2003 IEEE/WIC International Joint Conference on Web Intelligence and Intelligent Agent Technology

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The IEEE/WIC International Joint Conference on Web Intelligence and Intelligent Agent Technology was held in Halifax, Canada from 13th to 16th of October 2003. The two proceedings of WI and IAT (including main track regular/short papers and industry track papers) were published by the IEEE Computer Society Press.

This year's officials were: Ning Zhong (Conference Chair), Nick Cercone, Ruqian Lu, and Toyoaki Nishida (Conference Co-Chairs), Jiming Liu (Program Chair), Boi Faltings, Matthias Klusch and Chunnian Liu (Program Co-Chairs), Jianchang Mao, Yiming Ye and Lizhu Zhou (Industry Track Chairs), Cory Butz, Zhongzhi Shi and Yiyu Yao (Workshop Chairs), Jeffrey Bradshaw and Jinglong Wu (Tutorial Chairs), and Yiu-Ming Cheung (Publicity and Web Chair).

I. WEB INTELLIGENCE

Web Intelligence (WI) is a new direction for scientific research and development that explores the fundamental roles as well as practical impacts of Artificial Intelligence (AI) (e.g., knowledge representation, planning, knowledge discovery and data mining, intelligent agents, and social network intelligence) and advanced Information Technology (IT) (e.g., wireless networks, ubiquitous devices, social networks, wisdom Web, and data/knowledge grids) on the next generation of Web-empowered products, systems, services, and activities. It is one of the most important as well as promising IT research fields in the era of Web and agent intelligence. The IEEE/WIC International Conference on Web Intelligence (WI 2003) (http://www.comp.hkbu.edu.hk/WI03/) was a

high quality and impact conference, which was sponsored and organized by IEEE Computer Society Technical Committee on Computational Intelligence (TCCI) and by Web Intelligence Consortium (WIC).

Following the great success of WI 2001 held in Maebashi City, Japan in 2001 (http://kis.maebashi-it.ac.jp/wi01/), WI 2003 provided a leading international forum for researchers and practitioners (1) to present the state-of-the-art WI technologies; (2) to examine performance characteristics of various approaches in Web-based intelligent information technology; and (3) 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, WI 2003 has captured current important developments of new models, new methodologies and new tools for building a variety of embodiments of Web-based intelligent information systems.

II. INTELLIGENT AGENT TECHNOLOGY

The IEEE/WIC International Conference on Intelligent Agent Technology (IAT 2003) (http://www.comp.hkbu.edu.hk/IAT03/) was also sponsored and organized by TCCI and WIC.

The upcoming meeting in this conference series follows the great success of IAT-99 held in Hong Kong in 1999 (http://www.comp.hkbu.edu.hk/IAT99/) and IAT-01 held in Maebashi City, Japan in 2001 (http://kis.maebashi-it.ac.jp/iat01/). The aim of IAT 2003 was to bring together researchers and

practitioners from diverse fields, such as computer science, information technology, business, education, human factors, systems engineering, and robotics to (1) examine the design principles and performance characteristics of various approaches in intelligent agent technology, and (2) increase the cross-fertilization of ideas on the development of autonomous agents and multi-agent systems among different domains.

By encouraging idea-sharing and discussions on the underlying logical, cognitive, physical, and biological foundations as well as the enabling technologies of intelligent agents, IAT 2003 has demonstrated a lot of new results for building a variety of embodiments of agent-based systems.

II. TUTORIAL & WORKSHOPS

This year, the conferences accepted two tutorials: "A Glimpse at the Future of Agent Technology" by Jeffrey M. Bradshaw at the Institute for Human and Machine Cognition, USA, and "Adaptive Web-Based Systems: Technologies and Examples" by Peter Brusilovsky at University of Pittsburgh, USA.

The conference also accepted 3 workshops on "Knowledge Grid and Grid Intelligence", "Applications, Products and Services of Web-based Support Systems", and "Collaboration Agents: Autonomous Agents for Collaborative Environments".

IV. KEYNOTES/INVITED SPEAKERS

This year, the keynote/invited speakers discussed the following issues about WI and IAT: "Web Intelligence and Fuzzy Logic - The Concept of Web

IQ (WIQ)" (Professor Lotfi A. Zadeh, the slides of this talk can be found from the White Papers Session at WIC home page http://wi-consortium.org/), "Mining and Monitoring Data Streams" (Dr. Philip S. Yu), "Reasoning about Cooperation" (Professor Michael Wooldridge), "Web Information Extraction with Lixto: Visual Logic and Expressive Power" (Professor Georg Gottlob), and "Grid Research in China and the Vega Grid Project at ICT" (Professor Zhiwei Xu).

V. PAPER SUBMISSIONS

WI 2003 and IAT 2003 have received an overwhelming number of paper submissions, more than 592 papers (350 for WI 2003 and 242 for IAT) from over 48 countries and regions: Australia, Austria, Belgium, Brazil, Canada, Chile, China, Colombia, Croatia, Cuba, Czech Republic, Denmark, Egypt, Finland, France, Germany, Greece, Hong Kong, India, Iran, Ireland, Israel, Italy, Japan, Korea, Kuwait, Malaysia, Mexico, New Zealand, Norway, Poland, Portugal, Russia, Saudi Arabia, Singapore, Slovenia, Spain, Sweden, Switzerland, Taiwan, Thailand, The Netherlands, Tunisia, Turkey, UAE, UK, Uruguay, and USA.

It was about 16% of the 350 WI 2003 submissions were accepted as regular papers and 21% of the 350 were accepted as short papers. For IAT 2003, around 24% of the 242 submissions were accepted as regular papers and 21% of the 242 were accepted as short papers.

Figure 1 shows the paper submissions and the number of their countries or regions in 2001 and 2003 for WI and ITA, respectively. This figure depicts that the number of paper submission on WI from 2001 to 2003 have increased significantly.

VI. PRESENTATION SESSIONS

There were 11 technical sessions for WI 2003. They were: Web mining and data engineering, Web topology and social networks, Web prefetching, ontology engineering, context-aware computing, collaborative filtering and recommendation, categorization and ranking, Web services, Web information search and retrieval, e-business and e-technology, and Web information extraction and management.

For IAT 2003, there were 13 technical sessions: agent behaviours and reinforcement learning, distributed problem solving, task-oriented agents, autonomy-oriented computing, autonomous pricing and negotiation, autonomous information services, embodies agents and agent-based system applications, multi-agent systems, modelling and methodology, knowledge discovery and data mining agents, mobil agents, agent-based simulation, and autonomous auctions.

VII. SPECIAL EVENTS

The very exciting thing for the conferences was the lobster banquet in a historic warehouse near the Halifax harbour. The reception was held in the Atrium of the Computer Science Building at Dalhousie University. Apart from the delicious food, another interesting thing is that the reception was held after the lobster banquet. The reason was that the conferences were held just several days after a hurricane, what an excellent schedule!

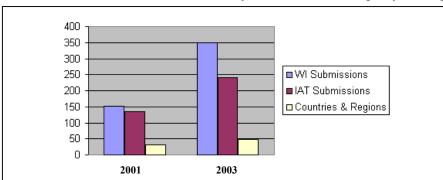This year, the conference committee and chairs selected two best papers: "Dynamic Stochastic Capacity Pricing for Resource Allocation" (by Alain G. Njimolu Anyouzoa, Theo D'Hondt, D.C. Akoa, and Mamour Ba), and "Exploiting a Search Engine to Develop More Flexible Web Agents" (by Shou-de Lin and Craig A. Knoblock). We can find such reports from WIC home page (http://wi-consortium.org/) and the News and Events Session at University of Southern California's Information Sciences Institute (http://www.isi.edu).

In the prize competition, the WI 2003 and IAT 2003 conference program committees selected eight papers, respectively, and forwarded them to the conference chairs. The chairs then selected three papers for each conference. The best one was decided according to the author's presentations.

VIII. WI 2004 & IAT 2004

WI 2004 and IAT 2004 will take place in Beijing, China (home pages: http://www.maebashi-it.org/WI04 and http://www.maebashi-it.org/IAT04; also mirrored at http://www.comp.hkbu.edu.hk/WI04 and http://www.comp.hkbu.edu.hk/IAT04) during September 20-24, 2004. The conferences are sponsored and organized by IEEE Computer Society Technical Committee on Computational Intelligence (TCCI), Web Intelligence Consortium (WIC), as well as ACM-SIGART.

The conference will be held in the best season (autumn) in Beijing. It is also one of the best months to visit some famous places in Beijing, such as the Great Wall.

The important dates are as follows: Electronic submission of full papers: 4 April 2004; Notification of paper acceptance: 10 June 2004; Workshop and tutorial proposals: 10 June 2004; Camera-ready of accepted papers: 5 July 2004; Workshops/Tutorials: 20 September 2004; and Conference: 21-24 September 2004.

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Fig. 1. Paper Submissions for WI and IAT