

Annual Report of the Canadian Medical and Biological Engineering Society

CMBEC27

The 27th Conference of the Canadian Medical and Biological Engineering Society was held in Ottawa, Ontario on November 21-23, 2002. With the future of health care and funding being of paramount importance on Parliament Hill, it was fitting that this conference be held in Canada's Capital, just a few blocks from the House of Commons. The chair of this event was Timothy J. Zakutney, Manager, Biomedical Engineering Services, Cardiovascular Devices Division at the University of Ottawa Heart Institute. Tim and his committee of volunteers worked tirelessly to organize a great event.

On the first day of the conference, the keynote address was made by Dr. Wilbert Keon, Founder, President and Chief Executive Officer of the University of Ottawa Heart Institute. He presented the delegates with an interesting overview of the significant changes in clinical technologies and their impact on patient care over the last several decades. Dr. Keon's role as a Senator also prompted interesting views on the future direction of health care and the impact that technology will play in its evolution.

Dr. Keon's presentation was followed by one by Dr. Tofy Mussivand, Chairman and Chief Scientific Officer of World Heart Corporation and Director, Cardiovascular Devices Division of the University of Ottawa Heart Institute. Dr. Mussivand focussed on the role of engineers and scientists in the evolution of clinical technologies and emphasized the necessity for innovative ideas and creativity in addressing the needs of today's patient.

On day two, Dr. Geoff Fernie, Professor and Director, Centre for Studies in Aging Sunnybrook & Women's College, Health Sciences Centre in Toronto clearly demonstrated how engineering has a direct impact on patient care and well-being through his talk on "*Rehabilitation: Recent Innovations, Funding and Priorities*". An impressive assortment of engineering contributions to rehabilitation left the delegates quite inspired.

As with previous CMBES events, the medical device community played a strong role in this 27th conference. Company representatives from 20 leading health care organizations had an extensive range of equipment and technology for demonstration allowing all in attendance hands-on experience with the latest in medical equipment technology and services.

The Organizing Committee worked very hard to prepare a program that was diverse and appealing to all delegates. Academically there was a very comprehensive scientific program chaired by Dr. Donald Russell, Associate Dean, Faculty of Engineering & Design at Carleton University. Bill Gentles of BT Medical Technology Consulting and John Leung who is with the University Health Network in Toronto, organized a very dynamic clinical engineering

program which was very well attended. An interactive presentation on Telehealth received enthusiastic reviews from the delegates.

REMARKABLE CMBES STUDENTS

The CMBEC27 Student Paper Competition proved to be quite a challenge for Dr. Russell and his scientific committee who had their work cut out for them as this year's judging of student papers proved to be very difficult as the caliber of scientific papers presented was truly outstanding. First place winner of this competition was Adrian Chan and second place went to Usha Kuruganti; both Adrian and Usha were PhD candidates from the Institute of Biomedical Engineering at the University of New Brunswick. Adrian's Paper was entitled: *A Multi-Expert Speech Recognition System Using Acoustic and Myoelectric Signals*. Since completing his PhD, Adrian began his career in January 2003 as an Assistant Professor in the Department of Systems and Computer Engineering at Carleton University in Ottawa, continuing his research in biological signals and multi-expert systems. Usha's Paper was entitled: *The Effect of Neural Drive on Bilateral and Unilateral Isometric Knee Extensions*. The third place prize went to Gerry Fung, a Masters candidate from the University of Toronto. Gerry's paper was entitled: *A Circuit Model of Sensory Receptor Function*. All three winners were presented with cash awards at the closing banquet of the conference.

CMBES RECOGNIZES EXCELLENCE

The CMBES banquet was held at the beautiful National Arts Centre in Ottawa on the closing day of the conference. Two very deserving individuals were honoured with awards following dinner. Dr. Carolyn Small, a professor of Mechanical Engineering at Queen's University and long time member of CMBES was recognized as a CMBES Fellow, for her significant contributions to the Society and the biomedical engineering profession. Peter Bennett, President and Founder of Dynamed Health Care Systems, was honoured as the 2002 Outstanding Canadian Biomedical Engineering Technologist for his outstanding involvement and contributions to the field of biomedical engineering technology and health care delivery in Canada.

NEW SLATE OF CMBES EXECUTIVE OFFICERS

A CMBES General meeting was held in November 2002 and the following individuals were elected to manage the Society's affairs.

President:	Robert (Bob) Gander, PhD, PEng. University of Saskatchewan, Saskatoon, SK
Vice-President	William (Bill) Gentles, PhD, PEng, CCE BT Medical Technology, Toronto, ON
Treasurer	Timothy J. Zakutney, MHS., P.Eng. University of Ottawa Heart Institute, Ottawa, ON
Membership	Michael J. Capuano, CBET© Hamilton Health Sciences Corporation, Hamilton, ON
Publications	Brian Van Skiver, PEng

Past President Capital Health Authority, Edmonton, AB
 Mario Ramirez, PEng
 Hospital for Sick Children, Toronto, ON

NRC HONOURS CMBES FOUNDER

The National Research Council of Canada will be honouring the Founder and first President of CMBES, Dr. Jack Hopps at a special ceremony to be held in Ottawa. A plaque will be dedicated to the memory of Dr. Hopps which reads as follows:

*The National Research Council of Canada and the City of Ottawa on this 5th day of June 2003 are joining to commemorate the achievements of Dr. John A. Hopps, O.C. 1919-1998
Distinguished scientist recognized globally for the invention of the world's first heart pacemaker and as the Father of Biomedical Engineering in Canada*

Dr. Hopps was a leader in the medical application of engineering science for almost half a century. Although he passed away in November 1998, Jack will always be remembered for his significant technical and scientific achievements, which continue to improve the lives of millions of people the world over. He left a legacy of medical devices and instruments that help people with a variety of disabilities. His contributions to medical technology and his outstanding reputation as a national and international leader in the biomedical engineering profession make him an important figure in human history. In an Angus Reid poll conducted in March 1999, the pacemaker was recognized by Canadians to be the *Most Significant Engineering Achievement of the 20th Century*. This honour as well as the NRC plaque are just two of the recognitions Dr. Hopps continues to receive even almost five years since his passing. He will not be forgotten.

CMBES STILL RELEVANT

CMBES continues to be relevant to the needs of its members. From its humble beginnings in 1965 when Dr. Hopps wrote the Secretary General of IFMBE announcing his intent to apply for official status and affiliation at the 6th International Conference held in Tokyo that summer, the Society has grown in strength and reputation. The priority then – *gaining recognition for medical engineering with government and hospital administrators* still remains an important objective of the Society today.

In a 1990 Newsletter article written by Orest Roy, CMBES President 1976-80, commemorating the 25th anniversary of CMBES. Dr. Roy wrote: *“...the opportunities for the Society to provide leadership are greater than they have ever been. Our health care system is in crisis; politicians are making crucial decisions about our acute and chronic care facilities that have tremendous impact on biomedical engineering. The CMBES is the*

only source of concentrated expertise in Canada. We have bright young people whose energy can be garnered to knowledgeably address issues to provide quality information and ensure that our health care system continues to benefit Canadians". More than a decade later, in 2003 Dr Roy's statement is still relevant - the Canadian health care system is unfortunately, still in crisis. However, our young people are brighter than ever before and the Society has a strong knowledge-base of members who are contributing on a daily basis to put an end to our Country's health care problems. The resolve and dedication of our biomedical engineering professionals is steadfast.

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