

# The 21<sup>st</sup> International Conference on Conceptual Modeling - ER 2002

Tampere Hall

Tampere, Finland, October 7 - 11, 2002

Homepage: [er2002.cs.uta.fi](http://er2002.cs.uta.fi)

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## Pre-Conference Tutorials

**Monday, October 7, 2002**

9.00 - 12.30

**Tutorial 1.** Modeling Dynamics of Business Processes: Key for Building Next Generation of Business Information Systems:

*Ilia Bider, IbisSoft, Stockholm, Sweden, and Paul Johannesson, The Royal Institute of Technology, Stockholm, Sweden.*

**Lunch** Restaurant in Tampere Hall

12.30 - 14.00

14.00 - 17.30

**Tutorial 2.** Ontology-driven Conceptual Modelling

*Nicola Guarino and Luc Schneider, National Research Council LADSEB-CNR, Padova, Italy.*

**Tutorial evening, 19.00 - 22.00**

Näsinneula observation tower

Light supper (at own cost)

## Conference Tutorials

**Tuesday, October 8, 2002**

11.00 - 12.30

**Tutorial 3.** Advanced OO Modelling: Metamodels and Notations for the New Millennium:

*Brian Henderson-Sellers, University of Technology, Sydney, Australia.*

16.00 - 17.30

**Tutorial 4.** Ontology-driven Conceptual Modelling: Advanced Concepts

*Nicola Guarino and Luc Schneider (Research Council LADSEB-CNR, Padova, Italy)*

**Wednesday, October 9, 2002**

11.00 - 12.30

**Tutorial 5.** Workflow Management in Electronic Commerce:

*Paul Grefen, University of Twente, The Netherlands.*

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# Conceptual Modeling - ER 2002 Conference, October 8 - 10, 2002

The conference starts on Tuesday, October 8, at 9.00 AM.  
The conference is closed on Thursday, October 10, at 5.30 PM.

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## Tuesday, October 8, 2002

### Opening of the Conceptual Modeling - ER 2002 Conference

9.00 - 9.10

Opening of the ER 2002 Conference

Hannu Kangassalo, Conference Chair, University of Tampere, Finland

Kari-Jouko Rähkä, Vice-President, University of Tampere, Finland

Stefano Spaccapietra, Program Committee Co-Chair,  
EPFL Lausanne, Switzerland

Salvatore T. March, Program Committee Co-Chair,  
Vanderbilt University, USA

Yahiko Kambayashi, Program Committee Co-Chair,  
University of Kyoto, Japan

### Keynote 1:

9.10 - 10.40 Session Chair: Salvatore T. March, Vanderbilt University, USA

**Conceptual Modelling and Ontology: Possibilities and Pitfalls**

*Ron Weber (University of Queensland, Australia)*

### Break

### Session 1: Semantics and Meta-Models

11.00 - 12.30 Session Chair: *Ramez Elmasri, (University of Texas at  
Arlington, USA)*

Component Construction of Database Schemes

*Bernhard Thalheim (Brandenburg University of Technology, Germany)*

Multirelational Semantics for Extended Entity-Relationship Schemata with  
Applications

*Sebastiano Vigna (Universita degli Studi di Milano, Italy)*

A Meta-model for e-Contract Template Variable Dependencies Facilitating e-  
Negotiation

*S.C. Cheung (Hong Kong University of Science and Technology, Hong  
Kong), Patrick C.K. Hung (University of Waterloo, Canada), and Dickson  
K.W. Chiu (Chinese University of Hong Kong, Hong Kong)*

### Tutorial 3.

11.00 - 12.30

Advanced OO Modelling: Metamodels and Notations for the New Millennium:

*Brian Henderson-Sellers, University of Technology, Sydney, Australia.*

**Lunch**      Restaurant in Tampere Hall

12.30 - 14.00

**Session 2: Principles of Ontology**

14.00 - 15.30 Session Chair: *Isabelle Comyn-Wattiau, (ESSEC Business School, France)*

On the General Ontological Foundations of Conceptual Modeling  
*Giancarlo Guizzardi (University of Twente, The Netherlands),  
Heinrich Herre (University of Leipzig, Germany), and  
Gerd Wagner (Eindhoven University of Technology, The Netherlands)*

Finding and Characterizing Changes in Ontologies  
*Michel Klein, Atanas Kiryakov, and Dieter Fensel (Vrije Universiteit, The Netherlands)*

Superimposed Schematics: Introducing E-R Structure for In-Situ Information Selections  
*Shawn Bowers, Lois Delcambre, and David Maier (Oregon Health and Science University, USA)*

**Special Workshop**

14.00 - 15.30 Workshop Chair: Peter P. Chen, Louisiana State University, USA.  
Cyber Security Workshop

**Session for Industrial Presentations, Demos and Posters (14.00 - 15.30)**

14.00 - 14.30  
Executable Model for Processing Customers' Feedback  
*Ilija Bider and Rogier Svensson, IbisSoft, Stockholm, Sweden,*

14.30 - 15.00  
JustBrowsing: A Generic API for Exploring Information (Demonstration)  
*Shawn Bowers and Lois Declambre. Oregon Health & Science University, USA*

**- Posters**

15.00 - 15.10  
Development of a conceptual datamodel for digital spatiotemporal geographical information, with application to several themes and geographical information systems.  
*Nico Van de Weghe, (Ghent University, Belgium)*

15.10 - 15.20  
Using Semantic Rules Database to Dynamically Set up the ICSPACE Virtual Building.  
*Ozifrankly Silva', Tatiana Tavares, Márcia Lucena, Guido Souza Filho, (Federal University of Rio Grande do Norte, Brazil)*

15.20 - 15.30  
On the Transformation of Object Oriented Conceptual models to Logical Theories: from EROOS to ID -Logic.

*Pieter Bekaert and Bert Van Nuffelen, (Katolic University of Leuven, Belgium)*

**Break**

**Session 3: Web Environments**

16.00 - 17.30 Session Chair: *Lois Delcambre, (Oregon Health and Science University, USA)*

Web extensions to UML: Using the MVC Triad

*David Lowe, Brian Henderson-Sellers, and Alice Gu (University of Technology, Sydney, Australia)*

Wiccap Data Model: Mapping Physical Websites to Logical Views

*Zehua Liu, Feifei Li, and Wee Keong Ng (Nanyang Technological University, Singapore)*

Representing and Querying Semistructured Web Data Using Nested Tables with Structural Variants

*Altigran S. da Silva, Irna M. R. Evangelista Filha, Alberto H. F. Laender (Federal University of Minas Gerais, Brazil) and David W. Embley (Brigham Young University, USA)*

**Tutorial 4.**

16.00 - 17.30 Tutorial Session Chair: •••

Ontology-driven Conceptual Modelling: Advanced Concepts

*Nicola Guarino and Luc Schneider (Research Council LADSEB-CNR, Padova, Italy)*

**Steering Committee Meeting (Closed)**

17.30 - 19.00

**Reception**

19.30 - 21.00

**Reception of City of Tampere**

Old City Hall

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**Wednesday, October 9, 2002**

**Keynote 2:**

9.00 - 10.30 Session Chair: *Stefano Spaccapietra, (EPFL Lausanne, Switzerland)*

**An Ontology for m-Business Models**

*Yves Pigneur (University of Lausanne, Switzerland)*

**Break**

**Session 4: Theory and Methods**

11.00 - 12.30 Session Chair: *Joachim Biskup, (University of Dortmund, Germany)*

## On the Transformation of Object-Oriented Conceptual Models to Logical Theories

*Pieter Bekaert, Bert Van Nuffelen, Maurice Bruynooghe, David Gilis and Marc Denecker (Katholieke Universiteit Leuven, Belgium)*

## Reasoning with Goal Analysis

*Paolo Giorgini (University of Trento, Italy), John Mylopoulos (University of Toronto, Canada), Eleonora Nicchiarelli, and Roberto Sebastiani (University of Trento, Italy)*

## Registering Scientific Information Sources for Semantic Mediation

*Amarnath Gupta, Bertram Ludaescher, and Maryann E. Martone (University of California, San Diego, USA)*

### **Tutorial 5.**

11.00 - 12.30

#### Workflow Management in Electronic Commerce:

*Paul Grefen, University of Twente, The Netherlands.*

#### **Lunch**      Restaurant in Tampere Hall

12.30 - 14.00

### **Session 5: Methods and Tools**

14.00 - 15.30 Session Chair: *Jose Palazzo de Oliveira, (Federal University of Rio Grande do Sul, Brazil)*

#### Multidimensional Modeling with UML Package Diagrams

*Sergio Lujan-Mora, Juan Trujillo (Universidad de Alicante, Spain), and Il-Yeol Song (Drexel University, USA)*

#### Comparative Evaluation of Large Data Model Representation Methods: The Analyst's Perspective

*Daniel L. Moody (Norwegian University of Science and Technology, Norway)*

#### Extracting Conceptual Relationships from Specialized Documents

*Bowen Hui and Eric Yu (University of Toronto, Canada)*

### **Special Workshop**

14.00 - 15.30 Workshop Chair: Peter P. Chen, Louisiana State University, USA.

#### Cyber Security Workshop

### **Break**

### **Session 6: Applications for Practice**

16.00 - 15.30 Session Chair: *Il-Yeol Song, (Drexel University, USA)*

#### A Transactional Model for Data Warehouse Maintenance

*Jun Chen, Songting Chen, and Elke A. Rundensteiner (Worcester Polytechnic Institute, USA)*

#### The Account Data Model

*Andrew Pletch, Chih-yang Tsai, and Charles Matula (State University of New York at New Paltz, USA)*

**A Semantic Model for Hypertext Data Caching**

*Kai Cheng (Kyoto University, Japan and Wuhan University, China) and  
Yahiko Kambayashi (Kyoto University, Japan)*

**Special Workshop**

16.00 - 17.30 Workshop Chair: Peter P. Chen, Louisiana State University,  
USA.

Cyber Security Workshop

**Conference Dinner**

19.00 - 23.00 **Restaurant Ziberia**

**Banquet keynote speaker:**

*Dr. Ruzena Bajcsy. (University of California, Berkeley, USA),*

Information Technology in Service to Society Opportunities and Challenges.

**Announcement of the ER2003 conference and invitation**

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**Thursday, October 10, 2002**

**Keynote 3:**

9.00 - 10.30 Session Chair: *Tok Wang Ling, (National U. of Singapore,  
Singapore)*

**Independence-Friendly Logic: Some Applications**

*Gabriel Sandu (University of Helsinki, Finland)*

**Break**

**Session 7: Applying Ontology in Conceptual Modeling**

11.00 - 12.30 Session Chair: *Arne Sølvberg, (Norwegian University of Science  
and Technology, Norway)*

Understanding and Simulating Narratives in the Context of Information  
Systems

*Angelo E. M. Ciarlini and Antonio L. Furtado (Pontifícia Universidade  
Católica do Rio de Janeiro, Brazil)*

Global Schema Generation Using Formal Ontologies

*Farshad Hakimpour (University of Zurich, Switzerland) and Andreas  
Geppert (Credit Suisse Financial Services, Switzerland)*

Automatically Extracting Ontologically Specified Data from HTML Tables with  
Unknown Structure

*David W. Embley, Cui Tao, and Stephen W. Liddle (Brigham Young  
University, USA)*

**Session 8: System and Data Integration**

11.00 - 12.30 Session Chair: *David W. Embley, (Brigham Young University,  
USA)*

**On the Expressive Power of Data Integration Systems**

*Andrea Cali', Diego Calvanese, Giuseppe De Giacomo, and Maurizio Lenzerini (Universita' di Roma "La Sapienza", Italy)*

**Property-Based Semantic Reconciliation of Heterogeneous Information Sources**

*Jeffrey Parsons (Memorial University of Newfoundland, Canada) and Yair Wand (The University of British Columbia, Canada)*

**Conceptual Integration of Multiple Partial Geometric Models**

*Simone Santini and Amarnath Gupta (University of California San Diego, USA)*

**Lunch** Restaurant in Tampere Hall  
12.30 - 14.00

**Session 9: Quality Assessment**

14.00 - 15.30 Session Chair: *Bernhard Thalheim, (Brandenburgian Technical University, Germany)*

**Evaluating the Quality of Process Models: Empirical Analysis of a Quality Framework**

*Terje Brasethvik, Daniel L. Moody, Guttorm Sindre, and Arne Sølvsberg (Norwegian University of Science and Technology, Norway)*

**Data Quality in Web Information Systems**

*Barbara Pernici (Politecnico di Milano, Italy) and Monica Scannapieco (Universita' di Roma "La Sapienza", Italy)*

**Conceptual Modeling Quality – From EER to UML Schema Evaluation**

*Samira Si-Said (Laboratoire CEDRIC-CNAM, France), Jacky Akoka (Laboratoire CEDRIC-CNAM et INT, France), and Isabelle Comyn-Wattiau (Université de Cergy-Pontoise et ESSEC, France)*

**Session 10: XML & Object Systems**

14.00 - 15.30 Session Chair: *Stephen W. Liddle, (Brigham Young University, USA)*

**Conceptual Modeling for Customized XML Schemas**

*Ramez Elmasri, Yu-Chi Wu, Babak Hojabri, Charley Li, and Jack Fu (The University of Texas at Arlington, USA)*

**A Flexible Cost Model for Abstract Object-Oriented Database Schemas**

*Joachim Biskup and Ralf Menzel (Universitat Dortmund, Germany)*

**Designing Valid XML Views**

*Ya Bing Chen, Tok Wang Ling, and Mong Li Lee (National University of Singapore, Singapore)*

**Break**

**Panel:** 16.00 - 17.30

"Do we need an ontology of ontologies?"

**Moderator:** *Heinrich C. Mayr, University of Klagenfurt, Austria*

Panelists:

- *Nicola Guarino, National Research Council LADSEB-CNR, Padova, Italy*
- *John Morris,*
- *Jari Palomaki, University of Tampere, Finland*
- *Bernhard Thalheim, Brandenburgian Technical University, Germany*
- *Yair Wand, University of British Columbia, Canada*

## **Closure of the Conference**

### **Finnish Sauna**

Native Finns will guide the participants.

Instructions and rules will be given in advance.

(At own cost)

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## **Workshops on Friday, October 11, 2002:**

(See the content of workshops on the page "Workshops".)

### **Second International Workshop on Evolution and Change in Data**

**Management (ECDM 2002):** Chairpersons: *Fabio Grandi, University of Bologna, Italy, John Roddick, Flinders University, South Australia.*

### **ER/IFIP WG8.1 Workshop on Conceptual Modeling Approaches to Mobile Information Systems Development - (MobIMod'02):**

Chairpersons: *John Krogstie, SINTEF and Norwegian Institute of Science and Technology, Norway, Keng Siau, University of Nebraska-Lincoln, USA, Kalle Lyytinen, Case Western Reserve University, USA.*

### **International Workshop on Conceptual Modeling Quality (IWCMQ'02):**

PC Chair: *Mario Piattini, University of Castilla-La Mancha, Spain.*

### **Joint Workshop on Conceptual Modeling Approaches for e-Business: A Web Service Perspective - eCOMO 2002:**

Chairpersons: *Heinrich C. Mayr, University of Klagenfurt, Austria, Willem-Jan van den Heuvel, Tilburg University, The Netherlands.*

### **Special workshop: Cyber security workshop:**

Chair: *Peter P. Chen, Louisiana State University.*

### **Observe times:**

**Tuesday, October 8, 2002, 14.00 - 15.30**

**Wednesday, October 9, 2002, 14.00 - 15.30**

**Wednesday, October 9, 2002, 16.00 - 17.30**

Partial list of participants of the workshop:

**Ruzena Bajcsy**, Director, Center for Information Technology Research in the Interest of Society - CITRIS, University of California at Berkeley, (also past Director of Computer Information Science and Engineering Directorate



(CISE), National Science Foundation - NSF), **Dr. Bajcsy will talk on Wednesday.**

- Topic of the talk: To comment on the cyber security activities at Berkeley.

**C. V. Ramamoorthy**, University of California at Berkeley, (past Editor in Chief: IEEE Transactions on Software Engineering, IEEE Transactions on Knowledge and Data Engineering),

- Topic of the talk: To share his views on security issues in software engineering.

**QiPing Liu**, CEO, China Power E-Commerce Corporation, China.

- Topic of the talk: To discuss the security issues in e-commerce.

**H. Yamaguchi**, Executive Consultant, IT Strategy, Nippon Electric Corporation (NEC), Japan,

- Topic of the talk: To discuss Japan's activities in cyber security.

**Ye-Sho Chen**, Louisiana State University, Business School,

- Topic of the talk: To talk about security issues from the perspectives of auditing.

**Peter P. Chen**, Louisiana State University.

S. Jajodia, (maybe), Director, Center for Secure Information Systems, George Mason University.

- To discuss the research projects in his center.

L. Wong, (maybe), U.S. Navy SPAWAR System Center, USA.

\* Others.

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**Friday, October 11, 2002:**

**Concert at Tampere Hall, 7 pm**

**Leif Segerstam, conductor**

**Helsinki Philharmonic Orchestra**

More information available from the Information Desk and on the webpage

<http://www.tampere-talo.fi/>

(at own cost)

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