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Web Technologies and Applications

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Proceedings

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Volume Editors

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The University of Adelaide, School of Computer Science
Adelaide, SA 5005, Australia
E-mail: qsheng@cs.adelaide.edu.au

Guoren Wang
Northeastern University, College of Information Science and Engineering
Shenyang 110819, China
E-mail: wanggr@mail.neu.edu.cn

Christian S. Jensen
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8200 Aarhus N, Denmark
E-mail: csj@cs.au.dk

Guandong Xu
Victoria University, Centre for Applied Informatics
Melbourne City, VIC 8001, Australia
E-mail: guandong.xu@vu.edu.au

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Message from the General Chairs

Welcome to APWeb 2012, the 14th Edition of Asia Pacific Web Technology Conference. APWeb is a leading international conference on research, development, and applications of Web technologies, database systems, information management, and software engineering, with a focus on the Asia-Pacific region. Previous APWeb conferences were held in Beijing (2011), Busan (2010), Suzhou (2009), Shenyang (2008), Huangshan (2007), Harbin (2006), Shanghai (2005), Hangzhou (2004), Xi'an (2003), Changsha (2001), Xi'an (2000), Hong Kong (1999), and Beijing (1998).

APWeb conferences cover contemporary topics in the fields of Web management and World Wide Web-related research and applications, such as advanced application of databases, cloud computing, content management, data mining and knowledge discovery, distributed and parallel processing, grid computing, Internet of Things, Semantic Web and Web ontology, security, privacy and trust, sensor networks, service-oriented computing, Web community analysis, Web mining and social networks.

The APWeb 2012 program featured a main conference and five satellite workshops. The main conference had two eminent keynote speakers, Patrick McDaniel from Pennsylvania State University, USA, and Vijay Varadharajan from Macquarie University, Australia, 39 full research papers, 34 short research papers, and 5 demonstration papers. The four workshops reported recent developments and advances in the contemporary topics in the related fields of:

- Information Extraction and Knowledge Base Building (IEKB)
- Intelligent Data Processing (IDP 2012)
- Sensor Networks and Data Engineering (SenDe 2012)
- Mobile Business Collaboration (MBC 2012)

Both main conference program and workshop sessions were of high quality owing to the strong support and commitment from their international Program Committee. We wish to take this opportunity to thank Program Co-chairs Michael Sheng, Guoren Wang, and Christian S. Jensen, for their dedication and effort in ensuring a high-quality program. We would also like to thank Workshop Co-chairs Hua Wang and Lei Zou, and each workshop organizers for their contributions to developing an interesting and attractive workshop program. Many colleagues helped toward the success of APWeb 2012. They are: Local Arrangements Co-chairs: Jianfeng He and Guangyan Huang; Financial Chair: Jing He; Publication Chair: Guandong Xu; Industry Co-chairs: Gary Morgan and Qingzhong Li; Demonstration Chair: Chaoyi Pang; Publicity Co-chairs: Haolan Zhang and Jiangang Ma, and Webmaster: Zhi Qiao and Zhangwei Jiang.

We would like to sincerely thank our financial supporters and sponsors. The following organizations generously supported and sponsored APWeb 2012:

Hebei University of Engineering, Nanjing University of Finance and Economics, National Science Foundation of China, Kunming University of Science and Technology, Graduate University of Chinese Academy of Science, and Victoria University.

Finally, we wish to thank the APWeb Steering Committee, led by Xuemin Lin, for offering the opportunity to organize APWeb 2012 in Kunming. We also wish to thank the host organization Kunming University of Science and Technology and local arrangements committee and volunteers for the assistance in organizing this conference. The following members helped with the registration, accommodation, and various logistics: Jing Yang, Xun Zhou, Fenhua Li, and Shang Hu.

February 2012

Yaoxue Zhang
Yanchun Zhang
Masaru Kitsuregawa

Message from the Program Chairs

The relentless growth in Internet functionality and broadband access has enabled a new wave of innovations that is transforming the way people and organizations interact, communicate, and collaborate. APWeb 2012 built on the tradition of 13 successful previous editions of the conference and aimed at presenting original contributions related to all fields of World Wide Web-related research, development, and applications.

The call for papers generated substantial interest. A total of 167 paper submissions were received, which represents an increase of over 60% compared to APWeb 2011. The paper submissions, from 17 countries and regions, were reviewed carefully by members of the Program Committee, which comprised 104 experts from 20 countries. Based on the reviews, 39 submissions were selected as full papers, yielding an acceptance rate of 23%. In addition, 34 submissions were selected as short papers. The selected papers covered a wide variety of important topics related to the World Wide Web, including Web mining, service-oriented computing, XML and semi-structured query processing, social networks, Web information extraction, and cloud computing. Authors of a few selected papers will be invited to submit extended versions to a special issue of the *World Wide Web* journal, published by Springer.

The conference program featured two keynote addresses given by Patrick McDaniel, Editor-in-Chief of *ACM Transactions on Internet Technology*, and Vijay Varadharajan, Microsoft Chair in Innovation in Computing at Macquarie University, Australia. The program encompassed five demonstrations, which were selected by a separate committee chaired by Chaoyi Pang.

The program also contained a collection of papers that were presented in affiliated workshops and that were published in a separate LNCS volume, including the International Workshop on Intelligent Data Processing (IDP 2012) organized by Chaoyi Pang, Junhu Wang, and Haolan Zhang, the Workshop on Information Extraction and Knowledge Base Building (IEKB 2012) organized by Dongyan Zhao, the Workshop on Sensor Networks and Data Engineering (SenDe 2012) organized by Jing He, Guangyan Huang, and Xiedong Cao, and the Third International Workshop on Mobile Business Collaboration (MBC 2012) organized by Dickson Chiu, Yi Zhuang, and Zhiang Wu.

We thank all authors for their submissions and the Program Committee members and external reviewers for their excellent work. We hope that you find the papers in the proceedings interesting and stimulating.

February 2012

Quan Z. Sheng
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