



# The CMBES Newsletter

Summer 2013

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## Feature Article

*Mario Ramirez* reflects on Boston Marathon experience.

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## CMBES Executive

**President:** [Murat Firat](#)  
**Vice President:** [Dr. Adrian D. C. Chan](#)  
**Past-President:** [Dr. Donald Russell](#)  
**Treasurer:** [Kyle Eckhardt](#)  
**Membership:** [Martin Poulin](#)  
**Professional Affairs:** [Gord McNamee](#)  
**Conference Planning:** [Sarah Kelso](#)  
**Awards:** [Dennis Len](#)  
**Publications:** [Mike Capuano](#)  
**Editor:** [Mike Capuano](#)  
**Executive Secretary:** [Anne Stacey](#)

**Web Master:** [Michael Hamilton](#)

## Message from the President

Happy belated “Biomedical/Clinical Engineering” week! As our proclamation for Biomedical/Clinical Engineering Appreciation Week says, “biomedical engineering technologists/technicians, clinical/biomedical engineers and other medical technology professionals uniquely serve patients, the medical community, and new technology development to improve the quality of Canada’s healthcare.” There is no doubt you are all uniquely serving to make Canada’s healthcare better. I hope you had a chance to take this opportunity to celebrate and share your successes together and with others in your organizations. This year with the support of couple of our sponsors, CMBES managed to send out some “celebration packages” including a stand-up banner and brochures. We started hearing great celebration stories from across the country. Please share your pictures and stories with us.

We just completed a successful 2013 joint conference with APIBQ in Ottawa. The joint event created amazing synergies between the participants, as a result CMBES Executive Committee strategically decided to create an appointed committee for “Bilingual Affairs” to continue and build up on the momentum started in Ottawa. Many thanks to Mohcine El Garch, who will be chairing this committee and lead this special initiative.

As part of our strategic plan, CMBES Executive team decided to create a few more appointed committees: “Information Technology Committee”, which will be chaired by Michael Hamilton, “Academic Affairs Committee,” and “Marketing and Advocacy Committee.” We will search for leaders who would take on the chair roles for these. There is no doubt these new committees and leadership will help moving our society towards the strategic directions identified and will serve our members and

profession. Thanks in advance for all volunteers, who commit their time and efforts!

Our membership numbers are growing. I encourage all of you to sign on to the CMBES Forum to discuss and share your experiences. Please don’t hesitate to let us have your ideas and suggestions to improve the CMBES Forum and expand the CMBES network!

Respectfully submitted

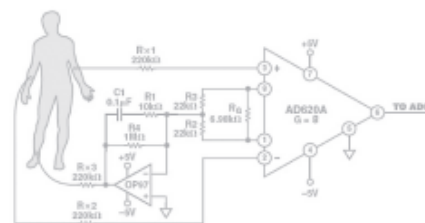
**Murat Firat, MSc, PEng, CCE**  
**CMBES President**

## Celebrating Biomedical and Clinical Engineering Week



**CMBES salutes** the biomedical engineers, clinical engineers, biomedical engineering technicians, and technologists who make valuable contributions to Canadian healthcare institutions in the areas of

- Patient Safety
- Research and Development
- Technology Management
- Equipment Services
- Cost Savings
- Problem Solving
- Planning
- Support



**CMBES The Canadian Medical and Biological Engineering Society**  
**cmbes.ca**

Thank you to our sponsors: **CMEPP** Canadian Medical Equipment Protection Plan





## CMBES Announces Group Purchase Plans for Members

Apart from the general benefits of membership, the Canadian Medical and Biological Engineering Society, CMBES members also have the opportunity to participate in a Group Purchase Plan. A plan has been devised, allowing you as a member to reap the benefits from a Group Purchase Plan immediately. While the savings are group based, your coverage is always individual. This plan includes key vendors who have great appeal, Staples office supplies, The Personal home and auto insurance and The Willow Design Group. Your membership can realize significant savings on items that usually are a majority of any personal purchase. Stay tuned – more suppliers to come!

### Vendors

#### **Staples Advantage**

Members are offered a discount of 10%-30% on purchases. This amazing partnership will now give you access to everything through an on-line purchasing website, catalogue, flyers, and sales items that are different from the retail establishment. You can now order from your home office or any business location you have and receive free next day delivery with large discounts catered to your needs. Fast Internet ordering through [www.eway.ca](http://www.eway.ca) or toll-free Customer Care support at 1 877-272-2121.

To receive immediate savings and set up your Staples Advantage account for your location, contact: Geneviève Brousseau, 1 800-363-8555 ext. 8270, or [genevieve.brousseau@staples.com](mailto:genevieve.brousseau@staples.com).

#### **The Personal Home and Auto Group Insurance**

The Personal's home and auto group insurance offers you personalized coverage, attractive discounts and quality service. What's more, your spouse and dependents can benefit from your group offer. Whether it's online or over the phone, The Personal will give you a quick, detailed quote. For more information, visit [www.thepersonal.com](http://www.thepersonal.com).

#### **The Willow Design Group**

Members are offered a 13% discount on any design projects. The Willow Design Group specializes in small business website design, including both custom and template design options. Specializing in working with business owners to create affordable, effective web designs to help promote their businesses, and offering a wide range of design services, The Willow Design Group is here to help you with all your design needs!

To begin your savings and receive a free quote on your design projects, visit their website: <http://www.thewillowdesigngroup.com/>.

#### **NorthPay**

Pivotal Payments brings you payment acceptance convenience, support and specialized pricing for credit and debit card processing services. It gives us great pleasure to introduce association members to our new Canadian NorthPay processing solution. Pivotal Payments is offering association members a 10 – 30% decrease in their overall processing fees. Pivotal Payments wants to earn your business. Take advantage of our No Term month-to-month processing contract which you are free to cancel at any time as long as you provide us with 30 days notice. Tel # 1-866-883-9038 | Fax# 1-866-847-6129. [mabdu-lai@pivotalpayments.com](mailto:mabdu-lai@pivotalpayments.com).



## Upcoming Events 2013/2014

**CMBEC37 will be held in Vancouver May 20—23th, 2014.**





**CMBEC 37**  
May 20 - 23, 2014  
Marriott Renaissance  
Harbourside Hotel  
Vancouver, BC

Visit [www.cmbes.ca](http://www.cmbes.ca) for more information or call 613-728-1759.

### Webinars for the 2013/2014 Series

The next series of webinars looks to be as interesting and engaging as ever. The complete schedule should be in place by September. Some sessions are tentatively being scheduled like Infusion Pump Integration, Wearable Devices, CMBES Peer Review, CMEPP, and the Newly proposed CE Standards of Practice. Stay tuned, we'll keep you posted.

### CMBES Peer Review Update



Based on the CMBES Clinical Engineering Standards of Practice (CESOP), the CMBES Peer Review is an excellent way for biomedical/clinical engineering centres to obtain recognition for their work and accomplishments. This on-site multi-discipline review focuses on clinical engineering programs specifically. If you think you are ready to be surveyed, please contact me ([capuamik@hhsc.ca](mailto:capuamik@hhsc.ca)) or the secretariat ([secretariat@cmbes.ca](mailto:secretariat@cmbes.ca)).

The CMBES Peer Review Committee continues to meet and is currently working on improving the audit process and on the surveyor guidance document. Approving and planning for upcoming reviews has also taken place.

*Mike Capuano, CBET/CCE; Chair, Peer Review Committee*

# Meet the CMBES Executive!



## President



Murat Firat, MSc., P.Eng., CCE  
University Health Network  
Manager, Medical Engineering Department  
Toronto, ON  
[E-mail](#)

## Vice President



Adrian Chan  
Associate Professor, Dept Systems & Computer Eng  
Director, Ottawa-Carleton Institute of Biomedical Engineering  
Carleton University  
[E-mail](#)

## Past President



Donald Russell, PhD, PEng  
Associate Dean, Faculty of Engineering and Design  
Professor, Department of Mechanical and Aerospace Engineering  
Carleton University  
Ottawa, ON  
[E-mail](#)

## Publications



Mike Capuano, CBET, CCE  
Manager, Biomedical Technology  
Hamilton Health Sciences  
Hamilton, ON [E-mail](#)

## Membership



Martin Poulin, M.Eng., P.Eng.  
Manager, Biomedical Engineering - VIHA  
Vancouver Island Health Authority  
Victoria, BC  
[E-mail](#)

## Professional Affairs



Gordon McNamee  
Manager, Biomedical Engineering  
Brandon Regional Health Authority  
Brandon, MB  
[E-mail](#)

**Awards**



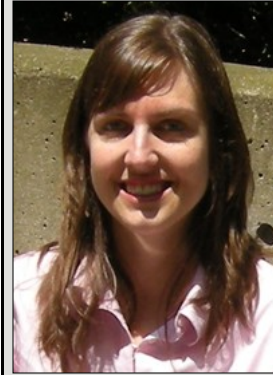
Dennis Len  
Director, Biomedical Engineering  
Regina Qu'Appelle Health Region  
Regina, SK  
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**Treasurer**



Kyle Eckhardt MEng  
Clinical Engineer  
Health Sciences Centre,  
Winnipeg, MB  
[E-mail](#)

**Conference Planning**



Sarah Kelso  
Regional Manager, Clinical  
Engineering Program  
Winnipeg, MB  
[E-mail](#)

**The CMBES Executive is expanding. Look for the appointed chairpersons in the next issue of The CMBES Newsletter.**

## **Elevate your profile - become a CMBES committee member!**

**The CMBES executive is interested in building our committees. If you think you have the right stuff, have a desire to contribute, and want become part of a dynamic team; then this is for you.**

**Contact the CMBES Secretariat or any of the executive members if you are interested in any of the following portfolios:**

- **Membership**
- **Awards**
- **Professional Affairs (Peer Review, CE/Biomed Week, Standards of Practice)**
- **Publications and Marketing**
- **Future Conference Planning**
- **Conference Organizing Committees**

## Treasurer Update

by Kyle Eckhardt



Dear Colleagues,

It has been a long winter here in Winnipeg. One of the coldest on record. On the bright side the poor weather has afforded me many opportunities to become more comfortable with my role as treasurer and to complete all 2012 financials. 2012 was a very positive year for the society. The webinars are proving to be very successful and membership in the society is increasing. The outlook was bright for CMBEC36 in Ottawa, despite the weather not showing up.

It was a pleasure meeting and speaking with everyone at the conference. There were some great sessions, presentations and many opportunities to interact with colleagues from across the country and speak with a multitude of vendors. We received another tremendous response from the vendor community for CMBEC36. Without their support we would not be able to have such a gathering. I presented on work done with the surgical instrument repair program in Winnipeg as well as lead the Cross Canada Checkup Session. We discussed how to work with IT, risk management processes being adopted and how to resource staffing for these projects. Thanks again to everyone who came out and to the vendor community.

If you are curious to know how the organization is doing and what priorities will be set for the upcoming year, please feel free to attend the Annual General Meeting at the end of the conference. The entire executive will be in attendance and there will be many opportunities to get involved with the society

I know it's a bit early to be discussing next year's conference, but the executive has recently secured a location in Vancouver. The Renaissance Marriott Hotel will be the venue of CMBEC37. I spent several years in Vancouver training to become a Clinical Engineer and deeply enjoyed all the offerings. I am excited to return to Vancouver to see those gorgeous mountains; and go play in them for a few days post conference.

Please feel free to get in touch with me should you have any questions or want to get involved. Thanks so much!

All the best.

Kyle Eckhardt

[keckhardt@hsc.mb.ca](mailto:keckhardt@hsc.mb.ca)



## Check out the Forum!

Go to [cmbes.ca](http://cmbes.ca) and log into your account. The discussion board promotes networking with peers similar to a Listserv but more comprehensive. It supports categories established by the CMBES to allow focused discussions.

### Conference & Webinar Discussion

**NEWTOPIC\***   Mark topics read • 4 topics • Page 1 of 1

ANNOUNCEMENTS		REPLIES	VIEWS	LAST POST
	<b>Changes to the CMBES Forum or "Where has my topic gone?"</b> by <b>Michael Hamilton</b> » Fri Jun 01, 2012 10:17 am	0	186	by <b>Michael Hamilton</b>  Fri Jun 01, 2012 10:17 am

TOPICS		REPLIES	VIEWS	LAST POST
	<b>Travel &amp; Accommodations</b> by <b>Michael Hamilton</b> » Thu Nov 29, 2012 9:10 am	1	340	by <b>Michael Hamilton</b>  Mon Dec 03, 2012 1:35 pm
	<b>Continuing Education suggestions</b> by <b>Michael Hamilton</b> » Tue Oct 16, 2012 11:08 am	2	562	by <b>MuratF</b>  Thu Nov 29, 2012 9:00 am
	<b>Where would you like to have the upcoming CMBES Conferences</b> by <b>MuratF</b> » Tue Jun 19, 2012 9:09 am	0	192	by <b>MuratF</b>  Tue Jun 19, 2012 9:09 am
	<b>ACCES17 / CMBES35 Joint Conference 2012</b> by SteveSmith » Mon May 28, 2012 6:59 am	1	286	by <b>MuratF</b>  Wed Jun 06, 2012 11:20 am

Display topics from previous:  Sort by

## Conference Planning

by Sarah Kelso, Conference Planning Chair



### Future Conference Locations

Our national Conference is held in locations across Canada from year to year.

The schedule of future Conferences is:

- 2014 CMBEC37, Vancouver, BC
- 2015 CMBEC38, Toronto, ON [2015 World Congress]
- 2016 CMBEC39, Calgary, AB



## CMBES Soapbox

Viewpoints on Soapbox may not reflect those of the CMBES.

# Going to a Conference...

By Mike Capuano

I recently attended Canada's premier event on Biomedical and Clinical Engineering, CMBEC36/APIBQ42 in Ottawa. I was amazed by the quality of the presentations, diversity in scope, and the vast networking opportunities it provided. I must congratulate the organizing committee led by Tim Zakutney of the Ottawa Heart Institute for putting it together. It had just about everything a conference should have: keynote speakers that enlighten and inspire us to keep doing what we are doing, presenters from all parts of Canada, scientists, engineers, leaders, technicians and technologists, government officials, students, volunteers, and the fantastic array of exhibitors this year. It's unfortunate that many potential attendees out there were not able to attend due to budget cuts, travel restrictions, or policies that understate the importance of these events especially for our

field which is changing so rapidly. We had a full day session on 'a Holistic Framework for Medical Devices Safety and Optimal Performance.' This was organized and chaired by Dr. Michael Cheng. With members from UHN, CADTH, and CSA; it had everything you needed to understand the true technology lifecycle. Networking with our peers is an important feature of the conference. Opportunities to connect were abundant. The Awards Banquet and Gala, the Annual General Meeting, open panel discussions, scientific and clinical engineering sessions, and the exhibit hall were all great vehicles to connect. Look out for more reports on the conference in the Fall 2013 issue of the CMBES Newsletter.



**Tim Zakutney, Chair of CMBEC36/APIBQ42 in Ottawa.**



# IMAGES FROM CMBEC36/APIBQ42, OTTAWA MAY 21–24, 2013 MORE IMAGES NEXT 5 PAGES !!



Kyle Eckhardt presents on **Instrument Repair Program** at HSC in Winnipeg.

Keynote speaker, W. James King, MSc, MD, FRCP, Medical Director, Informatics, Children's Hospital of Eastern Ontario (CHEO)



Panel members of the '**Holistic Framework for Medical Device Safety and Optimal Performance**' workshop chaired by Dr. Michael Cheng (seated next to podium) and Dr. Tony Easty (far left). Representatives from Health Canada, Canadian Agency for Drugs, Technology, and Health (CADTH), and CSA also participated.

# CMBEC36/APIBQ42



# CMBEC36/APIBQ42



# CMBEC36/APIBQ42



# CMBEC36/APIBQ42



## *Dr. Monique Frize*

*Order of Canada, P.Eng., B.A Sc., D.I.C, Ph. D.,  
M. PHIL., MBA, Distinguished Professor*

Membre fondateur de l'APIBQ 1972  
Quatrième présidente de l'APIBQ 1978-80



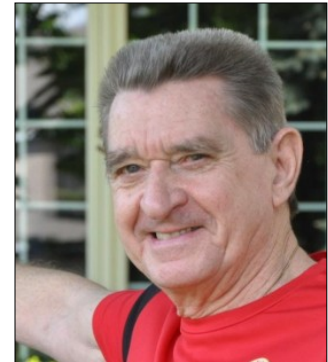
# CMBEC36/APIBQ42



**Thanks to Kyle Eckhardt of Winnipeg Health Sciences Centre for taking pictures and submitting these images for the Newsletter!!**

## Colin Maxwell delivers an inspiring keynote at CMBEC36 !

Colin Maxwell is well known at the Ottawa Heart Institute. After suffering from dilated irreversible cardiomyopathy at age 67, he received the HeartMate II Left Ventricular Assist Device (LVAD), which he relied upon for approximately 191 days and was transplanted successfully on January 19<sup>th</sup>, 2012. He is now over 1 year transplanted. His address was both riveting and light-hearted touching on all of the challenges he met on the way to recovery. Mr. Maxwell served in the Saskatchewan cabinet as Minister of Advanced Education and Manpower, as Minister of Culture and Recreation and as Minister of Parks and Renewable Resources. He then moved to Ottawa, where he became executive vice-president of the Canadian Wildlife Federation (CWF). He retired as CWF executive vice-president in 2007.



## PEO Publication Recognizes Jack Hopps in Recent Article

**Canada's Father of  
Biomedical Engineering  
John "Jack" Alexander Hopps, P.Eng.,  
1919–1998**

**Photo: Canada Science &  
Technology Museum**



March/April 2013 issue of the Engineering Dimensions article "Heroes For The Ages: Ten extraordinary engineers who have made their mark on history", honoured Jack Hopps, the founder of CMBES. Here is a brief excerpt from the article: "As a pioneer of biomedical engineering best known for inventing the world's first artificial pacemaker, John Hopps, P.Eng., has been instrumental in advancing an innovation that has helped millions of people with cardiac conditions worldwide.....Hopps was a champion of biomedical engineering, who helped promote its growth in Canada. In 1965, he founded and became the first president of the Canadian Medical and Biological Engineering Society. He also helped lead the International federation for Medical and Biological Engineering, serving as its president in 1971 and as its secretary general from 1976 to 1985. As well, Hopps was president of the Ottawa Chapter of the Ontario Heart Foundation, and chaired the Canadian Standards Association's Committee on Patient Care Safety. Hopps' contributions to biomedical engineering and to human health earned him several distinctions. In 1986, he was made an officer of the Order of Canada; in 2005, he was inducted into the Canadian Science and Engineering Hall of Fame. In June 2008, his invention of the pacemaker was recognized by IEEE Canada with a Milestone in Electrical Engineering and Computing, which honours significant technical achievements in all areas associated with IEEE."

# Congratulations to *Trillium Health Partners* for completing their first CMBES Peer Review !

The Peer Review Program has seen some activity lately. The most recent review took place at Trillium Health Partners (THP) in Mississauga Ontario in February of this year. Murray Greenwood, Manager of the Biomedical Engineering department at THP, says they have been working on this for some time prior to the review. It involved 3 sites, the Mississauga Hospital, Credit Valley Hospital, and the Queensway Health Centre. This required 3 days to complete with a team of 4 CMBES Peer Review surveyors. The surveyors were: Mike Capuano (HHS - Hamilton), Bill Gentles (BT Medical - Toronto), Petr Kresta (HSC - Winnipeg), and Fernando LeBron (LHSC - London - Retired). The exercise explored numerous facets of the Service based on the Clinical Engineering Standards of Practice (CESOP) and included customer and leadership

interviews, audits, tours of different areas, review of several protocols and procedures, and group briefings. The staff of the Biomedical Engineering department at THP are commended for seeking an outside perspective of their program. This shows confidence and a commitment to continuous improvement. The group was awarded the CMBES Peer Review Certificate indicating compliance for 3 years. Congratulations to them on behalf of the CMBES and it's members! Awarding of the certificate and the hardcopy report took place on March 26th 2013. Lead Surveyor Mike Capuano was on hand to present the certificate. Recipients included Manager, Murray Greenwood and Corporate VP, Elena Pacheco. Pictures were taken, lunch was had, and there was cake!





# Time to Celebrate!



Above: The THP Biomedical Engineering Team



At left: Mike Capuano (CMBES), Elena Pacheco (Vice President), and Murray Greenwood (Manager).



## CMBES Webinar Series

September to May is the 'Webinar' season. We provided 8 webinars for the clinical engineering community (and beyond) for 2012/13. A variety of speakers generously provided their time focusing on a wide range of topics from electrical safety standards and alarms to multiple infusions.



Moderator, Mike Capuano

### Webinar Recap for 2012/13:

1. Lean Methodology for Biomed - Optimizing Clinical Engineering using LEAN (Tim Zakutney)
2. Evolution of Co-oximetry and Respiratory Monitoring (Peter Godlewski)
3. In-house Inspection of Endoscopes (Dennis Leiner)
4. Servicing of Ceiling and Mobile Patient Lifts (Jeremy Dann)
5. Electrical Inspections of Medical Equipment in Canadian Healthcare Facilities (Ron Evans)
6. Clinical Engineering Productivity Benchmarking (Binseng Wang)
7. Actionable Alarm or Crying Wolf: Using Data to Drive Alarm System Changes (Maria Cvach)
8. Mitigating Risks Associated with Multiple Infusions (Mark Fan, Sonia Pinkney, Tony Easty)

<b>Total Registrations:</b>	<b>137</b>
<b>Avg per Webinar:</b>	<b>17</b>
<b>Estimated Attendees:</b>	<b>822</b>
<b>Attendees per Registration:</b>	<b>6</b>

### Feedback (43 respondents):

#### For Relevance of Topic / Knowledge of Speaker:

<b>Good to Very Good:</b>	<b>90%</b>
<b>Fair:</b>	<b>15%</b>
<b>Poor:</b>	<b>5%</b>

**Missed a Webinar? Download it from the [Store](#) at [www.cmbes.ca](http://www.cmbes.ca). Membership and registrant discounts apply.**

# CMBES Webinars Across Canada





## Celebrating National Biomedical/Clinical Engineering Appreciation Week (NBCEAW) May 2013

### Unseen hands that keep hospital running

Sunday, May 26, 2013 3:04:46 EDT PM

Senior BMET, Frank Gigliotti inspects an infant warming station at NHS.



[Niagara Health System \(NHS\)](#) Biomedical Engineering boosts its presence using National Biomedical/Clinical Engineering Week. An article in region newspaper outlets gets the message out that they are a vital component of medical technology delivery and support at NHS.



**Jean Ngoie, Manager,**  
NHS Biomedical  
Engineering

### NHS News Release:

If they have done their jobs right, the patients will never know they were there. Every piece of equipment used by the Niagara Health System to treat its patients -- from heart monitors to endoscopes and respirators -- are kept running by a team of technicians and engineers. And while other key members of a medical team, particularly doctors and nurses, are well known, these men and women toil in public obscurity. But without them, a hospital could not function.

"We are responsible for about 12,000 pieces of equipment," said Jean Ngoie, regional manager of the NHS biomedical engineering department. Every day, Ngoie's 10-member team of biomedical technicians and engineers, referred to as "bio-meds" for short, are called upon to install, repair, calibrate or otherwise test equipment used to monitor and treat patients. Taking care of this gear isn't like fixing your computer at home, or installing your cable service. Medical equipment can be required to save a life, something the bio-meds are well aware of.

"It does add something to the work. We know we are making a difference," biomedical technician Frank Gigliotti said. "Everything we are doing is about patient safety." He said nearly every piece of medical equipment can be serviced by the NHS team. A handful of highly specialized gadgets, including dialysis machines and the linear accelerators used for radiation treatment in oncology, are tended to by expert personnel outside the NHS. "But even then, they are still bio-med technicians," Gigliotti said.

Bio-meds will sometimes even be called to help out during surgery, if a machine isn't working properly. "Sometimes we have to go

into surgery to fix something. Or if a backup is needed, we have to get the backup running," he said.

The job of the bio-med is an increasingly complicated one. Where in the past it was a matter of replacing transistors or circuit boards, now it is about keeping up with cutting edge software running on machines that can cost more than the average car. "This job is about constant learning," Ngoie said.

It has to be. The pace of technological change is such that equipment becomes obsolete almost as soon as it hits the market. Someone, somewhere, is always upgrading, improving or reinventing what health-care professionals use.

Ngoie said his team is always training, taking courses and learning about new equipment and technology in order to keep up. Bio-meds played a key role in acquiring the new technology used in the recently opened St. Catharines hospital. Gigliotti spent more than two years working with doctors, nurses, hospital officials, other bio-meds and equipment vendors to select the gear that would be purchased for the new facility. "I want to stress, though, that we are just one part of the medical team," he said.

**Jean Ngoie described his initiative at NHS for NBCEAW. He had this article published in three Sun Media newspapers in Niagara and also on the NHS Intranet. They organized Lunch-and-Learns at NHS sites in St. Catharines and Welland. Over 200 people participated in the Biomed Quiz.**



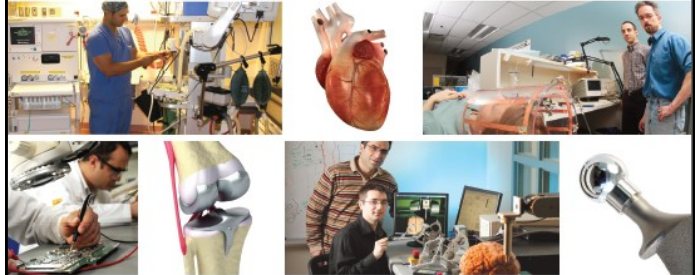
## Professional Affairs by Gord McNamee



CMBES has a new 33 x 78 roll up banner (right) and an 8-page society brochure (below). These professionally designed resources were developed for awareness and NBCEAW campaigns and are available to all member institutions affiliated with our members. They elegantly display our key strengths and are designed to be visually eye-catching.

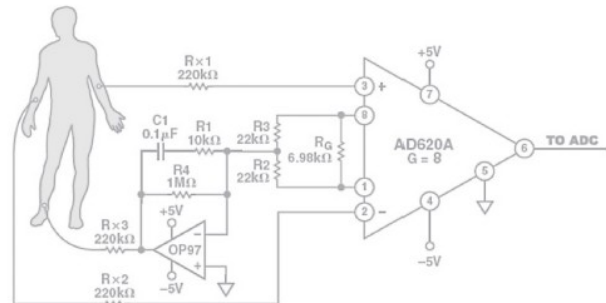
Banner

## Celebrating Biomedical and Clinical Engineering Week



**CMBES salutes** the biomedical engineers, clinical engineers, biomedical engineering technicians, and technologists who make valuable contributions to Canadian healthcare institutions in the areas of

- Patient Safety
- Cost Savings
- Research and Development
- Problem Solving
- Technology Management
- Planning
- Equipment Services
- Support



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**cmbes.ca**

Thank you to our sponsor: **CMEPP** Canadian Medical Equipment Protection Plan

Brochure



The Canadian Medical and Biological Engineering Society  
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# The 2013 Boston Marathon: A Reflection From One of Our Own

By Mario R. Ramirez, M.A.Sc., P. Eng, CCE



The weekend for the Boston Marathon is a very electrifying environment where everyone is smiling, excited, nervous and pictures are taken everywhere; when one picks up the number, under the sign of the route map, under the signs with Boston Marathon emblem and pictures of the crowds. On Sunday the excitement keeps growing as the main street, Boylston is closed as there is a 5 Km friendship run. All runners and their families go to see the finish line and we all take the time to take more pictures. As you are at the finish line, you hear people from all over the world talking about their excitement and the upcoming run the next day.



Marathon day seemed to be another regular marathon day where we get up at 4 AM to get ready for the race. Breakfast in the hotel room, get dressed and then go to the Boston Commons to catch the buses to the starting line. The race started as scheduled with different start times for the wheel chairs, the elite women and then at 10 Am the elite men and the first wave of runners. Two more waves of runners start 20 minutes apart.

My race went well through most of the course. We get the excitement half way through as we go through the “the wall of noise”, The Wellesley women’s college. All the young college girls are cheering for the runners and have signs encouraging the runners to stop and give them a kiss. We also see other signs through the route and one that caught my attention was a sign that a young kid had **“This is the most boring parade I have ever watched!”**



Fortunately, I had a good run and finished the marathon in 3:19 minutes. I saw Penny my wife close to the finish line and went on to get my bag to change into dry cloths and start walking to the hotel. My wife stays watching the marathon as she likes to take pictures of our friends who are running the marathon. She decided that she had enough of standing and started to walk to the hotel so we can talk about my race. As she was walking back, she heard a couple of loud 'booms' followed by sirens but did not think too much about them, as the environment is very noisy and she hears sirens during the marathon as some runners might need assistance. She got to the hotel room where I was ready to jump into the ice bath I had prepared. We were talking about my race when my cell phone rang. She answered and it was our son who sounded very worried. He inquired where Penny was and where I was. She could hear the fear on his voice and he was relieved to hear that we both were at the hotel and I was getting into the ice bath. She asked the reason for his concern and he indicated that there were a couple of explosions at the finish line of the marathon. My wife said it was impossible, as she had been there and had just left the area. He told her to turn the news on and see for her-

self. Penny turned the TV on and saw the news of the explosions. As she mentioned her conversation to me, the world seemed to turn around, one minute we are enjoying the accomplishment of the marathon and the next minute the enjoyment turns into worry about our safety and the safety of the people who we knew were running the marathon or their families who were at the finishing line. After my ice bath, I started the process of trying to contact our running friends to find out how they were. Cell phones were not working properly as the cell lines were either jammed or went down as the police indicated not to use the cell phones as they could trigger another explosive device. Penny and I went down to the lobby of the hotel and saw the lobby full of people who were looking for shelter from the situation outside. Three po-





lice officers were at the entrance to the hotel and were not letting more people in unless they could show they were staying at the hotel. All the access routes to the hotel had been “closed” and everyone was glued to the TV screens in the lobby. We saw the manager come with three FBI agents who took the elevator to go “somewhere”. They came down and after a short stop to talk among themselves, the female agent went to the female washroom and the male agent went to the washroom. We thought they might be looking for something or someone. Few minutes later the manager is walking towards the elevator but this time with three SWAT team members fully armed and fingers on the trigger, ready for any action; scenes that we only see on TV. They take the elevator and go somewhere, they come back down again, stop to talk and then they go to the washrooms. Everyone is watching and worried that there might be something/someone hiding in the washroom. They come out and do not bring anybody or anything and go to the entrance of the hotel where they stay for the rest of the night. By this time we were with a couple of our running friends and determined that their visit to the washroom was more for physiological

purposes rather than looking for explosives!

The mood in the lobby was sombre and many people were crying, sending messages to friends and stayed glued to the TV. We tried to grab something to eat. Remember I had breakfast at 4 am, and we finally managed to get a table at the hotel’s restaurant at 9 pm. By this time we had learned that all our running friends and their families were OK and we were more relieved.

Leaving the city was not necessarily difficult, but rather lengthy as we had to find a way to get onto the highway. Quite a few blocks in the downtown area were closed for the investigations. Another thing that was interesting was that when we crossed the border in Buffalo, Homeland Security officials were stopping all cars and checking them. As soon as they saw my Boston Marathon Jacket they took ‘extra time’ to question me and asked to check my trunk. My wife and I were glad to cross to the Canadian side!

As I reflect on the events on April 15th, I realize how fragile our lives are. One moment one is very excited and happy of achieving a goal, and in the next minute we are worried and concerned for our well being and those whom we love. It gave me an appreciation of how lucky we were that we were not affected by the explosions and also how lucky I am to have so many good friends. It was very moving and I am very honoured to have received many emails from friends and colleagues. Many people called the house to find out how Penny and I were after the explosions and made us realize that we are blessed to have such good friends. We were going to stay for a couple of days in Boston to “visit” the city, but with the events we decided to come back home. We arrived back home and Penny and I spent the rest of the week together and as much as possible with the kids (they are over



taking away time from family. After the events in Boston, I did not check my work e-mails and spent the time with Penny enjoying our time together.

Many of you might be wondering, 'Did Mario qualify for next year's marathon?' Let me tell you, 'Yes, he qualified for next year's Boston marathon and yes; he will be going to run it again!'



## **CMBES Academic Affairs**

### **Meeting of the Chairs and Directors of Academic Programs in Biomedical Engineering**

CMBES hosted the 2nd meeting of chairs and directors of biomedical engineering programs at CMBEC36/APIBQ42. CMBES Vice President, Adrian Chan of Carleton University in Ottawa, hosted the meeting with help from Antony Hodgson from UBC, Kevin Englehart from UNB, and Geoff Maksym from Dalhousie. This meeting involved 17 chairs and directors from academic institutions from all across Canada. An agreement was made to form the Canadian Council of Chairs of Biomedical Engineering (CCCBME), with the objective to promote excellence and innovation in biomedical engineering education, research, and translation to improve health, wellbeing, and prosperity of Canadians. This will be achieved through sharing of information, identifying best practices, and collaboration across institutions.

By Adrian Chan, PhD

**CMBES AWARDS**

Awards Chairman  
Dennis Len



**Awards Handed Out at CMBEC36/APIBQ42 in Ottawa!**

**2013 Outstanding Canadian BMET**



Presented to a Canadian BMET to recognize excellence in the field of biomedical engineering technology. This award is presented to a technician or technologist who has distinguished him or herself in one or more of the following areas: scientific or technical abilities, exceptional service and/or technical skills, outstanding contribution to the improvement of health-care technology, or notoriety in the profession of biomedical engineering and technology at the national and/or international level.

**David Hancock CBET, CRES, CET**

**2013 Outstanding Canadian Biomedical Engineer**



Presented to a Canadian biomedical engineer who has made outstanding contributions in the field of biomedical engineering. Such achievements can be in the form of scientific or technical developments as well as a broad-spectrum of areas such as leadership, service and organizational skills that contributed to the improvement of health care delivery in Canada, or prominence in organizations concerned with biomedical engineering at the national or international level.

**Michael Cheng BE, PhD, HCOM, P.Eng, CCE, CQA**

**2013 Fellowship Award**



A fellowship may be conferred by the CMBES Executive, upon recommendation of the Awards Committee, to a member of the Society with an exceptional record of accomplishments and service to biomedical engineering whether in practice, development or research. The accomplishments shall have contributed to the advancement or application of engineering, science and technology, and in so doing, bringing significant value to the Society and the profession.

**Monique Frize**

**Order of Canada, P.Eng, BAsC, DIC, PhD, MPHIL, MBA, Distinguished Professor**

## Winners Of 2013 CMBEC36/APIBQ42 Student Paper Competitions

**1st Place** sponsored by Maquet-Dynamed Inc.

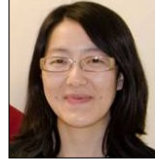
**Mr. K.C. Geoffrey Ng, University of Ottawa**



"Three-dimensional modelling and squat depth to examine geometric hip joint parameters of cam femoroacetabular impingement"

**2nd Place** sponsored by Maquet-Dynamed Inc.

**Ms. Sankua Chao, Carleton University**



"De Novo Peptide Sequencing Using General-Purpose Computing On a Graphics Processing Unit"

**3rd Place** sponsored by Maquet-Dynamed Inc.

**Mr. Adeel Alam, University of Toronto**



"Development of a sheath for an ultrasound probe used to monitor coagulation during prostate cancer treatment"



## VOLUME 46, ISSUE 2

# Membership Committee Update

by Martin Poulin



As of 8 May 2013, we have 237 active members.

The membership committee has met a few times this year to discuss how to move some of the recently identified strategic initiatives forward.

We have had Dr. Rajeev Yadav from Toronto and Gad Ecosta from the University Health Network (Toronto) join the team.

Our recent marketing initiative was to get 40 CMBES promotional pamphlets sent to the Biomedical/ Clinical Engineering schools across Canada to provide to recent graduates. The hope is to make them aware of their national society and encourage them to get involved. I've found talking to many Biomed students in our area that the students are not aware of CMBES. If you are a recipient of these pamphlets, please encourage students to take a look at the CMBES website.

A significant change was made in January to membership renewal dates due to the enhanced features of our new online management system Neon. We now have floating renewal dates for members, which ensures each individual payment is applicable for a full year. The only issue associated with this automated system is that those of you who renew their membership more than 30 days after the renewal date will be considered "new" members and will receive an automated "welcome" message. Rest assured that I review the list to verify that you are indeed just renewing.

A second marketing initiative is the membership team will be contacting members registered last year who did not renew this year to encourage them to rejoin and to ask what we can do better as a society to meet their needs.

Regards,

**Martin Poulin, M.Eng., P.Eng.**

*Manager, Biomedical Engineering - VIHA  
& Membership Chair - CMBES  
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## A Word from CADTH...



*CADTH — A Source of Evidence for Biomedical Engineers*

When assessing biological and medical systems, CMBES members may find themselves asking where they can go for the latest evidence-based information and resources on medical device technologies to inform their work.

It may come as a surprise to many that this information exists close by — at the Canadian Agency for Drugs and Technologies in Health (CADTH). As an independent, not-for-profit organization, CADTH produces credible, impartial advice and provides evidence-based information about the effectiveness and efficiency of health technologies (devices and equipment, medical and surgical procedures, drug and vaccines).

Some CMBES members may already be familiar with CADTH by having attended past workshops, stopping by CADTH information booths at CMBES conferences, or having connected with CADTH Liaison Officers at the local level for support on specific projects.

Through the CADTH website, visitors can access CADTH's findings, recommendations, and intervention tools, many of which would be of interest to biomedical engineers. Some examples are:

- Infrared Thermography for Population Screening and Diagnostic Testing for Breast Cancer* (Issues in Emerging Health Technologies bulletin, Mar. 2012)
- Transcatheter Aortic Valve Replacement* (Environmental Scan, Feb. 2013)
- Canadian Hospital Policies on Wireless Communication Device Use* (Environmental Scan, Nov. 2011)
- Esophageal Doppler Ultrasound-Based Cardiac Output Monitoring for Adults undergoing Surgery: A Review of Clinical and Cost-Effectiveness* (Summary with Critical Appraisal, Mar. 2013)
- Patient Lifts and Transfer Equipment for Preventing Pressure Ulcers: A Review of Clinical and Cost-Effectiveness and Guidelines* (Summary with Critical Appraisal, Mar. 2013)
- Alternative Energy Devices for Adults Undergoing General Surgery: A Review of Clinical-Effectiveness and Evidence-Based Guidelines* (Summary with Critical Appraisal, Dec. 2012)
- Mercury versus Non-Mercury Sphygmomanometers: A Review of the Comparative Clinical Effectiveness and Guidelines* (Summary with Critical Appraisal, Sept. 2012)
- Telemetry Devices to Monitor Cardiac Patients: A Review of the Safety and Guidelines* (Summary with Critical Appraisal, July 2012)
- Wrist Sphygmomanometry versus Upper Arm Sphygmomanometry: Clinical Effectiveness and Guidelines* (Summary of Abstracts, Feb. 2013)
- The Calibration and Maintenance of Automated Blood Pressure Monitors and Sphygmomanometers: Guidelines and Recommendations* (Summary of Abstracts, Oct. 2012)

These reports and more are available as open access at [www.cadth.ca](http://www.cadth.ca). CMBES members are also welcome to contact CADTH at [requests@cadth.ca](mailto:requests@cadth.ca) or via their jurisdictional CADTH Liaison Officer ([www.cadth.ca/en/services/liaison-officer](http://www.cadth.ca/en/services/liaison-officer)), to discuss evidence needs and request support.





## Update on [2015 World Congress](#) in Medical Physics and Biomedical Engineering, Toronto.

*With the CMBES/COMP and IUPESM agreements signed, we have moved on to the next phase. The selection committee chose 3 world-class PCO (Professional Conference Organizer) companies as finalists. These companies provide professional organizational services, project management, facilitation, financial management, promotion/public relations, and staffing for large trade shows and conferences. At a recent meeting in Toronto at Princess Margaret Hospital, the committee heard presentations from each of the candidates and conducted interviews. We ended up ranking the companies in priority of preference. Pending a system demonstration, reference check, and final negotiations; we will soon be into conference organizing activities. The congress is being held in Toronto June 7th to June 12th in 2015 at the Metro Toronto Convention Centre.*

**Submitted by Mike Capuano**

### 2015 World Congress on Medical Physics and Biomedical Engineering



CMBES, along with the Canadian Organization of Medical Physicists (COMP), will be hosting the 2015 World Congress on Medical Physics and Biomedical Engineering June 7 to June 12, 2015 in Toronto, Ontario. More information on the Congress will be forthcoming, for more information or questions and comments please join our [forum](#). If you're interested in joining the Organizing Committee contact the Secretariat at [secretariat@cmbes.ca](mailto:secretariat@cmbes.ca).

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**CANADIAN MEDICAL AND BIOLOGICAL ENGINEERING  
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