



Message from Life Member Affinity Group Chair.

It is time to select a new leader for the IEEE Toronto Section Life Members. If you would like to give-back some of your time and talent in order to help run this group, or would like to nominate one of your fellow life-members, please send a note to the nomination committee via. Pat Finnigan. The chair should be an IEEE LM, LSM, LF etc. The LMs also need your help serving on the Executive of the LM Affinity group – let us know if you are interested.



Pelle Westlind

The newsletter editor wants to extend the thanks from our LM group to Pelle for the thoughtful, enthusiastic leadership he brought to us as chair. Pelle is a tireless and dedicated member of our section !

Welcome to New LMs !

Toronto Section extends a warm note of appreciation to the new Life Members of our section. They have demonstrated a lasting dedication to IEEE, and we wish them all the best.

V S Umamaheswaran	Ajax
E G Cooper	Markham
Helmut G Brosz	Markham
Donald Matthews	Newmarket
Lyle R Thompson	North York
S B Matthews	North York
Paul V Bates	Orangeville
George L Wortman	Richmond Hill
S G Zaky	Toronto
Eugene Plotkin	Toronto

A Niiholm	Toronto
Douglas B Martin	Toronto
Ilia Kaufman	Toronto
Per Erik Westlind	Toronto
Joseph Foldi	Toronto
Stan J Arnot	Toronto

IEEE Toronto is busy as always both through its technical chapters, and as the “anchor” section of IEEE Region 7. Find out more about the exciting line-up of IEEE Toronto Section events, or how you can participate and contribute to IEEE Toronto at: <http://toronto.ieee.ca> or contact your editor via the response sheet at the end of this newsletter.

Canadian Air and Space Museum Tour – Wednesday May 11 at 10:30 AM

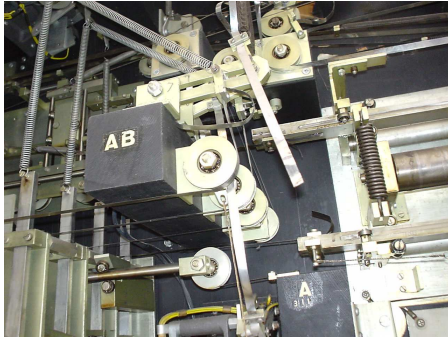


Avro CF-105 Arrow

You are invited to our next event, a guided tour of the Air and Space Museum in Downsview.

Mr. John Harper, Director of Education Programs will lead us through the “hanger” where we can see the full-size Avro Arrow replica, a Lancaster Bomber being re-constructed, the large electro-mechanical computer used with the Air Canada “Viscount” cockpit simulator, and a wealth of other fascinating Air and Space memorabilia.

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Viscount Simulator Analog Computer (part)

The electronic technology in many of these planes was pushing the envelope of their day, so this will be 1 ½ hours well spent.



APS-20B Radar from Lancaster

Please confirm you attendance with:
Patrick.Finnigan@ieee.org.

Date: Wednesday May 11, 2011

Time: 10:30 AM – Noon

Where: 65 Carl Hall Blvd., Downsview

Cost: \$9.00

More Info: <http://www.casmuseum.org/>

IEEE Teacher In-Service Program Workshop in Toronto, April 28 & 29

Notice the call for participation attached at the end of the newsletter. As you may know, schools are in desperate need of experienced mentors to encourage students in science and engineering (some electrical, we hope!). An IEEE R7 committee now has active IEEE TISP volunteers in almost all of the R7 sections from coast to coast. Toronto is

no exception, but we would like Toronto Section LMs to consider this as a real opportunity to give-back their expertise to the next generation of potential engineers at the high-school level.

Attending the workshop is a fun and easy way to find out more about this exciting IEEE-led initiative.

You will find a large (almost 100) set of experiments at:

<http://tryengineering.org>

The workshop will concentrate on two of these:

- Using Ohm's Law to Build a Voltage Divider
- Wind Energy

But, all of these experiments are low cost and a fun chance to learn about some aspect of technologies you may not be up-to-date with – for example barcodes:



The UPC code for Heinz 57 Ketchup Tomato (14 oz). The code is 013000001243. (from the Cracking the Code experiment)

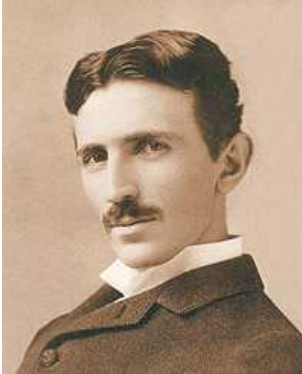
Running these with your younger family members (or just by yourself!) can be quite a bit of fun and an opportunity to learn at the same time.



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There are also a number of very exciting simulations, at the same web site. For example, one of the most popular with students is the design, construction, and operation of a solar-powered race car (picture). There are a large number of design parameters to choose from (see the "Play Games" page on <http://tryengineering.org>), and these simulations give students a real feel for how the modern computer-aided engineering process works.

IEEE History Center



IEEE History Center, located at Rutgers University in New Jersey continues to promote recognition for the 125+ years of continuous electrical and electronic inventions, and their impact on society. You can catch up with the latest IEEE Milestones and other events by subscribing to their newsletter, or visiting the newsletter archive (http://www.ieee.org/about/history_center/newsletters.html).

To subscribe to the IEEE History Center's free newsletter, please send your name, postal mailing address, e-mail address (optional if you wish to receive the electronic versions), and IEEE member number (if applicable – non-members are encouraged to subscribe as well) to

ieee-history@ieee.org

Do you know when the world's first central AC power plant began

operation? Check out historic dates in technology, as well as important

IEEE events taking place in March, April, and May, at

<http://bmsmail3.ieee.org:80/u/17852/60428>

(Courtesy of IEEE "The Institute")

Hammond Museum of Radio Tour



An enthusiastic group of IEEE LMs who are interested in broadcast technology and electrical history met at the Hammond Museum of Radio just outside of Guelph, Ont. on May 8, 2010. This Museum was started many years ago by Mr. Fred Hammond, and is located adjacent to one of the Hammond Manufacturing facilities.



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Museum volunteers Larry Asp (back row left) and Lloyd Swackhammer (kneeling center) provided a behind-the-scenes look at this marvelous collection of radios and broadcast history memorabilia. The collections includes commercial broadcast radios, “amateur” radios (used by the “ham” radio fraternity), and also military radio gear. No, those are not satellite dishes in the first picture, but a variety of antique external audio speakers. Looking “under the covers” of these marvelous old (mainly tube) radios gives one a fine appreciation of how far and fast electronics and broadcast technology have advanced since the first broadcasts of the 1920s. The group was hosted to a lunch by IEEE Toronto Section, and many career experiences and plans for future Life Member events were discussed. IEEE members who travel anywhere near Guelph will find something of interest at the museum. More details and info are available at its web site:

<http://www.hammondmuseumofradio.org/>

Science Teachers of Ontario Conference



Volunteers Pat Finnigan & Ms. Lanxin Deng, . Doctoral Candidate at McMaster University.

IEEE was well represented at the Annual STAO conference November 11-13, 2010 in Toronto. Don Matthews, Doug Martin and Pat Finnigan from Toronto LM were partnered with David Hepburn (Hamilton) and Murray McDonald (London). Thanks to the IEEE Toronto Section, and the other Ontario (and even Alberta!) IEEE sections who contributed funds to sponsor this event. The team was able to engage many teachers and students in order to publicize IEEE .

Everybody had a lot of fun making a small motor out of magnet wire, battery, sticks and small rare-earth magnet. The students seemed most interested in the computer simulations offered through the IEEE TISP program website. Most visitors did not know about IEEE or TISP. Dave and Pat also put on a workshop for teachers using the “Oil Spill” experiment from the lessons.

IEEE Canada Foundation Update

Please see the update from Dr. Bob Alden included with the mailing of this newsletter.

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Information Update

Please take time to update your contact information for our mailing lists and for email contact, and send it back via email or post. **Also please visit iee.org to renew your (no charge) LM membership. Thanks!**

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Name:

Address:

e-mail address:

Home Phone:

Business Phone:

Member No :

Comments and any requests for assistance:

Direct mail to:

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e-mail to: Patrick_Finnigan@iee.org

Toronto Section Life Member Newsletter



Calling all IEEE Members in Ontario, Canada



Are you... interested in improving the exposure of young people in the Ontario, Canada area to Engineering and Technology?

Will you... be interested in helping teachers of primary, middle and high schools so that they are better prepared to introduce Engineering and Technology to their students?

Did you... know that IEEE provides materials and tools that can help meet these goals?

Then, you should... Register and attend:

IEEE's Teacher In-Service Program (TISP) Training Workshop
28-29 April 2011
Delta Meadowvale Resort & Conference Centre
Mississauga, Ontario, Canada

About the TISP Training Workshop

The purpose of this workshop is to help IEEE members improve the teaching of engineering and engineering design in pre-university schools (primary schools, middle schools and high schools). In this workshop, IEEE members will learn how to work with teachers of pre-university schools, and how to conduct hands-on sessions for these teachers on engineering topics. The teachers will then use these sessions on a regular basis with their own students.

The expectation is that IEEE members who complete the workshop will contact local schools in the future, and work with their teachers on lesson plans that demonstrate engineering and engineering design. Examples of lesson plans are available at <http://www.tryengineering.org/lesson.php>

The workshop is held for one and a half days, and it provides attendees with examples of lesson plans, suggestions on the best way to contact and work with the pre-university school system, and description of successful management of a TISP program in an IEEE Section. **The event is free of charge for all IEEE members and invited educators.** IEEE will reimburse all reasonable travel-related expenses for this workshop. Travel-related expenses include up to a one night hotel stay and transportation to and from the workshop location.

Workshop Registration

Organized Jointly By:

IEEE Educational Activities Board
 IEEE Region 7

To Register, Please Go To:

<http://guest.cvent.com/d/mdqtbm/1Q>

Please Register By:

April 7, 2011

Questions:

For more information, please contact
 Lynn Bowlby, +1 732.562.5496,
l.bowlby@ieee.org

Workshop Agenda

Thursday, 28 April, 4:30pm to 7:00pm

Program background and scope, hands-on presentation

Thursday, 28 April, 7:00pm

Networking/Dinner

Friday, 29 April, 9:00am to 4:00pm

Challenges and opportunities in Ontario schools; hands-on presentation, a question-and-answer period; discussion on topics such as: costs and resources, how to make contact with local pre-university schools, aligning a TISP session with education standards used in Ontario schools; and break-out groups to discuss next steps



News for Canadian IEEE Life Members – January 2011

The IEEE Canadian Foundation is the philanthropic arm of the IEEE in Canada. Under a recently completed agreement with the IEEE Life Members Committee, Canadians now have a simple way to donate to IEEE as life members, receive the same tokens of appreciation, AND receive a tax receipt.

The Canadian Life Members Fund (CLMF) of the IEEE Canadian Foundation has been created to enable Canadian IEEE life members to contribute to the objectives of the IEEE and to participate in a donor thank you program similar to the one initiated by the IEEE Life Members Committee (LMC) - while taking advantage of the ability to receive a CRA approved tax receipt for their donation. This program has been initiated at the request of the IEEE Canada LMC and with the knowledge and support of the IEEE LMC. Because CRA (Canada Revenue Agency) regulations are more restrictive than those of the IRS in the United States, the reward levels are slightly higher in Canada compared to those in the U.S..

Canadian IEEE life members who donate to the Canadian Life Members Fund will receive a special token of appreciation:

- **IEEE Life Members lapel pin** (LM, LSM, LF grades available) for a donation of \$60 to \$119
- **IEEE Life Members pewter coaster** which commemorates an IEEE Historical Milestone for a donation of \$120 or more

Online Giving For full details and to donate, please go to:
<http://ieeecanadianfoundation.org/EN/donateonline.php>

Making a gift is simple and you have lots of choices:

- One-time or monthly donations
- A choice of four foundation funds including CLMF
- A choice of giving anonymously
- An option to dedicate your donation "in memory of" or "in honour of"
- Payment by a choice of; Visa, MasterCard, AmEx, Interac or PayPal

Tribute Gifts can be a deeply gratifying way to recognize someone that touched your life while advancing technology for humanity.

- **Gifts in Memory** - Create a lasting memorial for a friend or loved one who has passed away by making a gift to the IEEE Canadian Foundation. In memoriam gifts are a thoughtful way to express your sympathy and to perpetuate the engineering profession and the mission of the IEEE Canadian Foundation.
- **Gifts in Honour** - Show those closest to you the important role they play in your life by making a gift in their honour to support the study of science and engineering.

Gifts of any amount are gratefully accepted and can be made at anytime during the year. When making a tribute gift to the IEEE Canadian Foundation, you can use the Tribute Giving Form on the website or provide the name of the person being honoured or memorialized. It is also important to provide the name and address of the person you want the IEEE Canadian Foundation to notify of your gift. The IEEE Canadian Foundation will notify the honouree or their family of the tribute gift.

Planned Gifts are a powerful way for you to ensure the IEEE Canadian Foundation has the future resources it needs to support the next generation of engineers. Planned gifts typically come from a donor's assets rather than income. These gifts can either be outright or deferred. They enable you to integrate your charitable objectives with your overall financial, tax, and estate plans to maximize benefits to both you and the IEEE Canadian Foundation. These types of gifts are part of your estate planning and should be made in consultation with your lawyer, financial advisor, or insurance advisor.

Typical types of planned gifts include:

- **Life Insurance** - Name the IEEE Canadian Foundation as your beneficiary or donate an existing policy that you no longer need
- **Will or Trust Provision** - Make a charitable bequest to the IEEE Canadian Foundation in your will or living trust.
- **Retirement Plan** - Avoid "double taxation" by naming the IEEE Canadian Foundation as beneficiary of your retirement plan.

Success Stories

Here are some abbreviated success stories to show how your gifts make a real difference. The full stories are on our website – look for “Success Stories” on our home page.

McNaughton Centres have been created at 34 universities and Colleges across Canada. These grants provide a student activity centre for IEEE student members that fosters and enables entrepreneurial activity, develops team spirit and practical experience. The most recent of these was approved last November for a new branch at the UBC Okanagan campus. What follows is part of a UBC press release entitled: **Engineering student lands \$5,000 grant for new UBC research lab.**



Student Emily Landry helped secure funding to create an electronics learning lab at UBC's Okanagan campus. Engineering students at UBC's Okanagan campus have received \$5,000 to establish a work space for electronic prototyping, which will help advance research at the university. "The IEEE McNaughton Learning Resource Centre will provide electrical engineering students with the capability to tinker with and actually prototype electronics that they create themselves," says third-year engineering student Emily Landry, who was instrumental in obtaining funding for the project. "It will also facilitate peer-to-peer learning and provide students with resources that help them achieve greater levels of success in curriculum-related design projects and engineering competitions." The funding, which goes to the IEEE Student Branch on campus, consists of \$3,750 from the IEEE Canadian Foundation's McNaughton Learning Resource Centre Grant program, and \$1,250 from the School of Engineering's Engineering Professional Academic Fund.

After graduation, Landry says, she will put her electrical engineering degree to use to bring positive change. "I always thought very highly of engineers and how they are able to influence the world," says Landry. "They create the technology that the world uses, so if you want to change the way the world operates, or our culture, being an engineer gives you a way to do that." Read the full story on our website under "Success Stories", linked from the home page.

Special Grants to IEEE Student Branches help students build on their McNaughton Centre facilities and design and implement special projects. A recently funded project by University of Calgary students was the holding of a humanitarian design competition. This was intended to inspire and challenge students to develop the skills and the motivation essential to their future contribution to humanity. The design competition was put on to engage a wide range of students with the idea of building innovative technology for the betterment of humanity, and help create more well-rounded students. The two design challenges were a wind generator and an emergency shelter. The winning design for the shelter is shown below.



Special Grants to high schools promote our profession and encourage interest in engineering and science while often building bridges between IEEE Sections and high or public school teachers. The All Saints Robotics Team in Kanata, Ontario, is a dedicated group of high school students ranging from Grades 9 through 12. The objective of the team is to provide students with hands-on and practical applications related to the discipline of Robotics and Engineering. The team was formed in 2006 to provide students the opportunity to gain experience in various technologies and disciplines such as

design, programming and project management as well as team building and gracious professionalism. Their main objectives were to compete in the FIRST Robotics Competition in Toronto, Ontario (Regional) and Atlanta, Georgia (World Championship) in April 2010 with teams from around the World. Through these objectives they are helping foster the next generation of engineers and technologists.



IEEE Canadian Foundation Scholarships currently have a value of \$5,000 for university students and \$2,500 for college students and a maximum of five are given in any one year. Nominations are received from IEEE student branch counsellors and must be accompanied by a report by the nominee on her or his activities and leadership roles in the McNaughton Centre and the student branch.

ICF Awards from Endowed Funds include a Power Quality Scholarship (Alberta universities only), Vehicular Technology Travel Grants, the Women In Engineering Prize, Quebec Science Fair Prizes, and several IEEE Canada Medals. These programs have a common theme of recognizing excellence in professional endeavours – technical achievement and volunteer leadership.

Toronto Section Opportunities – there are many ways individuals can contribute to IEEE in Canada by helping the IEEE Canadian Foundation. This help can take the form of donations of cash or planned donations, as well as contributing volunteer time and ideas. If the Section wishes to make a donation, member dues may not be used, only funds such as conference surpluses. Within the Toronto Section, about \$18,884 in Centre grants have been awarded to UofT and Ryerson over the years and 24 scholarships have been awarded to UofT or Ryerson students. Individuals or Sections can endow a scholarship or an award. Given the size of the Toronto Section membership, a capital campaign in support of the IEEE Canadian Foundation could be very effective.

Contacting the IEEE Canadian Foundation - Within the Toronto Section, Bob Alden is the ICF liaison on your Section Executive. His role is to be your contact and transmit information back and forth. Any Section member can also contact our Treasurer, VP Grants, VP Development, or myself – click on "contact us" or "feedback welcome" on our website.

Robert T.H. (Bob) Alden, LFIEEE r.alden@ieee.org
IEEE Canadian Foundation President
IEEE Foundation Director
IEEE Canada Director