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Foreword

Advanced Science and Technology, Advanced Communication and Networking, Information Security and Assurance, Ubiquitous Computing and Multimedia Applications are conferences that attract many academic and industry professionals. The goal of these co-located conferences is to bring together researchers from academia and industry as well as practitioners to share ideas, problems and solutions relating to the multifaceted aspects of advanced science and technology, advanced communication and networking, information security and assurance, ubiquitous computing and multimedia applications.

This co-located event included the following conferences: AST 2010 (The second International Conference on Advanced Science and Technology), ACN 2010 (The second International Conference on Advanced Communication and Networking), ISA 2010 (The 4th International Conference on Information Security and Assurance) and UCMA 2010 (The 2010 International Conference on Ubiquitous Computing and Multimedia Applications).

We would like to express our gratitude to all of the authors of submitted papers and to all attendees, for their contributions and participation. We believe in the need for continuing this undertaking in the future.

We acknowledge the great effort of all the Chairs and the members of advisory boards and Program Committees of the above-listed events, who selected 15% of over 1,000 submissions, following a rigorous peer-review process. Special thanks go to SERSC (Science & Engineering Research Support soCiety) for supporting these co-located conferences.

We are grateful in particular to the following speakers who kindly accepted our invitation and, in this way, helped to meet the objectives of the conference: Hojjat Adeli (The Ohio State University), Ruay-Shiung Chang (National Dong Hwa University), Adrian Stoica (NASA Jet Propulsion Laboratory), Tatsuya Akutsu (Kyoto University) and Tadashi Dohi (Hiroshima University).

We would also like to thank Rosslin John Robles and Maricel O. Balitanas, graduate students of Hannam University, who helped in editing the material with great passion.

April 2010 Tai-hoon Kim

Preface

We would like to welcome you to the proceedings of the 2010 International Conference on Ubiquitous Computing and Multimedia Applications (UCMA 2010), which was held on June 23–25, 2010, at Sheraton Grande Ocean Resort, in Miyazaki, Japan.

UCMA 2010 focused on various aspects of advances in ubiquitous computing and multimedia applications with computational sciences, mathematics and information technology. It provided a chance for academic and industry professionals to discuss recent progress in the related areas. We expect that the conference and its publications will be a trigger for further related research and technology improvements in this important subject. We would like to acknowledge the great effort of all the Chairs and members of the Program Committee. Out of around 150 submissions to UCMA 2010, we accepted 22 papers to be included in the proceedings and presented during the conference. This gives an acceptance ratio firmly below 15%. Eight of the papers accepted for UCMA 2010 were published in a special volume, LNCS 6059, by Springer. The remaining 14 accepted papers can be found in this CCIS volume.

We would like to express our gratitude to all of the authors of submitted papers and to all attendees, for their contributions and participation. We believe in the need for continuing this undertaking in the future.

Once more, we would like to thank all the organizations and individuals who supported this event as a whole and, in particular, helped in the success of UCMA 2010.

April 2010

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