

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
Gillian Dobbie

National University of Singapore, Singapore
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
Yoshifumi Masunaga
Elisa Bertino
Carlo Zaniolo

ICT, Chinese Academy of Science, China
Ochanomizu University, Japan
Purdue University, USA
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
Yizhong Wu
Zhimaog Guo
Keping Zhao

Fudan University, China
Fudan University, China
Fudan University, China
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, Astralia

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 Vergara, Italy
Sudha Ram	University of Arizona, USA
Kathy Shelfer	Drexel University, USA
Maurizio Talamo	University of Roma Tor Vergara, 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 Hilleegersberg	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