Lecture Notes in Computer Science 6897

Commenced Publication in 1973
Founding and Former Series Editors:
Gerhard Goos, Juris Hartmanis, and Jan van Leeuwen

Editorial Board

Haixun Wang   Shijun Li   Satoshi Oyama
Xiaohua Hu   Tieyun Qian (Eds.)

Web-Age Information Management

12th International Conference, WAIM 2011
Wuhan, China, September 14-16, 2011
Proceedings

Springer

Volume Editors

Haixun Wang
Microsoft Research Asia, Beijing, 100190, China
E-mail: haixunw@microsoft.com

Shijun Li
Wuhan University, Hubei 430072, China
E-mail: shjli@whu.edu.cn

Satoshi Oyama
Hokkaido University, Sapporo, Hokkaido 060-0814, Japan
E-mail: oyama@ist.hokudai.ac.jp

Xiaohua Hu
Drexel University, Philadelphia, PA 19104, USA
E-mail: xh29@drexel.edu

Tieyun Qian
Wuhan University, Hubei, 430072, China
E-mail: qty@whu.edu.cn

Preface

WAIM has been a leading international conference on research, development, and applications of Web technologies, database systems, information management and software engineering. WAIM is focused in the Asia-Pacific region, and previous WAIM conferences were held in Shanghai (2000), Xi'an (2001), Beijing (2002), Chengdu (2003), Dalian (2004), Hangzhou (2005), Hong Kong (2006), Huangshan (2007), Zhangjiajie (2008), Suzhou (2009), and Jiuzhaigou (2010). As the 12th event in the increasingly popular series, WAIM 2011 attracted outstanding researchers from all over the world to Wuhan, China. In particular, this year WAIM and Microsoft Research Asia jointly sponsored a database summer school, which was collocated with WAIM.

This high-quality program would not have been possible without the authors who chose WAIM as a venue for their publications. Out of 181 submitted papers from various countries and regions, we selected 53 full papers for publication. The acceptance rate for regular full papers is 29%. The contributed papers addressed a wide scope of issues in the fields of Web-age information management and advanced applications, including Web data mining, knowledge discovery from streaming data, query processing, multidimensional data analysis, data management support to advanced applications, etc.

A conference like this can only succeed as a team effort. We want to thank the Program Committee Chairs, Program Committee members and the reviewers for their invaluable efforts. Special thanks to the local Organizing Committee headed by Liang Hong and Ming Zhong. Many thanks also go to the Workshop Co-chairs (Chengfei Liu and Liwei Wang), Finance Chairs (Howard Leung and Xuhui Li), and Publicity Co-chairs (Weiyi Meng, Lei Chen and Guohui Li). We also thank the conference sponsors for their generous support.

We hope that you enjoy reading the proceedings of WAIM 2011.

September 2011
Haixun Wang
Shijun Li
Satoshi Oyama

Conference Organization

Honorary General Co-chairs

Yanxiang He	Wuhan University, China
Changjie Tang	Sichuan University, China

General Co-chairs

Katsumi Tanaka	Kyoto University, Japan
Zhiyong Peng	Wuhan University, China

Program Committee Co-chairs

Haixun Wang	Microsoft Research Asia
Shijun Li	Wuhan University, China
Satoshi Oyama	Hokkaido University, Japan

Workshop Co-chairs

Chengfei Liu	Swinburne University of Technology, Australia
Liwei Wang	Wuhan University, China

Industry Co-chairs

Mukesh Mohania	IBM, India
Xiaoxin Wu	Huawei, China

Publication Co-chairs

Xiaohua Hu	Drexel University, USA
Tieyun Qian	Wuhan University, China

Publicity Co-chairs

Weiyi Meng	Binghamton University, USA
Lei Chen	Hong Kong University of Science and Technology, Hong Kong
Guohui Li	Huazhong University of Science and Technology, China

Local Organization Co-chairs

Liang Hong   Wuhan University, China
Ming Zhong   Wuhan University, China

Finance Co-chairs

Howard Leung   City University of Hong Kong
Xuhui Li   Wuhan University, China

Steering Committee Liaison

Qing Li   City University of Hong Kong

CCF DBS Liaison

Xiaofeng Meng   Renmin University, China

Program Co-chairs

Haixun Wang   Microsoft Research Asia
Shijun Li   Wuhan University, China
Satoshi Oyama   Hokkaido University, Japan

Area Chairs

Bin Cui   Peking University, China
Danushka Bollegala   University of Tokyo, Japan
Jianyong Wang   Tsinghua University, China
Kenny Zhu   Shanghai Jiao Tong University, China
Seung-won Hwang   Pohang University of Science and Technology,
                                Korea
Wei Wang   University of New South Wales, Australia
Xiaochun Yang   Northeastern University, China
Alfredo Cuzzocrea   University of Calabria, Italy

Program Committee

Anthony Tung   National University of Singapore, Singapore
Aoying Zhou   East China Normal University, China
Baihua Zheng   Singapore Management University, Singapore
Bin Cui   Peking University, China
Bingsheng He   Chinese University of Hong Kong, Hong Kong
Chengkai Li   University of Texas at Arlington, USA

Danushka Bollegala   The University of Tokyo, Japan
David Cheung   The University of Hong Kong
Donghui Zhang   Microsoft Jim Gray Systems Lab, USA
Fei Xu   Microsoft
Feifei Li   Florida State University, USA
Ge Yu   Northeastern University, China
Guoren Wang   Northeastern University, China
Guozhu Dong   Wright State University, USA
Heng Tao Shen   University of Queensland, Australia
Hiroaki Ohshima   Kyoto University, Japan
Hong Chen   Chinese University of Hong Kong,
                              Hong Kong
Hongzhi Wang   Harbin Industry University, China
Hua Wang   University of Southern Queensland,
                              Australia
Huan Liu   Arizona State University, USA
Hwanjo Yu   Pohang University of Science and
                              Technology, Korea
Jaewoo Kang   Korea University
Jeffrey Yu   Chinese University of Hong Kong
Jianliang Xu   Hong Kong Baptist University, Hong Kong
Jianyong Wang   Tsinghua University, China
Jie Tang   Tsinghua University, China
Jimmy Huang   York University, Canada
Jun Gao   Peking University, China
Ke Wang   Simon Fraser University, Canada
Kenny Zhu   Shanghai Jiao Tong University, China
Lei Chen   Hong Kong University of Science and
                              Technology, Hong Kong
Lei Duan   Sichuan University, China
Lin Li   Wuhan University of Technology, China
Lei Zou   Peking University, China
Lipeow Lim   University of Hawaii at Manoa, USA
Min Wang   HP Lab China
Nick Koudas   University of Toronto, Canada
Ning Jing   National University of Defense
                              Technology, China
Peiquan Jin   University of Science and Technology
                              China, China
Peng Wang   Fudan University, China
Philip Yu   University of Illinois at Chicago, USA
Qiang Ma   Kyoto University, Japan
Qiang Zhu   University of Michigan at Dearborn, USA
Raymond Ng   University of British Columbia, Canada
Ruili Wang   Massey University, New Zealand
Ruoming Jin   Kent State University, USA

Seung-won Hwang   Pohang University of Science and
                               Technology, Korea
Shinsuke Nakajima   Kyoto Sangyo University, Japan
Shuai Ma   University of Edinburgh, UK
Shuigeng Zhou   Fudan University, China
Shuming Shi   Microsoft Research Asia
Tao Li   Florida International University, USA
Tengjiao Wang   Peking University, China
Ting Yu   North Carolina State University, USA
Toshiyuki Amagasa   University of Tsukuba, Japan
Wei Wang   University of New South Wales, Australia
Weiyi Meng   State University of New York at
                               Binghamton, USA
Weizhu Chen   Microsoft Research Asia
Xiaochun Yang   Northeastern University, China
Xiaofeng Meng   Renmin University of China, China
Xiaoyong Du   Renmin University of China, China
Xin (Luna)   Dong AT&T Research, USA
Xingquan Hill Zhu   University of Technology, Sydney
Xintao Wu   University of North Carolina at Charlotte,
                               USA
Xu Yu   Teradata, USA
Xuanjing Huang   Fudan Universtiy, China
Xuemin Lin   University of New South Wales, Australia
Yan Jia   National University of Defense
                               Technology, China
Yanghua Xiao   Fudan Universtiy, China
Yaokai Feng   Kyushu University, Japan
Yi Cai   City University of Hong Kong, Hong Kong
Yi Ke   Hong Kong University of Science and
                               Technology, Hong Kong
Yingzi Jin   University of Tokyo, Japan
Yoshiharu Ishikawa   Nagoya University, Japan
Yuchen Fu   Soochow University, China
Yunjun Gao   Zhejiang University, China
Yuqing Wu   Indiana University at Bloomington, USA
Zhanhuai Li   Northwestern Polytechnical University, China
Zhongfei Zhang   State University of New York at
                               Binghamton, USA
Zhongyuan Wang   Microsoft Research Asia

Table of Contents

Keynotes

Session 1A: Query Processing

Session 1B: Uncertain Data

Session 1C: Social Media (1)

Session 2A: Semantics

Session 2B: Data Mining (1)

Session 2C: Social Media (2)

Session 3A: Cloud Data

Session 3B: Multimedia Data

Session 3C: User Models

Session 4A: Data Management

Session 4B: Graph Data

Session 4C: Name Disambiguation

Session 5A: Performance

Session 5B: Data Mining (2)

Session 5C: Temporal Data

Session 6A: XML

Session 6B: Spatial Data

Session 6C: Event Detection