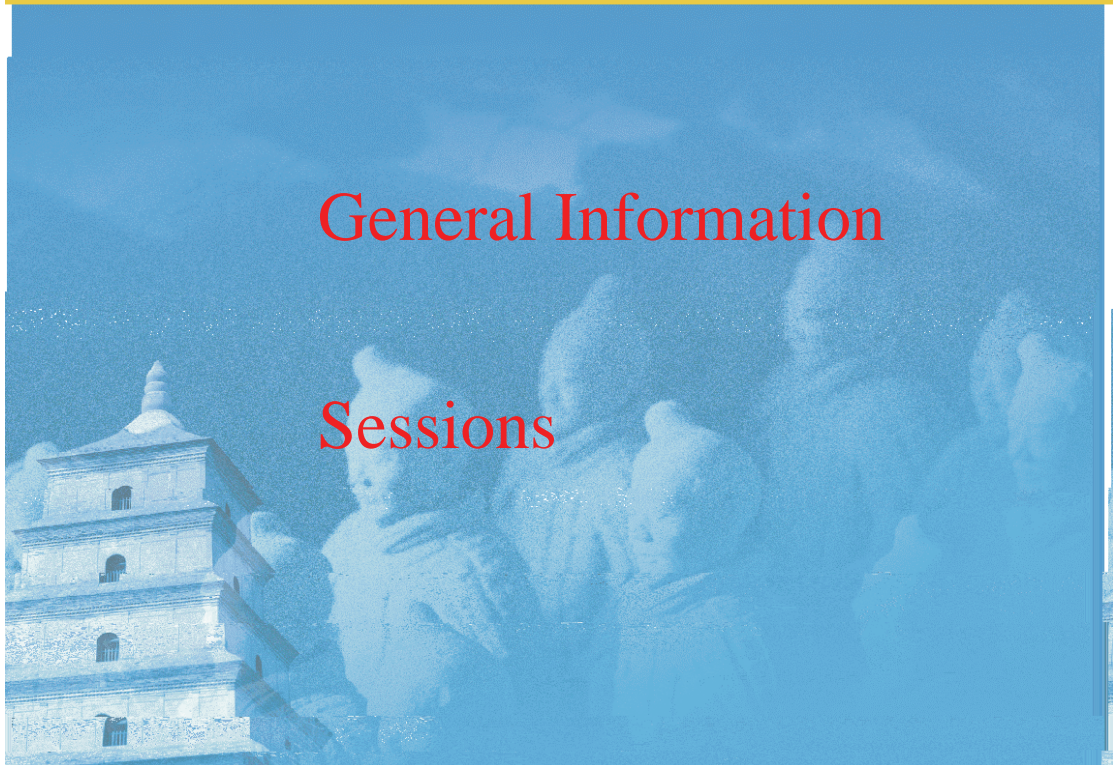


**Proceedings of the 2008 12th International Conference on
Computer Supported
Cooperative Work in Design**

General Information

Sessions



Proceedings of the 2008 12th International Conference on Computer Supported Cooperative Work in Design

Volume I

April 16-18, 2008

Xi'an, China

Edited by:

Weiming Shen, Qinghua Zheng, Jean-Paul Barthès, Junzhou Luo
Jianming Yong, Zhenghua Duan, Feng Tian

Sponsor:



Xi'an Jiaotong University

Co-Sponsors:



IEEE China Council



CSCWD

International Working Group on
CSCW in Design



Xidian University



**Proceedings of
the 2008 12th International Conference on
Computer Supported Cooperative Work in Design**

Copyright and Reprint Permission: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923. For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Operations Center, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331. All rights reserved. Copyright ©2008 by the Institute of Electrical and Electronics Engineers.

Print Version

IEEE Catalog Number: CFP08797-CDR
ISBN: 978-1-4244-1650-9
Library of Congress: 2007906161

CD-ROM Version

IEEE Catalog Number: CFP08797-CDR
ISBN: 978-1-4244-1651-6
Library of Congress: 2007906161

Published by the Institute of Electrical and Electronics Engineers Inc.

ISBN: 978-1-4244-1651-9

Printed in Beijing, China

International Steering Committee

Chair: Prof. Jean-Paul Barthès (France)
Co-Chairs: Prof. Junzhou Luo (China)
Prof. Weiming Shen (Canada)
Secretary: Prof. Weiming Shen (Canada)
Deputy Secretary: Dr. Jianming Yong (Australia)
Members: Prof. Jano Moreira de Souza (Brazil)
Prof. Igor Hawryszkiewicz (Australia)
Prof. Tangqiu Li (China)
Prof. Susan Finger (USA)
Dr. Anne James (UK)
Prof. Mary Lou Maher (Australia)
Prof. Hwa Gyoo Park (Korea)
Prof. Tetsuo Tomiyama (Netherlands)
Prof. Yun Yang (Australia)
Prof. Qinghua Zheng (China)

Conference Committees

Honorary Conference Co-Chairs:

Prof. Nanning Zheng (President, Xi'an Jiaotong University, China)
Prof. Zongkai Lin (Chinese Academy of Sciences, China)
Prof. Xun Hou (Vice-President, Chinese Academy of Sciences, China)
Prof. Tianjian Lu (Vice-President, Chinese Academy of Sciences, China)
Prof. Zhuangde Jiang (Vice-President, Chinese Academy of Sciences, China)
Prof. Xiaohong Guan (Chinese Academy of Sciences, China)

General Conference Chair:

Prof. Qinghua Zheng (Xi'an Jiaotong University, China)

Conference Co-Chairs:

Prof. Jano de Souza (Federal University of Rio de Janeiro, Brazil)
Prof. Susan Finger (Carnegie Mellon University, USA)
Prof. Tetsuo Tomiyama (TUDelft, Netherlands)
Prof. Mengqi Zhou (IEEE China, China)

Program Committee Co-Chairs:

Prof. Weiming Shen (National Research Council, Canada)
Prof. Jean-Paul Barthès (Université de Technologie de Compiègne, France)
Prof. Junzhou Luo (Southeast University, China)
Dr. Jianming Yong (University of Southern Queensland, Australia)
Prof. Zhenghua Duan (Xidian University, China)

Organizing Committee Chair:

Dr. Feng Tian (Xi'an Jiaotong University, China)

Members

Ms. Xiyuan Wu (Xi'an Jiaotong University, China)
Mrs. Lili Chen (Xi'an Jiaotong University, China)

Publicity and Publication Chairs:

Prof. Mengqi Zhou (IEEE China Council, China)

Program Committee Members:

Hamideh Afsarmanesh (NL)
Rachid Anane (UK)
Pedro Antunes (PT)
Nelson Baloian (BR)
Jinian Bian (CN)
Marcos Borges (BR)
Crescencio Bravo (ES)
Luis Camarinha-Matos (PT)
Stephen Chan (HK)
Kuo-Ming Chao (UK)
Dingfang Chen (CN)
Chih-Hsing Chu (TW)
Graham Coates (UK)
Jose Cordeiro (PT)
Sharon Cox (UK)
Jano Moreira de Souza (BR)
Jinxiang Dong (CN)
Zuming Dong (CA)
Zhenhua Duan (CN)
Fabricio Enembreck (BR)
Yushun Fan (CN)
Jinan Fiaidhi (CA)
Susan Finger (US)
Jean-Marc Frayret (CA)
Xiufen Fu (CN)
Jerry Fuh (SG)
Rajit Gadh (US)
Robert Gajewski (PL)
Shuming Gao (CN)
Peng Gong (CN)
Hamada Ghennniva (CA)
Ricardo Goncalves (PT)
Nathan Griffiths (UK)
Ning Gu (CN)
Chaozhen Guo (CN)
Soonhung Han (KR)
Qi Hao (CA)
Igor Hawryszkiewicz (AU)
Fazhi He (CN)
David Hicks (DK)
Yeh-Liang Hsu (TW)
Bin Hu (UK)
Rahat Iqbal (NL)
Anne James (UK)
Mike Jackson (UK)
Pingyu Jiang (CN)
Toshiya Kaihara (JP)
Irina Kondratova (CA)
Peter Kropf (CA)
Jean-Christophe Lapayre (FR)
Lai-Chung Lee (TW)
Tae-Eog Lee (KR)
Shaozi Li (CN)
Tangqiu Li (CN)
Weidong Li (UK)
Xiaoping Li (CN)
Yinsheng Li (CN)
Wenhe Liao (CN)
Hong Liu (CN)
Lizhen Liu (CN)
Qiang Liu (CN)
Kecheng Liu (UK)
Shufen Liu (CN)
Xiaoping Liu (CN)
Xiyu Liu (CN)
Joan Lu (UK)
Junzhou Luo (CN)
Yuhua Luo (ES)
Huadong Ma (CN)
Yonsheng Ma (SG)
K.L. Mak (HK)
Zakaria Mammam (AE)
Tsutomu Matsumoto (JP)
Sergio Palma Medeiros (BR)
Xiangxu Meng (CN)
Bernhard Mitschang (DE)
Sabah Mohammed (CA)
Andrew Nee (SG)
Vincent Ng (HK)
Eugenio Oliveira (PT)
Incheon Paik (JP)
Hwa Gyoo Park (KR)
Seong-Whan Park (KR)
Chenglian Peng (CN)
Willy Picard (PL)
Jose Pino (CL)
Michael Pouly (CH)
Milton Ramos (BR)
Ramana Reddy (US)
Miguel A. Redondo (ES)
Edson Scalabrin (BR)
Hyo-Won Suh (KR)
Abdallah Shami (CA)
Jun Shen (AU)
Lianguan Shen (CN)
Leonid Sheremetov (MX)
Meili Shi (CN)
Von-Wun Soo (TW)
Daizhong Su (UK)
Cesar Tacla (BR)
WenAn Tan (CN)
Dunbing Tang (UK)
Yong Tang (CN)
Indira Thouvenin (FR)
Tetsuo Tomiyama (NL)
Brigitte Trousse (FR)
Joris S.M. Vergeest (NL)
Haiyang Wang (CN)
Lihui Wang (CA)
Qianping Wang (CN)
Shaomei Wang (CN)
Xiangyu Wang (CN)
Yantao Wang (CN)
Ruizhong Wei (CA)
Baifeng Wu (CN)
Deyi Xue (CA)
Yuhong Yan (CA)
Yun Yang (AU)
Zhimin Yang (CN)
Niandong Yin (CN)
Muhammad Younas (UK)
Jason Yu (TW)
Jinqiao Yu (US)
K.M. Yu (HK)
You Yu (FI)
Matthew Yuen (HK)
Yong Zeng (CA)
Xuanfang Zha (USA)
Chris Zhang (CA)
Dan Zhang (CA)
Heming Zhang (CN)
Yunfeng Zhang (SG)
Xiaodong Zhang (CN)
Xiaokun Zhang (CA)
Shusheng Zhang (CN)
Weidong Zhao (CN)
Yanwei Zhao (US)
Sizhu Zhou (CN)
Haibin Zhu (CA)
Khaldoun Zreik (FR)

Preface

Welcome to the 2008 12th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2008).

Welcome to Xi'an Jiaotong University, a university with glorious history. The predecessor of Xi'an Jiaotong University is Nanyang Public University, which was founded in Shanghai in 1896. After moved to Xi'an in 1956, Xi'an Jiaotong University trained many outstanding talents from generation to generation. They have made great contribution to the thriving and prosperity of our country. Nowadays, Xi'an Jiaotong University covers nine subjects such as science, engineering, medicine, economics, management, art and law, and is characterized as science and engineering. It has become an important base that integrates the functions of talents training, scientific research, social services and promoting social development. It is directly administered by the Ministry of Education of China. It ranks among the top ten universities of China and its comprehensive strength ranks the first class among the institutions of higher education in China.

CSCW (Computer Supported Cooperative Work) with its applications to design and manufacture has been an active research field for about 15 years. Xi'an Jiaotong University boasts a number of research groups working in the related fields. It is a great honor for Xi'an Jiaotong University to host the 12th edition of the CSCWD conferences.

The CSCWD 2008 Program Committee has developed an exciting technical program that includes 34 technical sessions (contributed and invited). The proceedings contain 196 papers selected from more than 360 submissions from 12 countries.

I would like to thank all the chairs and members of the Program Committee for their efforts in putting together such a comprehensive program. Special acknowledgement goes to the authors who contributed to this conference.

I would also like to thank all the chairs and members of the Organizing Committees for taking care of all the details to make this conference successful, particularly, Feng Tian, Xiyuan Wu, Lili Chen, Weizhan Zhang, Jixin Hou, Wanyu Deng, Guangdong Liu, Shibin Wang for registration and statistical work, Cheng Zheng for the development and maintenance of the conference management Web site, volunteers from Xi'an Jiaotong university for support to the conference preparation, and staff of Nanyang Hotel and Cambridge Hotel for their excellent services.

We thank IEEE China Council for the co-sponsorship of this conference.



Nanning Zheng, Professor
President of Xi'an Jiaotong University
IEEE Fellow, Member of Chinese Academy of Engineering
CSCWD 2008 Honorary Conference Chair

Sessions

Keynote and Special Papers

CSCW Techniques

Knowledge Management for Cooperative Design

Intelligent Agents and Multi-Agent Systems for Cooperative Design

Web Services, Semantic Web, and Grids for Cooperative Design

Mobile Collaboration and Applications

Workflows for Cooperative Design

Virtual Reality for Cooperative Design

Security, Privacy, and Trust

Collaboration in Manufacturing, Construction, and Services

Cooperation in Virtual Enterprise and E-Business

Distance Learning

Other Applications