

Preface

We would like to welcome you to the proceedings of the workshops held in conjunction with the 23rd International Conference on Conceptual Modeling (ER 2004).

The objective of the workshops associated with ER 2004 was to give participants the opportunity to present and discuss emerging hot topics related to conceptual modeling, thereby adding new perspectives to conceptual modeling. To meet the objective, we selected six workshops with topics on conceptual modeling for Web information integration, digital government, GIS, change management, e-business, and agent technology. Some of these workshops were brand new while others had been held in conjunction with ER conferences as many as five times. They are:

1. 1st International Workshop on Conceptual Model-Directed Web Information Integration and Mining (CoMWIM 2004)
2. 1st International Workshop on Digital Government: Systems and Technologies (DGOV 2004)
3. 1st International Workshop on Conceptual Modeling for GIS (CoMoGIS 2004)
4. 3rd International Workshop on Evolution and Change in Data Management (ECDM 2004)
5. 1st International Workshop on Conceptual Modelling for Agents (CoMoA 2004)
6. 5th International Workshop on Conceptual Modeling Approaches for E-Business (The Model-Driven Design Value Proposition) (eCOMO 2004)

These six workshops received 38, 16, 58, 21, 17, and 13 papers, respectively. Following the philosophy of the ER workshops, the selection of contributions was very carefully carried out in order to keep the excellent standard; 13, 6, 16, 8, 7, and 6 papers were accepted by the six workshops, respectively, with acceptance rates 34%, 37%, 27%, 38%, 41%, and 46%, respectively. In total, 163 workshop papers were received and 56 papers were accepted with an average acceptance rate of 34.4%. Paper presentations of the first five workshops took place on November 9, 2004, and the sixth workshop took place on November 10, 2004. Each workshop had 2 to 4 sessions with 3 or 4 paper presentations in each session.

This proceedings contains selected workshop papers presented in the workshop sessions. We are deeply indebted to the authors, the members of the program committees, and external reviewers, whose work resulted in this outstanding program. We would like to express our sincere appreciation for the hard work by individual workshop organizers in organizing their workshops, handling the paper submissions, reviewing, and selecting workshop papers to achieve a set of excellent programs.

At this juncture, we wish to remember the late Prof. Yahiko Kambayashi who passed away on February 5, 2004 at age 60, and was at that time a workshop co-chair of ER 2004. Many of us will remember him as a friend, a mentor, a leader, an educator, and our source of inspiration. We express our heartfelt condolence and our deepest sympathy to his family.

We hope all participants shared the recent advances in research findings and developments in these emerging hot topics, and enjoyed the programs of the workshops and the conference, and their stay in Shanghai.

November 2004

Tok Wang Ling
Shan Wang
Katsumi Tanaka

ER 2004 Conference Organization

Honorary Conference Chairs

Peter P. Chen
Ruqian Lu

Louisiana State University, USA
Fudan University, China

Conference Co-chairs

Aoying Zhou
Tok Wang Ling

Fudan University, China
National University of Singapore, Singapore

Program Committee Co-chairs

Paolo Atzeni
Wesley Chu
Hongjun Lu

Università Roma Tre, Italy
University of California at Los Angeles, USA
Univ. of Science and Technology of Hong Kong,
China

Workshop Co-chairs

Shan Wang
Katsumi Tanaka
Yahiko Kambayashi¹

Renmin University of China, China
Kyoto University, Japan
Kyoto University, Japan

Tutorial Co-chairs

Jianzhong Li
Stefano Spaccapietra

Harbin Institute of Technology, China
EPFL Lausanne, Switzerland

Panel Co-chairs

Chin-Chen Chang
Erich Neuhold

Chung Cheng University, Taiwan, China
IPSI, Fraunhofer, Germany

Industrial Co-chairs

Philip S. Yu
Jian Pei
Jiansheng Feng

IBM T.J. Watson Research Center, USA
Simon Fraser University, Canada
Shanghai Baosight Software Co., Ltd., China

¹ Prof. Yahiko Kambayashi died on February 5, 2004.

Demos and Posters Chair

Mong-Li Lee National University of Singapore, Singapore
Gillian Dobbie University of Auckland, New Zealand

Publicity Chair

Qing Li City University of Hong Kong, China

Publication Chair

Shuigeng Zhou Fudan University, China

Coordinators

Zhongzhi Shi ICT, Chinese Academy of Science, China
Yoshifumi Masunaga Ochanomizu University, Japan
Elisa Bertino Purdue University, USA
Carlo Zaniolo University of California at Los Angeles, USA

Steering Committee Liaison

Arne Solvberg Norwegian University of Sci. and Tech., Norway

Local Arrangements Chair

Shuigeng Zhou Fudan University, China

Treasurer

Xueqing Gong Fudan University, China

Registration

Xiaoling Wang Fudan University, China

Webmasters

Kun Yue Fudan University, China
Yizhong Wu Fudan University, China
Zhimao Guo Fudan University, China
Keping Zhao Fudan University, China

ER 2004 Workshop Organization

ER 2004 Workshop Chairs

| | |
|--------------------------------|-----------------------------------|
| Shan Wang | Renmin University of China, China |
| Katsumi Tanaka | Kyoto University, Japan |
| Yahiko Kambayashi ² | Kyoto University, Japan |

CoMoGIS 2004 Program Chair

| | |
|-------------|-------------------------|
| Jihong Guan | Wuhan University, China |
|-------------|-------------------------|

CoMWIM 2004 Organization

Workshop Chairs

| | |
|---------------|---|
| Dongqing Yang | Peking University, China |
| Tok Wang Ling | National University of Singapore, Singapore |

Program Chairs

| | |
|---------------|---------------------------------|
| Tengjiao Wang | Peking University, China |
| Jian Pei | Simon Fraser University, Canada |

ECDM 2004 Program Chair

| | |
|--------------|------------------------------|
| Fabio Grandi | University of Bologna, Italy |
|--------------|------------------------------|

CoMoA 2004 Program Chair

| | |
|---------------|------------------------------------|
| Eleni Mangina | University College Dublin, Ireland |
|---------------|------------------------------------|

DGOV 2004 Program Chairs

| | |
|---------------|---------------------------|
| Il-Yeol Song | Drexel University, USA |
| Jin-Taek Jung | Hansung University, Korea |

eCOMO 2004 Program Chairs

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

² Prof. Yahiko Kambayashi died on February 5, 2004.

CoMoGIS 2004 Program Committee

| | |
|-----------------------|---|
| Gennady Andrienko | Fraunhofer Institute AIS, Germany |
| Masatoshi Arikawa | University of Tokyo, Japan |
| Chaitan Baru | San Diego Supercomputer Center, USA |
| Michela Bertolotto | University College Dublin, Ireland |
| Patrice Boursier | University of La Rochelle, France |
| Stephane Bressan | National University of Singapore, Singapore |
| James Carswell | Dublin Institute of Technology, Ireland |
| Barbara Catania | University of Genoa, Italy |
| Jun Chen | National Geomatics Center of China, China |
| Christophe Claramunt | Naval Academy, France |
| Maria Luisa Damiani | University of Milan, Italy |
| Max Egenhofer | NCGIA, USA |
| Andrew Frank | Technical University of Vienna, Austria |
| Jianya Gong | Wuhan University, China |
| Michael Gould | University Jaume I, Spain |
| Giovanna Guerrini | University of Pisa, Italy |
| Erik Hoel | ESRI, USA |
| Bo Huang | University of Calgary, Canada |
| Christian Jensen | Aalborg University, Denmark |
| Ning Jing | National Univ. of Defense Technology, China |
| Menno-Jan Kraak | ITC, The Netherlands |
| Robert Laurini | INSA, France |
| Ki-Joune Li | Pusan National University, South Korea |
| Hui Lin | Chinese University of Hong Kong, China |
| Tok Wang Ling | National University of Singapore, Singapore |
| Dieter Pfoser | CTI, Greece |
| Philippe Rigaux | Univ. Paris Sud, France |
| Andrea Rodriguez | University of Concepcion, Chile |
| Wenzhong Shi | Hong Kong Polytechnic University, China |
| Ryosuke Shibasaki | University of Tokyo, Japan |
| Charles A. Shoniregun | University of East London, UK |
| Stefano Spaccapietra | EPFL, Switzerland |
| George Taylor | University of Glamorgan, UK |
| Nectaria Tryfona | CTI, Greece |
| Christelle Vangenot | EPFL, Switzerland |
| Nancy Wiegand | University of Wisconsin-Madison, USA |
| Stephan Winter | University of Melbourne, Australia |
| Kevin Xu | NICTA, Australia |
| Yong Xue | Chinese Academy of Sciences, China |
| Xiofang Zhou | University of Queensland, Australia |
| Shuigeng Zhou | Fudan University, China |

CoMWIM 2004 Program Committee

| | |
|----------------|---|
| Svet Braynov | University at Buffalo, USA |
| Ying Chen | IBM China Research Lab, China |
| Zhiyuan Chen | Microsoft Research, USA |
| David Cheung | University of Hong Kong, China |
| Jun Gao | Peking University, China |
| Joshua Huang | University of Hong Kong, China |
| Dongwon Lee | Pennsylvania State University, USA |
| Chen Li | University of California, Irvine, USA |
| Bing Liu | University of Illinois at Chicago, USA |
| Dong Liu | IBM China Research Lab, China |
| Mengchi Liu | Câleton University, Canada |
| Qiong Luo | Univ. of Science and Technology of Hong Kong, China |
| Zaiqing Nie | Microsoft Research, China |
| Il-Yeol Song | Drexel University, USA |
| Haixun Wang | IBM Research, USA |
| Wei Wang | Fudan University, China |
| Yuqing Wu | Indiana University, USA |
| Chunxiao Xing | Tsinghua University, China |
| Lianghuai Yang | National University of Singapore, Singapore |
| Qiang Yang | Univ. of Science and Technology of Hong Kong, China |
| Jeffrey Yu | Chinese University of Hong Kong, China |
| Senqiang Zhou | Simon Fraser University, Canada |
| Xiaofang Zhou | Queensland University, Australia |

ECDM 2004 Program Committee

| | |
|--------------------|---|
| Alessandro Artale | Free University of Bolzano-Bozen, Italy |
| Sourav Bhowmick | Nanyang Technical University, Singapore |
| Michael Boehlen | Free University of Bolzano-Bozen, Italy |
| Carlo Combi | University of Verona, Italy |
| Curtis Dyreson | Washington State University, USA |
| Kathleen Hornsby | University of Maine, USA |
| Michel Klein | Vrije Universiteit Amsterdam, The Netherlands |
| Richard McClatchey | University of the West of England, UK |
| Federica Mandreoli | University of Modena and Reggio Emilia, Italy |
| Erik Proper | University of Nijmegen, The Netherlands |
| Chris Rainsford | DSTO, Australia |
| Sudha Ram | University of Arizona, USA |
| John Roddick | Flinders University, Australia |
| Nandlal Sarda | IIT Bombay, India |
| Myra Spiliopoulou | Otto-von-Guericke-Universitaet Magdeburg, Germany |
| Tetsuo Tamai | University of Tokyo, Japan |
| Babis Theodoulidis | UMIST, UK |
| Carlo Zaniolo | University of California at Los Angeles, USA |

CoMoA 2004 Program Committee

| | |
|------------------|------------------------------------|
| Javier Carbo | Univ. Carlos III of Madrid, Spain |
| Rem Collier | University College Dublin, Ireland |
| Kaiyu Dai | Fudan University, China |
| Maria Fasli | Essex University, UK |
| Ken Fernstrom | UCFV, Canada |
| Nathan Griffiths | University of Warwick, UK |
| Yinsheng Li | Fudan University, China |
| Eleni Mangina | University College Dublin, Ireland |
| Pavlos Moraitis | University of Cyprus, Cyprus |
| Iyad Rahwan | University of Melbourne, Australia |
| Chris Reed | University of Dundee, UK |
| Paolo Torroni | Università di Bologna, Italy |
| Shuigeng Zhou | Fudan University, China |

DGOV 2004 Program Committee

| | |
|---------------------|--|
| Yigal Arens | Digital Government Research Center, USC, USA |
| Carlo Batini | University of Milano Bicocca, Italy |
| Athman Bouguettaya | Virginia Tech, USA |
| David Cheung | University of Hong Kong, China |
| Ahmed K. Elmagarmid | Purdue University, USA |
| Joachim Hammer | University of Florida, USA |
| Ralf Klischewski | University of Hamburg, Germany |
| Chan Koh | Seoul National University of Technology, Korea |
| William McIver Jr. | National Research Council of Canada, Canada |
| Enrico Nardelli | University of Roma Tor Vergata, Italy |
| Sudha Ram | University of Arizona, USA |
| Kathy Shelfer | Drexel University, USA |
| Maurizio Talamo | University of Roma Tor Vergata, Italy |

eCOMO 2004 Program Committee

| | |
|-----------------------|---|
| Fahim Akhter | Zayed University, United Arab Emirates |
| Boldur Barbat | Lucian Blaga University, Sibiu, Romania |
| Boualem Benatallah | Univ. of New South Wales, Australia |
| Anthony Bloesch | Microsoft Corporation, USA |
| Antonio di Leva | University of Torino, Italy |
| Vadim A. Ermolayev | Zaporozhye State Univ., Ukraine |
| Marcela Genero | Univ. of Castilla-La Mancha, Spain |
| Martin Glinz | University of Zurich, Switzerland |
| József Györkös | University of Maribor, Slovenia |
| Bill Karakostas | UMIST Manchester, UK |
| Roland Kaschek | Massey University, New Zealand |
| Christian Kop | University of Klagenfurt, Austria |
| Stephen Liddle | Brigham Young University, USA |
| Zakaria Maamar | Zayed University, United Arab Emirates |
| Norbert Mikula | Intel Labs, Hillsboro, USA |
| Oscar Pastor | University of Valencia, Spain |
| Barbara Pernici | Politecnico di Milano, Italy |
| Matti Rossi | Helsinki School of Economics, Finland |
| Michael Schrefl | University of Linz, Austria |
| Daniel Schwabe | PUC-Rio, Brazil |
| Il-Yeol Song | Drexel University, Philadelphia, USA |
| Bernhard Thalheim | BTU Cottbus, Germany |
| Jos van Hillegersberg | Erasmus University, The Netherlands |
| Ron Weber | University of Queensland, Australia |
| Carson Woo | UBC Vancouver, Canada |
| Jian Yang | Tilburg University, The Netherlands |

ER 2004 Workshop External Referees

| | | |
|-------------------|----------------------|----------------------|
| Jose Luis Ambite | C.Q. Huang | Min Song |
| Franco Arcieri | Yunxiang Liu | Yu Tang |
| Mohammad S. Akram | Andrei Lopatenko | Igor Timko |
| Elena Camossi | Paola Magillo | Alexis Tsoukias |
| Luo Chen | Hyun Jin Moon | Bas van Gils |
| Federico Chesani | Barbara Oliboni | Huayi Wu |
| Junghoo Cho | Torben Bach Pedersen | Qi Yu |
| Denise de Vries | Fabrizio Riguzzi | C.Y. Zhao |
| Matteo Golfarelli | Maria Rita Scalas | Xiaohua (Davis) Zhou |

Co-organized by

Fudan University of China
National University of Singapore

In Cooperation with

Database Society of the China Computer Federation
ACM SIGMOD
ACM SIGMIS

Sponsored by

National Natural Science Foundation of China (NSFC)
ER Institute (ER Steering Committee)
K.C. Wong Education Foundation, Hong Kong

Supported by

IBM China Co., Ltd.
Shanghai Baosight Software Co., Ltd.
Digital Policy Management Association of Korea



<http://www.springer.com/978-3-540-23722-8>

Conceptual Modeling for Advanced Application Domains
ER 2004 Workshops CoMoGIS, CoMWIM, ECDM, CoMoA,
DGOM, and eCOMO, Shanghai, China, November 8-12,
2004. Proceedings

Wang, S.; Tanaka, K.; Zhou, S.; Ling, T.W.; Guan, J.;
Yang, D.; Grandi, F.; Mangina, E.; Song, I.-Y.; Mayr, H.C.
(Eds.)

2004, XXII, 696 p., Softcover

ISBN: 978-3-540-23722-8