

Preface

This volume contains the papers selected for presentation at *the First Asia-Pacific Conference on Web Intelligence* (WI 2001) held in Maebashi TERRSA, Maebashi City, Japan, October 23–26, 2001. It was sponsored by ACM SIGART and Maebashi Institute of Technology, in cooperation with ACM SIGCHI, ACM SIGWEB, the Japanese Society for Artificial Intelligence (JSAl), JSAl SIGFAI, JSAl SIGKBS, and IEICE SIGKBSE. The conference was held jointly with the Second Asia-Pacific Conference on Intelligent Agent Technology (IAT 2001).

WI 2001 was the first conference on a new and emerging subfield of computer science known as *Web Intelligence*. It provided an international forum for researchers and practitioners to present the state of the art in the development of Web intelligence, to examine performance characteristics of various approaches in Web-based intelligent information technology, and to cross-fertilize ideas on the development of Web-based intelligent information systems among different domains. By idea-sharing and discussions on the underlying foundations and the enabling technologies of Web intelligence, we hoped to stimulate the future development of new models, new methodologies, and new tools for building a variety of embodiments of Intelligent Web Information Systems (IWIS).

In spite of its name, WI 2001 was truly an international conference that attracted 153 full-length research paper submissions from 31 countries and regions of all continents. Each submitted paper was reviewed by at least three experts on the basis of technical soundness, relevance, originality, significance, and clarity. Based on the review reports, 28 regular papers and 45 short papers were accepted for presentation and publication. Seven technical sessions were organized, namely: Web Information System Environment and Foundations; Web Human-Media Engineering; Web Information Management; Web Information Retrieval; Web Agents; Web Mining and Farming; Web-Based Applications.

We wish to express our gratitude to all members of the Conference Committee and the International Advisory Board for their instrumental and unfailing support. WI 2001 had a very exciting program with a number of features, ranging from technical sessions, invited talks, demos, and social programs. All of this work would not have been possible without the generous dedication of the Program Committee members and the external reviewers, of our keynote speakers, Edward A. Feigenbaum and Benjamin Wah, and invited speakers, Nick Cercone, James Hendler, W. Lewis Johnson, Riichiro Mizoguchi, Prabhakar Raghavan, and Patrick S. P. Wang, who prepared and presented very stimulating talks, and of Yiming Ye (Demos & Exhibits Chair) who solicited demo proposals and set up the program. We thank them for their strong support.

The conference Web support team at the Knowledge Information Systems Laboratory, Maebashi Institute of Technology did a terrific job of putting together and maintaining the home page for the conference as well as building a software, *cyber-chair*, which is an intelligent agent and interface among orga-

nizers, program committee members, and authors/attendees. We would like to thank Juzhen Dong, Muneaki Ohsima, and Norichika Hayazaki of the conference Web support team for their dedication and hard work.

WI 2001 could not have taken place without the great team effort of the Local Organizing Committee and the support of Maebashi Institute of Technology and Maebashi Convention Bureau. Our special thanks go to Nobuo Otani (Local Organizing Chair), Sean M. Reedy, Masaaki Sakurai, Kanehisa Sekine, and Yoshitsugu Kakemoto (the Local Organizing Committee members) for their enormous efforts in planning and arranging the logistics of the conference from registration/payment handling, venue preparation, accommodation booking, to banquet/social program organization. Our sincere gratitude goes to all of the authors who submitted papers. We are very grateful to the WI 2001 corporate sponsors: Maebashi Convention Bureau, Maebashi City Government, Gunma Prefecture Government, The Japan Research Institute, Limited, United States Air Force Office of Scientific Research, Asian Office of Aerospace Research and Development, United States Army Research Office in Far East, and Web Intelligence Laboratory, Inc. for their generous support. Last but not the least, we thank Alfred Hofmann of Springer-Verlag for his help in coordinating the publication of the proceedings.

October 2001

Ning Zhong, Yiyu Yao
Jiming Liu, Setsuo Ohsuga

WI 2001 Conference Committee

General Chairs:

Jiming Liu
Setsuo Ohsuga

Hong Kong Baptist University
Waseda University, Japan

Program Chairs:

Ning Zhong
Yiyu Yao

Maebashi Institute of Technology, Japan
University of Regina, Canada

Demos and Exhibits Chair:

Yiming Ye

IBM T.J. Watson Research Center, USA

Local Organizing Chair:

Nobuo Otani

Maebashi Institute of Technology, Japan

Advisory Board:

Nick Cercone
Edward A. Feigenbaum
T.Y. Lin
Jiming Liu
Setsuo Ohsuga
Ryuichi Oka
Nobuo Otani
Zbigniew W. Ras
Andrzej Skowron
Xindong Wu
Yiyu Yao
Philip Yu
Ning Zhong

University of Waterloo, Canada
Stanford University, USA
San Jose State University, USA
Hong Kong Baptist University
Waseda University, Japan
Real World Computing Partnership, Japan
Maebashi Institute of Technology, Japan
University of North Carolina, USA
Warsaw University, Poland
Colorado School of Mines, USA
University of Regina, Canada
IBM T.J. Watson Research Center, USA
Maebashi Institute of Technology, Japan

VIII Organization

Local Organizing Committee:

Masahiko Satori
Tadaomi Miyazaki
Nobuo Otani
Sean M. Reedy
Ning Zhong
Masaaki Sakurai
Toshio Kawamura
Kanehisa Sekine
Midori Asaka
Yoshitsugu Kakemoto

Maebashi Institute of Technology, Japan
Maebashi Convention Bureau, Japan
Maebashi Convention Bureau, Japan
Maebashi Convention Bureau, Japan
Information Technology Agency, Japan
Japan Research Institute, Limited, Japan

Program Committee

| | |
|---------------------------|--|
| Sarabjot Singh Anand | MINEit Software Limited, USA |
| Hendrik Blockeel | Katholieke Universiteit Leuven, Belgium |
| Peter Bollmann-Sdorra | Technische Universität Berlin, Germany |
| Cory Butz | University of Ottawa, Canada |
| Keith Chan | Hong Kong Polytechnic University |
| Hsinchun Chen | University of Arizona, USA |
| Ming-Syan Chen | National Taiwan University |
| Jingde Cheng | Saitama University, Japan |
| David Cheung | Hong Kong University |
| Robert Cooley | University of Minnesota, USA |
| Stefan Decker | Stanford University, USA |
| Liya Ding | National University of Singapore |
| Dieter Fensel | Vrije Universiteit Amsterdam |
| Benjamin Grosof | Massachusetts Institute of Technology, USA |
| Jiawei Han | Simon Fraser University, Canada |
| James Hendorfer | DARPA/ISO, USA |
| Bernardo A. Huberman | Xerox Palo Alto Research Center |
| W. Lewis Johnson | University of South California, USA |
| Tomonari Kamba | NEC Human Media Research Lab., Japan |
| Yasuhiko Kitamura | Osaka City University, Japan |
| Ramamohanarao Kotagiri | University of Melbourne, Australia |
| Bing Liu | National University of Singapore |
| Chunnian Liu | Beijing Polytechnic University, China |
| Jiming Liu | Hong Kong Baptist University |
| Brien R. Maguire | University of Regina, Canada |
| Akira Namatame | National Defense Academy, Japan |
| Jian-Yun Nie | Université de Montréal, Canada |
| H-O Nyongesa | Sheffield Hallam University, UK |
| Yukio Ohsawa | University of Tsukuba, Japan |
| Terry R. Payne | Carnegie Mellon University, USA |
| Gregory Piatetsky-Shapiro | Knowlegde Stream, USA |
| Mohamed Quafafou | University of Nantes, France |
| Vijay V. Reghavan | University of SW Louisiana, USA |
| Qiang Shen | University of Edinburgh, UK |
| Timothy K. Shih | Tamkang University, Taiwan |
| Myra Spiliopoulou | University of Magdeburg, Germany |
| Jaideep Srivastava | University of Minnesota, USA |
| Yasuyuki Sumi | ATR Laboratory Japan |
| Einoshin Suzuki | Yokohama National University, Japan |
| Roman W. Swiniarski | San Diego State University, USA |
| Atsuhiro Takasu | National Institute of Informatics, Japan |

| | |
|--------------------|---|
| Pierre Tchounikine | University of Maine, France |
| Hiroshi Tsukimoto | Toshiba Corporation, Japan |
| Shusaku Tsumoto | Shimane Medical University, Japan |
| Gottfried Vossen | University of Munster, Germany |
| Lipo Wang | Nanyang Technology University, Singapore |
| Takashi Washio | Osaka University, Japan |
| Michael S.K. Wong | University of Regina, Canada |
| Graham Williams | CSIRO, Australia |
| Seiji Yamada | Tokyo Institute of Technology |
| Yoneo Yano | Tokushima University, Japan |
| Yiyu Yao | University of Regina, Canada |
| Yiming Ye | IBM T. J. Watson Research Center, USA |
| Tetuya Yoshida | Osaka University, Japan |
| Ning Zhong | Maebashi Institute of Technology, Japan |
| Lizhu Zhou | Tsinghua University, China |
| Wojciech Ziarko | University of Regina, Canada |



<http://www.springer.com/978-3-540-42730-8>

Web Intelligence: Research and Development
First Asia-Pacific Conference, WI 2001, Maebashi City,
Japan, October 23-26, 2001, Proceedings
Zhong, N.; Yao, Y.; Liu, J.; Ohsuga, S. (Eds.)
2001, XVI, 620 p., Softcover
ISBN: 978-3-540-42730-8