Preface

The International Conference on Intelligent Tutoring Systems (ITS) provides a leading international forum for the dissemination of original results in the design, implementation, and evaluation of intelligent tutoring systems and related areas. The conference draws researchers from a broad spectrum of disciplines ranging from artificial intelligence and cognitive science to pedagogy and educational psychology. ITS 2006 (http://www.its2006.org/), the eighth in this series of biennial conferences, took place during June 26–30, 2006 at the National Central University in Jhongli, Taiwan. Previous ITS conferences have been held in Montreal, Canada (in 1988, 1992, 1996, and 2000), San Antonio, Texas, USA (in 1998), Biarritz, France and San Sebastian, Spain (in 2002) and Maceio, Alagoas, Brazil (in 2004).

The theme of ITS 2006, “Intelligent Tutoring Scales Up!”, raises important issues for the future of ITS research. The conference explored intelligent tutoring systems’ increasing real-world impact on a global scale. Improved authoring tools and learning object standards have enabled fielding systems and curricula in real-world settings on an unprecedented scale. Researchers have deployed ITSs in ever larger studies and increasingly have used data from real students, tasks, and settings to guide new research. With high volumes of student interaction data, data mining, and machine learning, tutoring systems are learning from experience and improving their teaching performance. The increasing number of realistic evaluation studies has also broadened researchers’ knowledge about the educational contexts for which ITSs are best suited. At the same time, researchers have explored how to expand and improve ITS/student communications, for example, how to achieve more flexible and responsive discourse with students, help students integrate Web resources into learning, use mobile technologies and games to enhance student motivation and learning, and address multicultural perspectives.

The full papers and posters presented at ITS 2006 covered a wide range of ITS topics, including adaptive hypermedia, evaluation of instructional systems, learning environments, affect and models of emotion, human factors and interface design, machine learning in ITS, agent-based tutoring systems, instructional design, narratives in learning, natural language and discourse, architectures, instructor networking, pedagogical agents, assessment, intelligent agents, pedagogical planning, authoring systems, intelligent Web-based learning, situated learning, case-based reasoning systems, intelligent multimedia systems, speech and dialogue systems, cognitive modeling, Internet environments, student modeling, collaborative learning, knowledge acquisition, virtual reality, digital learning games, knowledge construction, Web-based training systems, distributed learning environments, knowledge representation, wireless and mobile learning, electronic commerce and learning, and learning companions.
VI Preface

This volume comprises all of the full papers and short papers associated with posters presented at ITS 2006. These 107 papers have survived a highly selective process. Of a total of 202 submissions, the Program Committee selected 67 full papers for oral presentation and 24 short papers for poster presentation. A later poster submission process yielded additional poster-related papers for a total of 40.

In addition to presentation of papers, ITS 2006 included a panoply of workshops, tutorials, posters, a student-track session, and invited keynote addresses from seven distinguished scholars: Yam San Chee, National Institute of Education, Singapore; Jim Greer, University of Saskatchewan, Canada; Ulrich Hoppe, University of Duisburg-Essen, Germany; Kinshuk, Massey University, New Zealand; Helen Pain, University of Edinburgh, UK; Rosalind Picard, Massachusetts Institute of Technology Media Laboratory, USA; and Ovid J.L. Tzeng, Academia Sinica, Taiwan.

Many people participated in making ITS 2006 a success. Tak-Wai Chan (National Central University, Taiwan) served as Conference Chair, with Mitsuru Ikeda (Advanced Institute of Science and Technology, Japan) and Kevin Ashley (University of Pittsburgh, USA) as Program Committee Co-chairs. A complete listing follows, but here we would especially like to thank: General Chair Wen-Lian Hsu (Academia Sinica, Taiwan), Local Organization Chair Richard Chih-Hung Lai (National Central University, Taiwan), Workshop Co-chairs Vincent Aleven (Carnegie Mellon University, USA) Chen-Chung Liu (National Central University, Taiwan) and Yao-Tin Sung (National Taiwan Normal University, Taiwan), Tutorial Co-chairs Oscar Lin (Athabasca University, Canada) and Wu-Yuin Hwang (National Central University, Taiwan), Panel Chair Tak-Wai Chan, (National Central University, Taiwan), Poster Co-chairs Tsukasa Hirashima (Osaka University, Japan) and Chih-Yueh Chou (Yuan Ze University, Taiwan) and Student Track Co-chairs Tanja Mitrovic (University of Canterbury, New Zealand) and Von-Wun Soo (National University of Kaohsiung, Taiwan). We thank the Program Committee and the External Reviewers for their thoughtful and timely participation in the paper selection process. The members of the Local Organizing Committee at the National Central University, Jhongli, Taiwan, worked especially long and hard: Financial and Registration Chair Jie-Chi Yang, Publicity Co-chairs Oscar Yang-Ming Ku and Magi, Exhibition Co-chairs Emily Ching and Legend Chang, Accommodation Co-chairs Jen-Hang Wang and Amy Yu-Fen Chen, Transportation Chair Zhi-Hong Chen, Website Chair Peter Chang, Technology Support Chair Eric Yu, Business Manager Hsiu-Ling Tsai and Social Event Co-Chairs Tzu-Chien Liu, Yi-Chan Deng, and Andrew Lee (Taipei Municipal Da-Hu Elementary School). As always, the ITS Steering Committee and its Chair, Claude Frasson (University of Montreal, Canada), provided steady guidance.

Finally, we gratefully acknowledge Springer for its continuing support in publishing the proceedings of ITS 2006 and the generous support of the Taiwan-based sponsors of ITS 2006, including the National Science Council, R.O.C., Ministry of Education, R.O.C., Taipei City Government, R.O.C. National Sci-
ence and Technology Program for e-Learning, and Taiwanese Association for Artificial Intelligence.

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