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http://www.biostec.org/

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U.S.A.

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Arizona State University

U.S.A.

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SELECTED PAPERS BOOK

A number of selected papers presented at BIODEVICES 2009 will be published by Springer-Verlag in a CCIS Series book. This selection will be done by the Conference Co-chairs and Program Co-chairs, among the papers actually presented at the conference, based on a rigorous review by the BIOSTEC 2009 Program Committee members.

OFFICIAL CARRIER

FOREWORD

This volume contains the proceedings of the *Second International Conference on Biomedical Electronics and Devices* (BIODEVICES 2009), organized by the Institute for Systems and Technologies of Information Control and Communication (INSTICC), technically co-sponsored by the IEEE Engineering in Medicine and Biology Society (EMB), in cooperation with AAAI and endorsed by IFMBE.

The purpose of the *International Conference on Biomedical Electronics and Devices* is to bring together researchers and practitioners from electronics and mechanical engineering, interested in studying and using models, equipments and materials inspired from biological systems and/or addressing biological requirements. Monitoring devices, instrumentation sensors and systems, biorobotics, micro-nanotechnologies and biomaterials are some of the technologies addressed at this conference.

BIODEVICES is one of three integrated conferences that are co-located and constitute the International Joint Conference on Biomedical Engineering Systems and Technologies (BIOSTEC). The other two component conferences are HEALTHINF (International Conference on Health Informatics) and BIOSIGNALS (International Conference on Bio-inspired Systems and Signal Processing).

The joint conference, BIOSTEC, has received 380 paper submissions from more than 55 countries in all continents. 57 papers were published and presented as full papers, i.e. completed work (8 pages/30' oral presentation), 126 papers reflecting work-in-progress or position papers were accepted for short presentation, and another 63 contributions were accepted for poster presentation. These numbers, leading to a "full-paper" acceptance ratio below 15% and a total oral paper presentations acceptance ratio below 49%, show the intention of preserving a high quality forum for the next editions of this conference.

The conference included a panel and five invited talks delivered by internationally distinguished speakers, namely: Egon L. van den Broek, Pier Luigi Emiliani, Maciej Ogorzalek, Vimla L. Patel and Edward H. Shortliffe. Their participation has positively contributed to reinforce the overall quality of the Conference and to provide a deeper understanding of the field of Biomedical Engineering Systems and Technologies.

The proceedings of the conference will be indexed by several major indices including DBLP, INSPEC and ISI-Proceedings and it will also be submitted for indexing to EI. A book with the revised versions of a short list of selected papers from the conference will be published by Springer-Verlag in Communications in Computer and Information Science (CCIS).

The program for this conference required the dedicated effort of many people. Firstly, we must thank the authors, whose research and development efforts are recorded here. Secondly, we thank the members of the program committee and the additional reviewers for their diligence and expert reviewing. Thirdly, we thank the keynote speakers for their invaluable contribution and for taking the time to synthesise and prepare their talks. Fourthly, we thank the program chairs, Teodiano

Freire Bastos Filho and Hugo Gamboa, whose collaboration was much appreciated. Finally, special thanks to all the members of the INSTICC team, especially Marina Carvalho at the conference secretariat whose collaboration was fundamental for the success of this conference.

This year, the organization will distribute two paper awards at the conference closing session: the best paper award and the best student paper award. The decision was mainly based on the paper classifications provided by the Program Committee.

We wish you all an exciting conference and an unforgettable stay in the lovely and historic city of Porto. We hope to meet you again next year for the 3rd BIODEVICES, details of which will soon be available at http://www.biodevices.org.

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Joaquim Filipe, Polytechnic Institute of Setúbal / INSTICC, Portugal
Hugo Gamboa, PLUX Biosignal Acquisition and Processing, Portugal

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