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Ezendu Ariwa Eyas El-Qawasmeh (Eds.)

# Digital Enterprise and Information Systems

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Proceedings

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## **Message from the Chairs**

The International Conference on Digital Enterprise and Information Systems (DEIS 2011), co-sponsored by Springer, was organized and hosted by the London Metropolitan University, UK, during July 20–22, 2011, in association with the Society of Digital Information and Wireless Communications. The DEIS conference series is planned as a major event in the area of digital enterprise and information systems, and serves as a forum for scientists and engineers to meet and present their latest research results, ideas, and papers in the diverse areas of digital information, data processing, enterprises, computer science, and related topics in this area.

DEIS 2011 included guest lectures and 70 research papers for presentation in the technical session. This meeting was a great opportunity to exchange knowledge and experience for all the participants who joined us from around the world to discuss new ideas in the areas of digital enterprises, digital businesses and other applications related to digitalization. We are grateful to London Metropolitan University, UK, for hosting this conference. We use this occasion to express our thanks to the Technical Committee and to all the external reviewers. We are grateful to Springer for co-sponsoring the event. Finally, we would like to thank all the participants and sponsors.

Ezendu Ariwa  
Jan Platos  
Eyas El-Qawasmeh

# Preface

On behalf of the DEIS 2011 conference, the Program Committee and London Metropolitan University, UK, we welcome you to the proceedings of The International Conference on Digital Enterprise and Information Systems (DEIS 2011) held at London Metropolitan University.

DEIS 2011 explored new advances in digital enterprise including digital economy, digital management products, business technology intelligence, software applications, computer systems, and digital information and data communications technologies. It brought together researchers from various areas of software engineering, information sciences, and enterprise businesses to address both theoretical and applied aspects of digital information and computer systems. We hope that the discussions and exchange of ideas will contribute to advancements in the technology in the near future.

The conference received 200 papers, out of which 73 were accepted, resulting in an acceptance rate of 37%. The accepted papers are authored by researchers from 27 countries covering many significant areas of digital information and enterprise business. Each paper was evaluated by a minimum of two reviewers.

Finally, we believe that the proceedings document the best research in the studied areas. We express our thanks to London Metropolitan University, UK, Springer, the authors and the organizers of the conference.

Hocine Cherifi

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