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Intelligent Tutoring Systems

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Proceedings



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Preface

Welcome to the proceedings of the 7th International Conference on Intelligent Tutoring Systems! In keeping with the rich tradition of the ITS conferences, ITS 2004 brought together an exciting mix of researchers from all areas of intelligent tutoring systems. A leading international forum for the dissemination of original results in the design, implementation, and evaluation of ITSs, the conference drew researchers from a broad spectrum of disciplines ranging from artificial intelligence and cognitive science to pedagogy and educational psychology.

Beginning with the first ITS conference in 1988, the gathering has developed a reputation as an outstanding venue for AI-based learning environments. Following on the great success of the first meeting, subsequent conferences have been held in 1992, 1996, 1998, 2000, and 2002. The conference has consistently created a vibrant convocation of scientists, developers, and practitioners from all areas of the field.

Reflecting the growing international involvement in the field, ITS 2004 was hosted in Brazil. The previous conferences were convened in Canada, the USA, and Europe. We are grateful to the Brazilian ITS community for organizing the first ITS conference in Latin America—in Maceió, Alagoas. With its coconut palm-lined beaches and warm, crystal-clear waters, Maceió, the capital city of the state of Alagoas, is fittingly known as “The Water Paradise.” The conference was held at the Ritz Lagoa da Anta Hotel, which is by Lagoa da Anta Beach and close to many of the city’s beautiful sights.

The papers in this volume represent the best of the more than 180 submissions from authors hailing from 29 countries. Using stringent selection criteria, submissions were rigorously reviewed by an international program committee consisting of more than 50 researchers from Australia, Austria, Brazil, Canada, Colombia, France, Germany, Hong Kong, Japan, Mexico, the Netherlands, Portugal, Singapore, Spain, Taiwan, Tunisia, the UK, and the USA. Of the submissions, only 39% were accepted for publication as full technical papers. In addition to the 73 full papers, 39 poster papers are also included in the proceedings. We are pleased to announce that in cooperation with the AI in Education Society, a select group of extended full papers will be invited to appear in a forthcoming special issue of the *International Journal of Artificial Intelligence in Education*.

Participants of ITS 2004 encountered an exciting program showcasing the latest innovations in intelligent learning environment technologies. The diversity of topics discussed in this volume’s papers is a testament to the breadth of ITS research activity today. The papers address a broad range of topics: classic ITS issues in student modeling and knowledge representation; cognitive modeling, pedagogical agents, and authoring systems; and collaborative learning environments, novel applications of machine learning to ITS problems, and new natural language techniques for tutorial dialogue and discourse analysis.

The papers also reflect an increased interest in affect and a growing emphasis on evaluation. In addition to paper and poster presentations, ITS 2004 featured a full two-day workshop program with eight workshops, an exciting collection of panels, an exhibition program, and a student track. We were honored to have an especially strong group of keynote speakers: Stefano A. Cerri (University of Montpellier II, France), Bill Clancey (NASA, USA), Cristina Conati (University of British Columbia, Canada), Riichiro Mizoguchi (Osaka University, Japan), Cathleen Norris (University of North Texas, USA), Elliot Soloway (University of Michigan, USA), and Liane Tarouco (Federal University of Rio Grande do Sul, Brazil).

We are very grateful to the many individuals and organizations that made ITS 2004 possible. Thanks to the members of the Program Committee, the external reviewers, and the Poster Chairs for their thorough reviewing. We thank the Brazilian organizing committee for their considerable effort in planning the conference and making it a reality. We appreciate the sagacious advice of the ITS Steering Committee. We extend our thanks to the Workshop, Panel, Poster, Student Track, and Exhibition Chairs for assembling such a strong program. We thank the General Information & Registration Chairs for making the conference run smoothly, and the Press & Web Site Art Development Chair and the Press Art Development Chair for their work with publicity. Special thanks to Thomas Preuß of ConfMaster for his assistance with the paper review management system, to Bradford Mott for his invaluable assistance in the monumental task of collating the proceedings, and the editorial staff of Springer-Verlag for their assistance in getting the manuscript to press. We gratefully acknowledge the sponsoring institutions and corporate sponsors (CNPq, CAPES, FAPEAL, FINEP, FAL, and PETROBRAS) for their generous support of the conference, and AAI and the AI in Education Society for their “in cooperation” sponsorship.

Finally, we extend a heartfelt thanks to Claude Frasson, the conference’s founder. Claude continues to be the guiding force of the conference after all of these years. Even with his extraordinarily busy schedule, he made himself available for consultation on matters ranging from the mundane to the critical and everything in between. He has been a constant source of encouragement. The conference is a tribute to his generous spirit.

July 2004

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