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Nabendu Chaki Agostino Cortesi (Eds.)

# Computer Information Systems - Analysis and Technologies

10th International Conference, CISIM 2011  
Kolkata, India, December 14-16, 2011  
Proceedings

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# Preface

This volume contains the revised version of the papers presented at the 10th International Conference on Computer Information Systems and Industrial Management Applications (CISIM 2011), held in Kolkata, India, during December 14–16, 2011.

CISIM centers on state-of-the-art research relevant to computer information systems and their applications, with a focus on agent-based computing. The goal of this annual meeting is to bring together researchers and practitioners from academia and industry to focus on advanced concepts in secure and agent-based computing and industrial management.

Topics covered by CISIM include (1) agent-based computing: agents and service science, agent-based system development, WWW and Semantic Web agents, agent-based simulations, agent communications; (2) security and trust: authentication and access control, intrusion detection, prevention and response, key management and cryptographic protocols, network security, Web security; (3) biometric security and multimedia analysis: multimedia content representation and reasoning, classification and indexing of multimedia information objects, multimedia security and protection, multimedia in mobile and ambient systems, security and reliability assessment for biometric systems, biometric standards and interoperability, derivation of cryptographic keys from biometrics, biometric performance management.

The Program Committee selected 30 papers out of 67 submissions based on anonymous reviews and discussions in an electronic Program Committee meeting. The principal selection criteria were relevance and quality. Every paper was reviewed by two to four reviewers, and the articles published in this volume were improved based on reviewers' comments. The papers present not only the research ideas but also substantial evaluations that made their arguments stronger.

CISIM has a tradition of inviting distinguished speakers to give talks. This time the program included six keynote addresses and plenary lectures by:

- Young Im Cho, University of Suwon, South Korea
- Dipankar Dasgupta, University of Memphis, USA
- Aditya K. Ghose, University of Wollongong, Australia
- Sushil Jajodia, George Mason University Fairfax, USA
- Dong Hwa Kim, Hanbat National University, Korea
- Heinrich Voss, Hamburg University of Technology, Germany

We would like to thank these renowned professors from Europe, North America, Australia and Asia for delivering these invited talks.

We take this opportunity to thank all the members of the International Program Committee and the external reviewers for their dedicated effort in the paper selection process that had been so crucial in ensuring the quality of the conference.

We thank the University of Calcutta and the Honorable Vice Chancellor, University of Calcutta, as well as the Chief Patron of CISIM 2011, Suranjan Das, for hosting the 10th International Conference on Computer Information Systems and Industrial Management Applications (CISIM 2011) in Kolkata.

We would also like to thank Ryszard Tadeusiewicz and Subhansu Bandyopadhyay, the Honorary Chairs for CISIM 2011, and the Conference General Chairs, Khalid Saeed, Ajith Abraham, and Vaclav Snasel. We thank the Steering Committee Chair Aditya Bagchi, and other members of the committee, and last but not least the two Co-chairs of Organizing Committee, Sankhayan Choudhury and Rituparna Chaki, along with all the members of the Organizing Committee.

Finally from the desk of Program Chairs for CISIM 2011, we thank all the authors who contributed to the success of the conference. We also sincerely hope that all attendees are benefited academically from the conference and wish them every success in their research.

December 2011

Nabendu Chaki  
Ryszard S. Choraś  
Agostino Cortesi  
Sławomir T. Wierzchoń

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The 10th International Conference on Computer Information Systems and Industrial Management Applications was organized by the University of Calcutta.

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