

WMISI 2007

Workshop on Medical Instrumentation Signal and Imaging 11 – 12 April 2007 Aveiro Portugal

Foreword

Medical Imaging may be regarded as paradigm for multidisciplinary scientific and technological convergence. Development of imaging devices and applications often result from concerted activities of basic scientific research, technological driven efforts and clinical validation. This broad scientific field is a place for research and development where contributions from Physics, Mathematics, Engineering and Biomedical sciences are always leading the way towards new imaging methods and applications. Direct or indirect probing of the human body for visual assessments is generally highly dependent on sensor technology. This general trend is an enormous source of challenges for instrumentation and all the accompanying signal processing tasks required to make the whole process of data acquisition as reliable as possible. Furthermore, major current state of art imaging modalities rely on the computer as an intrinsic agent of image formation. Modalities such as X-Ray Computed Tomography, (CT), Single Photon Computed Tomography, (SPECT) and Positron Emission Tomography (PET) are often displayed as inverse problem paradigms where the computer, as the main digital processing entity, plays the central role that handles the computational burden associated to image reconstruction.

It is with this multidisciplinary insight that we are proud to organize the first Workshop on Medical Instrumentation Signal and Imaging at the University of Aveiro.

This workshop consists on a series of invited talks both by internationally known researchers and prominent national experts on the various topics of Medical Imaging. A Poster session is also included and is mainly devoted to pos-graduate students making room for informal presentation and discussion of their works.

We hope that emphasizing the “sensor to application” approach will turn out to be a good strategy for bringing together many researchers with different scientific backgrounds.

This publication in a “proceedings” style is a compilation of the contributions to this Workshop both by invited speakers and selected poster session woks. An online version will be available at <http://biblioteca.sinbad.ua.pt/Revistas/>

We thus welcome all the attendees of WMISI07 at Aveiro and wish that many friendly and enlightening encounters may occur during this event

The organizing committee

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The Scientific Committee

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