

International Conference on Biomedical Science and Instrumentation
S N Bose National Centre for Basic Sciences
25 and 26 November 2016

Conference Report

The first International Conference on 'Biomedical Science and Instrumentation' was organised jointly by the University of Calcutta and the West Bengal University of Health Sciences. The participants included Speakers from USA, UK and India. The Conference was attended by over 80 delegates including faculty and students. The Conference was inaugurated by Sm. Chandrima Bhattacharya, Chairperson, West Bengal Medical Services Ltd., Minister Govt. of W. Bengal in the presence of Prof R K Poddar, former Vice- Chancellor, University of Calcutta, Prof Subir Kumar Dutta, former Dean of Medicine, University of Calcutta, Prof N Basu, Director, School of Tropical Medicine, Govt. of West Bengal and Prof S K Ray, Director, S N Bose National Centre for Basic Sciences.

The Keynote Address was delivered by Prof S C Roy, former Professor and Chairman, Dept. of Physics, Bose Institute, Kolkata on 'Progress in Biomedical Instrumentation and Recent Trends' in a session chaired by Prof. Poddar. In a wide-ranging talk Prof Roy harked back to the pioneering applications of X-rays by Rontgen and continued with examples of the applications of Physics, Chemistry, Nuclear and Information Sciences to bring about revolutionary changes in medical diagnostics, protection and therapy. This was followed by a Plenary Talk by Prof P A Kyriacou of the Dept. of Biomedical Engineering, City University, London on 'Optical Sensors in Medicine'. His talk discussed development of optical sensors used for invasive or non-invasive physiological measurements. He also covered real-time physiological and biochemical monitoring using optical techniques and spectral analysis. This session was chaired by Prof C K Dasgupta, former Professor University of Calcutta. The next Invited Talk was delivered by Prof G C Das of the Baylor College of Medicine, Houston, USA on 'Integration of Advanced Technology and Approaches to prove complex Human Diseases'. His talk focused on recent advances in Functional Genomics using therapeutic and gene therapy. The objective was to apply state-of-the-art technology to tackle HIV-associated neuropathy and / or Hep C induced Type II diabetes.

Industrial involvement was exemplified by an illustrated talk by a member of Siemens Healthcare Private Ltd outlining their extensive facilities and activities in Medical Instrumentation in India. The second morning saw the presentation of 8 research papers of an impressively high standard by students. Notable among these were papers on 'Spectroscopic techniques for Potential Biomedical Applications' by Nanbarun Polley and Prof Samir Pal of the S N Bose Centre, 'Measurement of O¹⁸ isotope in exhaled CO₂' by Santanu Mondal et al. also from the S N Bose Centre, 'Fabrication highly sensitive Electro-responsive Membrane' by Fazle Kibria and Dipankar Mandal of Jadavpur University, 'Automatic Detection of White Matter and

Gray Matter from MRI Image for Diagnosis of Neurological Diseases by Arani Mazumdar et al. of JAP-BMI, CU & WBUHS, `Structural Characterization of Blood Cells (Normal & Diseased) Using Scanning Electron Microscope by Triparna Datta et al. of University of Calcutta and `Natural ^{18}C and ^{13}C – urea in gastric juice for tracking non-ulcerous dyspepsia' by Mithun Pal et al. of the S N Bose Centre.

The Valedictory session was addressed by Prof D N Bose, former Dean I I T Kharagpur and Prof A S Chakraborty Dept of Physics and Molecular Biology, University of Calcutta who spoke of the highlights of the very successful Conference and gave the Vote of Thanks. The organisers are grateful to the Medical Research Council, India for major financial support, supplemented by grants from Siemens India and Icon Analytical. The organizers are also grateful to the Director S N Bose Centre for permission to hold the Conference in the premises. This International Conference held in the Eastern region was coordinated by Dr. Anima Sen of the University of Calcutta ably assisted by a dedicated group of staffs, conference treasurer Sri Subhankar Dutta and efficient students.

