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Preface

Biomedical engineering and medical informatics represent challenging and rapidly growing areas. Applications of information technology in these areas are of paramount importance. Building on the success of ITBAM 2010 and ITBAM 2011, the aim of the third ITBAM conference was to continue bringing together scientists, researchers, and practitioners from different disciplines, namely, from mathematics, computer science, bioinformatics, biomedical engineering, medicine, biology, and different fields of life sciences, so that they can present and discuss their research results in bioinformatics and medical informatics. We hope that ITBAM will always serve as a platform for fruitful discussions between all attendees, where participants can exchange their recent results, identify future directions and challenges, initiate possible collaborative research, and develop common languages for solving problems in the realm of biomedical engineering, bioinformatics, and medical informatics.

The importance of computer-aided diagnosis and therapy continues to draw attention worldwide and has laid the foundations for modern medicine with excellent potential for promising applications in a variety of fields, such as, telemedicine, Web-based healthcare, analysis of genetic information and personalized medicine. Following a thorough peer-review process, we selected 12 long papers and three short papers for the third annual ITBAM conference. The Organizing Committee would like to thank the reviewers for their excellent job. The articles can be found in the proceedings and are divided into the following sections: Medical Data Mining and Information Retrieval; Metadata Models, Prediction, and Mobile Applications; Systems Biology and Data Mining in Bioinformatics. The papers show how broad the spectrum of topics in applications of information technology to biomedical engineering and medical informatics is.

The editors would like to thank all the participants for their high-quality contributions and Springer for publishing the proceedings of this conference. Once again, our special thanks go to Gabriela Wagner for her hard work on various aspects of this event.

June 2012

Christian Böhm
Sami Khuri
Lenka Lhotska
M. Elena Renda

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