

## Editorial

## **<sup>1</sup>Reminiscing about the IFMBE – IOMP Symposium on Medical Physics and Biomedical Engineering in Developing Countries, WC 2012, Beijing, China**

The World Congress on Medical Physics and Biomedical Engineering (WC 2012) held between May 26 and 31, 2012 in Beijing, China, organized by International Union of Physical and Engineering Sciences in Medicine (IUPESM), which is an umbrella body for the two world organisations in Medical Physics and Biomedical Engineering: The International Organisation for Medical Physics (IOMP) and the International Federation for Medical and Biological Engineering (IFMBE).

As part of this IUPESM triennial world congress (WC 2012), I organized a symposium on Medical Physics and Biomedical Engineering in Developing Countries on behalf of IFMBE and IOMP. The symposium, which was track 20 of theme 20 of the WC 2012, was chaired by Dr André Linnenbank, of the Academic Medical Centre, Amsterdam, Netherlands and covered all aspects of the problems and prospects of Medical Physics and Biomedical Engineering in the Developing countries of the world.

Special topics of the symposium were handled by world renowned medical physicist and biomedical engineers from the various continents of the world.. These were *Developing Regional Organisations of Medical Physics and Biomedical Engineering* by Prof. Dr. Fridtjof Nüsslin of the Technical University of Munich, Germany; *Role of the Professional Bodies in developing Medical Physics and Biomedical Engineering* by Prof. Herbert F. Voigt of the Boston University, USA; *Resources for medical physics and biomedical engineering in the Developing countries (human resources, financial and other material resources, requirements, availability, training)* by Prof. Shankhar Muthu Krishnan also of Boston, USA; *Problems and Prospects of Medical Physics and Biomedical Engineering in the Developing countries* by Professor Mário Forjaz Secca of the Universidade Nova de Lisboa, Portugal; and *Role of the International Organisations in strengthening Medical Physics and Biomedical Engineering in the Developing Countries* by Melissa

Driver Beard of the Engineering World Health, U.S.A.

The high points of the symposium are the following:

\* The International Organization for Medical Physics (IOMP) as well as the International Federation for Medical and Biological Engineering (IFMBE) consists of thousands of medical physicists and biomedical engineers in addition to numerous adhering national member organizations.

\* Several national organizations within a region may form a Regional Organization to promote the professions (medical physics and biomedical engineering) in their regions.

\* The Regional Organisations, in particular, are expected to initiate activities in education & training and professional matters such as certification, professional registration and State recognition; they are expected to hold regular conference series hosted by one of their member countries.

\* Forming Regional Organizations is an effective way of disseminating the professions of medical physics and biomedical engineering particularly in the developing regions where the interaction with the IOMP and IFMBE encourages to establish proper national medical physics and biomedical engineering structures; to develop exchange programs and to ensure the continuous support in medical physics and biomedical engineering capacity building.

\* On the area of problems and prospects, the developing countries are in a unique situation regarding Medical Physics and Biomedical Engineering.

\* Although Medical Physics and Biomedical Engineering are associated with high level technology, in the Developing Countries, the local hospitals are full of medical equipment, from fairly basic to quite advanced, that need proper usage and constant maintenance and repair.

\* The lack of financial resources poses serious problems in the limitations of the Medical Technology

available: training people to use it correctly and making the most out of the equipment, maintaining the equipment in good working order and effecting repairs when needed.

\* However, these problems and challenges open up very interesting prospects for the job of a Medical Physicist and a Biomedical Engineering, requiring proper training, flexibility and creativity, which hopefully will culminate in the acceptance and recognition of the importance of the Medical Physicist and the Biomedical Engineer through the developing world.

\* On the issue of international non-governmental organisations (INGOs), at present, there are remarkably few INGOs whose missions focus specifically on needs and challenges facing biomedical engineering community in developing countries; Of the existing organizations who concentrate on this issue, many of them limit themselves to the role of the medical device donor.

\* Donations of all kinds are at the center of controversy in developing countries and many argue both sides of the issue – with one camp arguing that local needs must be met and the other camp declaring that donations lead to dependency.

\* International non-governmental organizations can address both sides of the issue by providing needed donations of medical equipment and consumables while also providing Ministries of Health and hospital personnel with an education about appropriate donations, appropriate technology, and healthcare technology management.

\* INGO's can also play a critical and active role in training biomedical equipment technicians so as to build a country's capacity to better serve its own medical equipment repair and maintenance needs.

At the end, the symposium came out with an unwritten communiqué that there is dire need for the medical physics and biomedical engineering of the developing countries to be strengthened to enable them develop at par with those of the other regions of the world. This is in essence the objective of the various committees and working groups of both the IOMP and IFMBE and indeed of the IUPESM.

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