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Preface

CISIM 2014 was the 13th of a series of conferences dedicated to computer information systems and industrial management applications. The conference was supported by IFIP TC8 Information Systems. This year it was held during November 5–7, 2014, in Ho Chi Minh City, Vietnam, at Ton Duc Thang University.

Over 100 papers were submitted to CISIM by researchers and scientists from universities around the world. Each paper was assigned to three reviewers initially, and in case of conflicting decisions, another expert's review was sought for a number of papers. In total, about 300 reviews were collected from the reviewers for the submitted papers. Because of the strict restrictions of Springer's *Lecture Notes in Computer Science* series, the number of accepted papers was limited. Furthermore, a number of electronic discussions were held between the Program Committee (PC) chairs to decide about papers with conflicting reviews and to reach a consensus. After the discussions, the PC chairs decided to accept for publication in the proceedings book about 60% of the total submitted papers.

The main topics covered by the chapters in this book are biometrics, security systems, multimedia, classification and clustering with application, and industrial management. Besides these, the reader will find interesting papers on computer information systems as applied to wireless networks, computer graphics, and intelligent systems.

We are grateful to the three esteemed speakers for their keynote addresses. The authors of the keynote talks were Profs. Sushmita Mitra, (Machine Intelligence Unit, Indian Statistical Institute, Kolkata) Jaroslav Pokorný (Charles University, Prague, Czech Republic) and Ngoc Thanh Nguyen (Wroclaw University of Technology, Poland). We sincerely believe that the technical papers are well complemented by these keynote lectures covering state-of-the-art research challenges and solutions.

We would like to thank all the members of the PC, and the external reviewers for their dedicated effort in the paper selection process. We also thank the honorary chairs of the conference, Profs. Ryszard Tadeusiewicz, Danh Le Vinh, and Ivo Vondrák.

Special thanks are extended to the members of the Organizing Committee and the Springer team for their great efforts to make the conference another success. We are also grateful to Andrei Voronkov, whose EasyChair system eased the submission and selection process and greatly supported the compilation of the proceedings.

We hope that the reader's expectations will be met and that the participants enjoyed their stay in the beautiful city of Ho Chi Minh.

September 2014

Khalid Saeed
Václav Snášel

Message from the Host University

Welcome to the 14th International Conference on Computer Information Systems and Industrial Information Applications (CISIM 2014), held at Ton Duc Thang University, Vietnam! This conference aims at offering a forum for scientists, researchers, and managers from universities and companies to share their research findings and experiences in the field. In recognition of its special meaning and broad influence, we consider the organization of this conference as one of our strategic activities toward developing within three decades an applied research university.

Ton Duc Thang University (TDTU) has always described itself as a young yet aspiring and dynamically growing higher education institution in vibrant Ho Chi Minh City. It is steadily growing to meet the expanding demand for higher education as well as high-quality human resources in Vietnam. With fourteen faculties and around 25,000 students, the University is now ranked among the largest and fastest developing universities in Vietnam in all aspects.

On behalf of TDTU, the host institution of CISIM 2014, I would like to express my sincere appreciation to our great partners – VŠB-Technical University of Ostrava and the University of Science and Technology AGH – for their great effort in organizing this conference. I would also like to send my special thanks to conference committees, track chairs, reviewers, speakers, and authors around the world for their contributions to and interest in our event.

I believe that you will have an interesting and fruitful conference in Vietnam. I really look forward to welcoming all of you at our campus and hope that this conference will start a long term partnership between you and our university.

September 2014

Prof. Le Vinh Danh, Ph.D.
President
Ton Duc Thang University

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