schett, Yong Xia (University of Zurich, Switzerland)

Agent-Based Approaches

Techniques for Reactive System Design: The Tools in TRADE .......... 93
  Roel J. Wieringa, David N. Jansen
  (University of Twente, The Netherlands)

A Requirements-Driven Development Methodology .................... 108
  Jaelson Castro, Manuel Kolp, John Mylopoulos
  (University of Toronto, Canada)

Constructing Libraries of Typical Plans ............................. 124
  Antonio L. Furtado, Angelo E.M. Ciarlini
  (Pontificia Universidade Católica do Rio de Janeiro, Brazil)
# Table of Contents

## Workflow Management

The P2P Approach to Interorganizational Workflows .................. 140  
*Wil M.P. van der Aalst, Mathias Weske*  
(Eindhoven University of Technology, The Netherlands)

Relaxed Soundness of Business Processes .............................. 157  
*Juliane Dehnert (Technical University Berlin, Germany), Peter Rittgen*  
(University of Koblenz-Landau, Germany)

Developing E-Services for Composing E-Services .................... 171  
*Fabio Casati, Mehmet Sayal, Ming-Chien Shan*  
(Hewlett-Packard Laboratories, USA)

## Data Models and Design

Data Models with Multiple Temporal Dimensions: Completing the Picture 187  
*Carlo Combi, Angelo Montanari (University of Udine, Italy)*

Querying Data-Intensive Programs for Data Design .................. 203  
*Jianhua Shao, Xingkun Liu, G. Fu, Suzanne M. Embury, W.A. Gray*  
(Cardiff University, Wales)

Consistency Management of Financial XML Documents ............... 219  
*Andrea Zisman (City University, England),  
Adamantia Athanasopoulou (Singular International SA, Greece)*

## Reuse and Method Engineering

The Relationship between Organisational Culture and the Deployment of Systems Development Methodologies ..................... 234  
*Juhani Iivari (University of Oulu, Finland),  
Magda Huisman (Potchefstroom University, South Africa)*

Increasing Reusability in Information Systems Development by Applying Generic Methods ................................. 251  
*Silke Eckstein, Peter Ahlbrecht, Karl Neumann*  
(TU Braunschweig, Germany)

An Assembly Process Model for Method Engineering ................. 267  
*Jolita Ralytė, Colette Rolland (Université Paris Sorbonne, France)*

Process Reuse Architecture ............................................. 284  
*Soeli T. Fiorini, Julio C. Sampaio do Prado Leite,  
Carlos J. Pereira de Lucena*  
(Pontificia Universidade Católica do Rio de Janeiro, Brazil)
XML and Information System Integration

Using a Metadata Software Layer in Information Systems Integration .... 299
Mark Roantree (Dublin City, Ireland),
Jessie B. Kennedy, Peter J. Barclay (Napier University, Scotland)

Distributed Information Search with Adaptive Meta-Search Engines .... 315
Lieming Huang, Ulrich Thiel, Matthias Hemmje, Erich J. Neuhold
(GMD-IPSI, Germany)

A Semantic Approach to Integrating XML and Structured Data Sources .. 330
Peter McBrien (Imperial College, England),
Alexandra Poulovassilis (University of London, England)

XML-Based Integration of GIS and Heterogeneous Tourism Information .. 346
Franz Pührermai, Wolfram Wöß
(Johannes Kepler University Linz, Austria)

Evolution

Objects Control for Software Configuration Management ............... 359
Jacky Estublier (Dassault Systèmes & LSR, Grenoble University, France)

Coordination Technologies for Managing Information System Evolution .. 374
Luis Filipe Andrade (ATX Software S.A., Portugal),
José Luiz Fiadeiro (University of Lisbon, Portugal)

Using Metrics to Predict OO Information Systems Maintainability ....... 388
Marcela Genero, José Olivas, Mario Piattini, Francisco Romero
(University of Castilla-La Mancha, Spain)

Conceptual Modelling

A Rigorous Metamodel for UML Static Conceptual Modelling
of Information Systems ............................................. 402
Régine Laleau (CNAM, France),
Fiona Polack (University of York, England)

Taxonomies and Derivation Rules in Conceptual Modelling ............. 417
Antoni Olivé (Universitat Politècnica de Catalunya, Spain)

Using UML Action Semantics for Executable Modeling and Beyond .... 433
Gerson Sunyé, François Pennaneac'h, Wai-Ming Ho,
Alain Le Guennec, Jean-Marc Jézéquel (IRISA, France)

Design and Implementation of a UML-Based Design Repository ....... 448
Rudolf K. Keller, Jean-François Bédard, Guy Saint-Denis
(Université de Montréal, Canada)
Practice and Experience

Why Enterprise Modelling? An Explorative Study into Current Practice . . 465
Anne Persson (University of Skövde, Sweden), Janis Stirna
(Royal Institute of Technology and Stockholm University, Sweden)

A Glimpse into CM3: Problem Management .................. 469
Mira Kajko-Mattsson
(Royal Institute of Technology & Stockholm University, Sweden)

A Method Engineering Language for the Description
of Systems Development Methods ......................... 473
Sjaak Brinkkemper (Baan Company R&D, The Netherlands),
Motoshi Saeki (Tokyo Institute of Technology, Japan),
Frank Harmsen (Cap Gemini Ernst & Young Management Consultants, The Netherlands)

Flexible Support of Work Processes (Panel)

Flexible Support of Work Processes –
Balancing the Support of Organisations and Workers (Panel) .......... 477
John Krogstie, Håvard D. Jørgensen (Norwegian University of Science
and Technology and SINTEF Telecom and Informatics, Norway)

Author Index .......................................................... 483
Advanced Information Systems Engineering
Dittrich, K.R.; Geppert, A.; Norrie, M. (Eds.)
2001, XII, 484 p., Softcover
ISBN: 978-3-540-42215-0