

ASSOCIATION FOR MEDICAL PHYSICS
AND BIOMEDICAL ENGINEERING

IN COOPERATION WITH THE

EUROPEAN FEDERATION OF ORGANISATIONS FOR MEDICAL
PHYSICS

**PROCEEDINGS OF THE THIRD
CONFERENCE ON MEDICAL PHYSICS
AND BIOMEDICAL ENGINEERING**

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FOREWORD

***D**ue to the rapid technological development in the world today, the role of physics in modern medicine is of great importance. The frequent use of equipment that produces ionizing radiation further increases the need for radiation protection, complicated equipment requires technical support, the diagnostic and therapeutic methods impose the highest professionals in the field of medical physics. Thus, medical physics and biomedical engineering have become an inseparable part of everyday medical practice.*

There are a certain number of highly qualified and dedicated professionals in medical physics in Macedonia who committed themselves to work towards resolving medical physics issues. In 2000 they established the first and still only professional Association for Medical Physics and Biomedical Engineering (AMPBE) in Macedonia; a one competent to cope with problems in the fields of medicine, which applies methods of physics and biomedical engineering to medical procedures in order to develop tools essential to the physicians that will ultimately lead to improve the quality of medical practice in general.

The First National Conference on Medical Physics and Biomedical Engineering was organized by the AMPBE in 2007. The idea was to gather all the professionals working in medical physics and biomedical engineering in one place in order to present their work and increase the collaboration among them. Other involved professions such as medical doctors, radiation technologists, engineers and professors of physics at the University also took part and contributed to the success of the conference. As a result, the Proceedings were published in Macedonian, with summaries in English. In order to further promote the medical physics amongst the scientific community in Macedonia, our society decided to organize The Second Conference on Medical Physics and Biomedical Engineering in November 2010. Unlike the first, this one was with international participation. This was very suitable event for our Association's 10th anniversary. We had the honor of hosting some of the most outstanding lecturers, experts in the field of medical physics and biomedical

engineering. Lecturers, who consistently participate in high level organized symposia, conferences, and congresses, evaluated our conference as a highly successful event.

The success of the previous conference encouraged us to continue the tradition of the three-year evaluation of our work and organize the THIRD CONFERENCE ON MEDICAL PHYSICS AND BIOMEDICAL ENGINEERING in October 2013. This event is organized again thanks to the cooperation of the European Federation of Organizations for Medical Physics (EFOMP). Renowned experts took part as Conference's plenary speakers. This proceeding contains works in different fields presented on the conference orally or as poster presentations.

I want to express my special thanks to the invited lecturers for their immense contribution to the success of the conference.

My sincere appreciation to the Scientific Committee for their professional work, and I heartily thank all members of the Organizing Committee for their thoughtful participation, constructive remarks and invaluable assistance.

For closing, I wish to take this opportunity to thank all the participants, co-organizers of this event for their contribution. This scientific event would not be possible without the financial support of the selected companies presented here.

As a chairman of the conference Organizing Committee, I would like to personally thank all the individuals and institutions whose co-creative efforts and support help us to make that kind of conferences possible in Macedonia. This has been a most educational, rewarding, and worthwhile journey.

On behalf of the organizing committee of Third MPBE conference,



Sonja Petkovska

*President of the Association for Medical
Physics and Biomedical Engineering*