

Highlights

IEEE Canada Spring Meeting Report
NECEC 2007
Scholarships and Awards

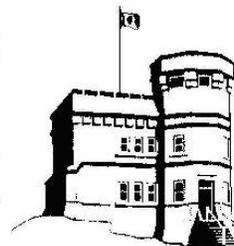
Upcoming

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IEEE

IEEE Newfoundland & Labrador Section
www.ieee.org/newfoundland_labrador



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Upcoming Events

Annual Lobster Boil



The Social Event of the Season!!

Sunday, June 15, 2008, 6:30 for 7pm
Fluvarium, St. John's

For over 30 years now the IEEE Newfoundland & Labrador Section Lobster Boil has been an annual tradition. Once again, the location is the **Fluvarium** with its pleasant decor and great outdoor gallery. If you don't wish to partake of the fresh, succulent Newfoundland and Labrador lobster as your main course, choices of steak or vegetarian will be offered. Your choice will have to be made when you purchase your ticket so the caterer can prepare and provide as requested.

Please bring your ticket with you to identify which meal you have ordered and to enter in the door prize draw.

The menu: All choices include 2 drink tickets for wine, beer, spirits or non-alcoholic beverage; coffee or tea; and

dessert. Remember to specify your choice when you purchase.

Choice #1: **Lobster** dinner
Choice #2: Steak dinner
Choice #3: Vegetarian

Prices remain the same as last year:
\$20 each for IEEE members, who may bring one guest for an additional \$20;
\$30 each for non-members

For tickets, contact any member of the executive. Tickets have to be purchased by **Monday, June 9** so that we can pass the information on to our caterer.

We hope to see you there!

NECEC 2008

Thursday, November 8, 2008
Holiday Inn, Portugal Cove Road

Planning is well underway for the 18th annual Newfoundland Electrical and Computer Engineering Conference. This continues to be a very successful event enabling engineering professionals from both industry and academia in Newfoundland and Labrador to showcase technical developments and share experiences. Proceeds from this event are used to fund student scholarships at Memorial University.

We are very pleased to announce that our Conference Chair will be Gervase

White, Senior Manager of Building Engineering Services with Aliant. Mr. White brings tremendous industry experience to the Committee and has been a long-term IEEE member and dedicated volunteer. We look forward to a very successful conference under his leadership. Dr. Dennis Peters from Memorial University will be the Conference Vice-Chair. The Technical Chair will be Dr. Eric Gill from Memorial University.

For further details, check <http://necec.engr.mun.ca>, which will be updated very soon.

CCECE 2009

May 3-6, 2009
Delta St. John's Hotel and Convention Centre

The Section is very proud to be hosting the 22nd Canadian Conference on Electrical and Computer Engineering (CCECE), which will be held at the Delta St. John's and the St. John's Convention Centre May 3-6, 2009. This is the annual flagship conference of IEEE Canada and serves as an excellent opportunity for researchers and professionals in the IEEE fields to meet and present their work. The theme for CCECE '09 is "**From Electrons to Oceans: Innovation at Many Scales.**"

A welcome reception for all delegates will be held Sunday evening at The Rooms. We will offer pre-conference tutorials. The Conference sessions themselves, on Monday, Tuesday and Wednesday, will be conducted in the conference facilities at the Delta with plenary sessions and meals in the Convention Centre. In addition, an active and enticing social program will be offered to all attendees, partners, and guests.

The conference committee is co-chaired by **Dr. Wally Read** and **Dr. John Quaiocoe**, and the technical committee is led by Dr. Eric Gill and Dr. Dennis Peters. Experienced, enthusiastic, and dedicated volunteers from the Section round out the organizing committee and will help to ensure that the conference is very successful. Of course there is always room for more help, so if you're interested in getting involved, please contact the organizing committee at contact@ccece09.org.

Following the lead of CCECE '08, the conference will be structured into a **seven mini-symposia** in the areas of Circuits, Devices and Systems; Control and Robotics; Communications and Networking; Computers, Software and Applications; Ocean Engineering; Power Electronics and Energy Systems; and Signal and Multimedia Processing. A full paper review process will be used to ensure that the conference is of very high technical quality.

We predict that CCECE 2009 will be an unforgettable experience – an overwhelming technical and financial success that also offers a wealth of activities and networking opportunities for delegates. We hope to see you in 2009!

For further information and updates see the conference website at www.ccece09.org.

Past Events

IEEE Canada Meetings

The spring meeting of IEEE Canada (Region 7) took place May 2-4, 2008 in

Niagara Falls. The Region meets twice annually to discuss activities and developments relevant to IEEE Canada. In addition to Region business these meetings provide a valuable networking opportunity for the IEEE Canada community in which we are able to share information and ideas between Sections. Our Vice-Chair, Lori Hogan and Past Chair who is the current Region 7 Membership Development Chair, Kathleen Chafe attended these meetings.

On May 2nd we had Section Chair's training. We heard from Marc Apter, Chair of Membership Engagement and Life Cycle Committee on the organizational **changes from Regional Activities Board to Member and Geographic Activities Board**. This was initiated in order to ensure that IEEE was better positioned to serve the member. Its primary focus is to "help the member grow and develop for themselves, for the Institute and to serve the common good throughout their life cycle and their various roles". The transition will take 2-4 years. For more information see <http://iee.org/web/volunteers/mga/home/index.html>

In addition, there was training provided on Membership Development Strategies, Resources, Tools and Best Practices as well as Finances.

Our caucus meeting on May 3rd began with greetings and a presentation on tentative plans for 2009 from John Vig, President-Elect. This was followed by reports from the executive and committees of the region, review and audit committee report of the budget for 2008 and proposed budget for 2009, and presentations from CCECE 2007, the IEEE Canadian Foundation and the Sections' Congress planning committee.

Sections Congress 2008 will be held September 19-22 in Quebec City. This is an international IEEE event held every 3 years and provides Sections with training, networking, and development opportunities. The Section is planning on sending at least two candidates to represent Newfoundland and Labrador.

The next Board Meeting will be held September 17-19, 2008 in Quebec City.

AGM

The Section's Annual General Meeting took place on Thursday, December 6, 2007 at Memorial University. The meeting began with a presentation entitled "*Thinking Yourself into an Electrical / Computer Engineer*" by Dr. Cecilia Moloney. This interesting and interactive talk explored women in the fields in science and engineering. The presentation was dedicated to the women engineering students who lost their lives on December 6, 1989 in the Montreal Massacre.

Following the presentation, the Section Executive members presented their annual reports. A Q&A session followed so as to clarify any questions or concerns that members had with respect to the governance of their Section. In addition, the new Section Officers were also elected. As per Section by-laws each term is for a 2 year period.

http://ewh.ieee.org/r7/newfoundland_labrador/bylaws.php

A wine and cheese reception followed the meeting which gave attendees an opportunity to discuss Section activities in a more informal setting.

NECEC 2007

On November 8th, the Section, in partnership with Memorial University, hosted the 17th annual Newfoundland and Labrador Electrical and Computer Engineering Conference (NECEC) at the Holiday Inn in St. John's.

The Conference Chair for NECEC 2007 was Dwight Howse from CCMC and the Technical Chair was Dr. Dennis Peters from Memorial University. We continue to be very impressed by the strength and diversity of technical innovations and implementations presented each year by the technical community within Newfoundland and Labrador. This year we had 118 attendees and 58 papers covering a wide range of technical subject areas.

Our keynote speaker was Jim Keating, Vice-President Business Development, Newfoundland and Labrador Hydro who

spoke on the Provincial Energy Plan. Our luncheon speaker was Randy Billard from Virtual Marine Technologies who gave a presentation on Entrepreneurship.

Four awards were presented:

The 2007 recipients of these awards were:

- **Wally Read Best Student Paper:** Rhonda Chaytor, "High Performance Privacy Protection Hardware"

- **Wally Read Best Graduate of the Last Decade (GOLD) Paper:**

Reza Shahidi, "Decorrelating the Components of a Variational Decomposition Model"

- **Best Poster:** Shenqiu Zhang and Dr. Cecilia Moloney,

"The 2-Directional Wavelet Transform: Illustrating The Power of Filter Banks, Resampling, and Frequency Shifting in Image Representation"

- **T. David Collett Best Industry Paper:** Dr. John Walsh, Dr. Eric Gill, and Weimin Huang, "Analytical Considerations for High Frequency Surface Wave Radar Operating from a Moving Ocean Platform"

Following the technical sessions, we held a wine and cheese reception and awarded door prizes donated by our sponsors. The Planning Committee and Section Executive Committee would like to extend our sincere thanks to our speakers, presenters, sponsors, session chairs, volunteers, and others who contributed to our conference this year. It is much appreciated and we look forward to NECEC 2008!

Tour of Landmark Graphics Visualization Lab

On February 27, 2008 a tour was held of the Landmark Graphics Visualization Lab in the Earth-Sciences Building at Memorial University. It is a research centre that brings together high performance computing and immersive, 3-D visualization. The facility opened in 2005 as the only one in Atlantic Canada and it is among very few such facilities worldwide. The Landmark Graphics Visualization Laboratory is a 3-D facility, consisting of a 7x2m curved Panoram Technologies screen with three rear-mounted projectors and high-end video processing equipment. Active full-colour stereo is achieved through the use of CrystalEyes liquid crystal shutter

glasses, resulting in an incredibly realistic visualization environment. The system uses top-of-the-line hardware to generate high-quality 3-D OpenGL graphics, processed on a dedicated Linux-based IBM cluster.

Spacecraft Formation Flying Control: A Decentralized Approach

On October 19, 2007, **Dr. Amir Aghdam** from Concordia University visited Memorial University and gave a technical presentation entitled "Spacecraft Formation Flying Control: a Decentralized Approach" In this presentation, the control problem for a number of cooperative spacecraft with communication constraints was investigated and a solution presented involving a proposed decentralized controller. The efficacy of the proposed method is then demonstrated through simulations.

Awards

IEEE NL Section Electrical and Computer Engineering (ECE) Scholarships

The IEEE NL Section Scholarships may be awarded yearly to two full-time undergraduate students in Term 4 and 6, respectively. The students have to be enrolled in Electrical and Computer Engineering, active IEEE student members, and of scholarship standing as defined by the University. The objectives are: increasing student interest in and recognition of the IEEE, enhancing a promising student's ability to succeed at the undergraduate level, and providing students with a reason and opportunity to think seriously about their professional goals. In Fall 2007, the Term 6 scholarship was awarded to **Chris Conway**. Chris was involved in NECEC 2006 and 2007.

IEEE Canadian Foundation Scholarship

In April 2008, **Samuel Robert Cove** was awarded the IEEE Canadian

Foundation Scholarship. Robert is a Memorial University ECE student who has been involved in the IEEE student branch. He was an active participant in NECEC 2005 and 2007, and the IEEE Student Night in 2007. In January 2007 he became the IEEE Engineering Society B Chair.

The Term 8 Student Project Awards

The annual IEEE Student Night, held March 26th, was again a great success. This annual event is put off by the members of the IEEE Student Branch to recognize the graduating ECE class as they present their final term projects and get ready for the next stage of their lives and careers. The Term 8 class is required to produce a final project to demonstrate the skills and knowledge obtained throughout their post secondary education. IEEE Student Night featured three selected presentations, as well as tours and demonstrations of the projects completed by the students. A reception followed allowing for networking and relaxation.

The IEEE offers a variety of awards related to the final-year projects. This year the projects were of a very high caliber. Winners along with project titles were:

Best Demonstrations:

S.A. Brown – "Real Time Simulation of Rigid Body Mechanics," **M. MacMullin** "Virtual Surround Sound Head Phones," and **S. O'Neil** – "Eye Tracking for PC Control."



Demonstration and 1st Prize Presentation Winner S.A. Brown with Vice Chair Lori Hogan

Best Presentations:

1st Prize – **S.A. Brown**, “*Real Time Simulation of Rigid Body Mechanics*,”

2nd Prize – **S. Silk**, “*The Unshredinator: a Machine Vision Approach to Document Reconstruction*,”

3rd Prize – **J. McCarthy**, “*SEGWii*.”



2nd Prize Presentation Winner Simon Silk with Vice Chair Lori Hogan

Convocation Award

This award, which consists of a certificate and cash prize, is presented at the Spring Convocation to a graduating student in the ECE Program who has achieved a high academic standing and who has made a significant contribution to the Faculty and to the IEEE student branch. This year, **Simon Silk** was nominated for this award. Simon has been actively involved in the technological community, and joined IEEE due to his strong interest in hi-fi audio. He actively participated in the IEEE NECEC conferences, IEEE Student Nights, and other activities organized by the IEEE NL Section.

Science Fair Award

The Section annually offers an award for the best project related to topics of interest to the IEEE at the Eastern Newfoundland Regional Science Fair. This award reflects the IEEE's continuing interest in fostering the development of science and technology among our youth. The award consists of a monetary prize and engraved plaque.

This year, the prize was awarded to the team of **Stephen Brophy** and **Ashley**

Porter from Holy Spirit High School for their project entitled “*The Wave of the Future*”, which dealt with finding effective methods to harness energy from ocean waves.

Special thanks to Adam Burry and Stephen Smith for volunteering to judge. We are seeking contacts with the Central and Western Newfoundland Regional Science Fairs to expand our awards across the province. If you can help, please contact lori.hogan@ieee.org

Student Branch Activities

This past year has once again been busy for the student branch. A new executive for Society A has been elected. The IEEE sponsored student project night was held. We have continued to support NECEC by providing student volunteers to assist with logistics.

Currently there are two student societies - Society A and Society B. The Society A executive members are:

Chair – Susan Ryan

Treasurer – Kevin Murrant

Senior Class Rep – Jordan Perchard

The Junior Class Representative position is still available and will be reopened for election this coming fall.

The IEEE Student Congress will be held in September. This is a valuable learning opportunity for junior members of the executive; giving them essential tools, skills and ideas on how to run and maintain a successful IEEE Student Branch.

If you are interested in becoming involved with the student branch,, please contact ieee@engr.mun.ca.

WISE SSEP

The WISE Student Summer Employment Program (SSEP) has started its 19th year with great anticipation. This award-winning program will continue to provide young women with an opportunity to gain valuable work experience in the fields of science, engineering, medicine and technology.

More than 600 young women have already take part in SSEP, working in a variety of exciting paid research assistant positions. These positions are open to Grade 11 female students and many take place on the campus at Memorial University and with partner organizations. In addition to the work experience, participants receive mentoring through the WISE NL organization and attend workplace tours and social events that enable them to meet and network with others who work in science and engineering fields.

If you are interested in volunteering as a mentor with WISE SSEP 2008 or getting student applications please visit www.cdli.ca/wise/ssep or contact the Program Administrator, Mercia Conway at mercia@engr.mun.ca.

Membership

Membership in IEEE Newfoundland & Labrador Section remains relatively stable at approx. 150 members. Encouragingly, we have had enquiries from several members of the local engineering community, looking to re-join IEEE. IEEE membership can help give job seekers an edge and also provides many technical and professional development tools/benefits.

For IEEE membership info please contact Gerard Dunphy at gdunphy@nlh.nl.ca or see <http://www.ieee.org/web/membership/join/join.html>

GOLD Volunteer

We are seeking a volunteer to chair the GOLD Affinity Group. The time commitment is minimal. We are required to organize two activities annually; however, the rewards of planning successful events and networking with other IEEE volunteers are great! If you are a GOLD member (completed your first degree within the last ten years - graduate students welcome) and are interested in learning more, please contact Lori Hogan at lori.hogan@ieee.org