

## Highlights

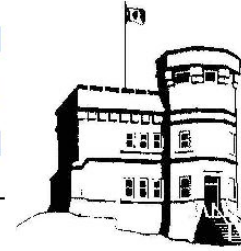
NECEC 2008  
Award Winners

## Upcoming

CCECE 2009



# IEEE



IEEE Newfoundland & Labrador Section  
[www.ieee.org/newfoundland\\_labrador](http://www.ieee.org/newfoundland_labrador)

Newsletter of the Newfoundland and Labrador IEEE Section, Volume 08, No. 2, Dec. 2008

### Upcoming Events in NL

#### CCECE 2009

May 3-6, 2009

Delta St. John's Hotel and Convention Centre

The Newfoundland and Labrador Section is very proud to be hosting the **22nd Canadian Conference on Electrical and Computer Engineering (CCECE) '09**. This annual flagship conference of IEEE Canada 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 Organizing 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.

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. The extended deadline to receive papers and tutorial proposals is **Monday, December 22, 2008 12:00 EST**. For further details please refer to **Call for Papers** at [www.ieee.ca/ccece09/pdfs/cfp\\_e\\_09.pdf](http://www.ieee.ca/ccece09/pdfs/cfp_e_09.pdf)

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 May! For further information and updates see the **Conference Website** at [www.ieee.ca/ccece09/](http://www.ieee.ca/ccece09/).

If you are interested in volunteering with the conference please contact Kathleen Chafe at [chafek@ieee.org](mailto:chafek@ieee.org).

### Past Events in NL

#### Annual General Meeting

December 4, 2008 starting 7pm

Engineering Faculty Board Room

This newsletter was going to printing prior to our Annual General meeting on Thursday, December 4th, 2008 at 7pm in the Faculty Lounge of MUN's Engineering Building. In addition to Section business and Executive Officer reports, there will be a technical talk from Barry Dawe of Northern Radar, who will be speaking on New Developments in High-Frequency Radar. An update on this event will be provided in our Spring Newsletter.

#### NECEC 2008

Thursday, November 6, 2008

Holiday Inn, Portugal Cove Road

On November 6, 2008 the IEEE NL Section, in partnership with Memorial University, hosted the 18<sup>th</sup> annual Newfoundland and Labrador Electrical and Computer Engineering Conference (NECEC) at the Holiday Inn in St. John's. NECEC is a forum where professionals and students in electrical, electronic and computer engineering as well as information technology and sciences can present their work to the growing technical community within the province.

The Conference Chair for NECEC 2008 was **Gervase White** from Aliant and the Technical Chair was **Dr. Eric Gill** from Memorial University. We are pleased to report that this year we had 95 attendees and 60 papers (52 oral presentations + 8 posters) covering a wide range of technical subject areas.

This year's Keynote Speaker was **Bill Carter**, Director of Ocean Observation School of Ocean Technology, Marine Institute, who provided an overview of the very interesting "Smart Bay Project" in Placentia Bay. Our luncheon speaker was **Tony Dawe** of QuadraTec Inc, who provided information on Engineers Canada. Following the technical sessions, we held a wine and cheese reception and awarded door prizes donated by our sponsors.



*Alain O'Dea presenting at NECEC*

Proceeds from this event and past conferences are used to sponsor IEEE Scholarships, which are awarded to students in the Electrical Engineering or Computer Engineering program at Memorial University of Newfoundland, as well as to support other activities within the province.

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. We will not be holding NECEC in 2009 due to the upcoming CCECE. We look forward to seeing you at CCECE '09 and NECEC '10!

### **IOT Tour** **Wednesday, October 1, 2008**

On Wednesday, October 1st, the Section hosted a tour of the National Research

Council's Institute of Ocean Technology. This world class facility located on campus on Memorial University is renowned for its research and facilities.

The tour included the Ice Tank (largest of its kind in the world), Tow Tank and Ocean Engineering Basin. These facilities, used for model scale testing, have been involved in a diverse array of research on everything from the Hibernia platform to sailboats from the America's Cup.

Mike Sullivan, our tour guide for the evening, also showed us some of the smaller facilities the Institute houses, including the model shop and AUV laboratory. After the tour was complete we had a chance to socialize over refreshments.

### **Annual Lobster Boil** **Saturday, June 9, 2008** **Fluvarium, St. John's**



This year's Lobster Boil was held on Saturday, June 9 at the Fluvarium. The Lobster Boil has been held by the Section since the 70s. The atmosphere inside the Fluvarium was warm and friendly, as around 40 guests enjoyed lobster, steak, or a vegetarian entree. A pleasant change this year was the inclusion of member's children for the first time in recent memory, making the Lobster Boil a family affair. We plan to continue this tradition in future years.

If you missed this year's event, hopefully we will see you next year. Mark June 2009 on your calendar as Lobster Boil month!

### **MI Motion on the Bridge and ROV Simulation Tour** **Tuesday, May 27, 2008** **Marine Institute**

The Centre for Marine Simulation is an operational unit of the School of Maritime Studies at the Marine Institute. It comprises a suite of environments simulating various aspects of marine

operations that are used for education, training, applied research and development.

The tour highlighted the Full Mission Bridge Simulator that enables bridge crews to be trained in a realistic environment incorporating 360 degrees of visuals and sound with six degrees of motion and control of weather and ocean parameters. A wide selection of ports, waterways and vessel types are available for training purposes and the Centre also develops its own ship and waterway models for simulation.

In addition, tour participants had the opportunity to try their hand at flying a Remotely Operated Vehicle (ROV) on a simulator designed and manufactured by GRI Simulations of Mt. Pearl. This simulator is considered to be among the best in the world with a variety of ROV classes and operating scenarios available. The School of Ocean Technology has incorporated two ROV simulators within its ROV Operator training program. Refreshments were served following this very interesting and interactive tour.

## **Past Events outside NL**

### **Sections' Congress 2008** **September 19-22, 2008** **Quebec City**



Sections' Congress is a triennial gathering for IEEE volunteers across the world, primarily from the local Section level. It is an opportunity for Section leaders and volunteers to learn more about IEEE programs and services, and offer advice and feedback to the larger organization about what should be done to address the needs of members. The NL Section was well represented at Congress, with six Section Executive members attending the Congress in various capacities and Dr. Eric Gill (Section Chair) taking the role of Primary Delegate.

Over the four days, attendees learned about the changes the IEEE organization has been making to become more "member-centric" and in tune with the needs of engineers, scientists and professionals. Breakout sessions were held on a broad range of topics, from the basics of running an IEEE Section and recruiting volunteers and members, to humanitarian efforts in Africa and Asia. Near the end of the Congress, attendees were encouraged to attend discussion sessions to define action points that the IEEE organization should focus on over the next three years. These action points were narrowed down through voting by Primary Delegates to a shorter list of ten, which can be found at:

<http://www.ieee.org/web/volunteers/sections-congress/2008/sc08-recommendations.html>

Though the weekend was filled with information, there were also many opportunities to socialize and be entertained. The Opening Banquet featured acrobats and other Cirque acts, and the Annual Awards Ceremony held the Saturday night of Congress featured honored awards winners such as Dr. Gordon Moore (Moore's Law) and Sir Timothy Berners-Lee (inventor of the World Wide Web). The next Congress will be in San Francisco in 2011.

### **IEEE Canada Meetings September 17-19, 2008 Quebec City**

The IEEE Canada Board (Region 7) fall meeting was held in Quebec City from September 17-19. Under the leadership of Region 7 Director, Dr. Ferial El-Hawary, the voting members of the Board are composed of Section Chairs or their designated representatives from each Section in Canada, the Member Services Chair, the Publications and Communications Chair, the External Relations Chair, and the Treasurer. There were others in attendance observing the meeting and contributing to discussions. These individuals included representatives from Sections and Groups as well as from other Regions and the IEEE International

headquarters in Piscataway, NJ. The Board meets twice a year, once in the spring immediately before CCECE and again in the fall. Eric Gill represented the Section as the voting member from Newfoundland and Labrador.

Our caucus meeting on Thursday consisted of Officer, Section, Group, and visitor reports. The main focus of this meeting was the determination of four issues to be brought forward to Sections' Congress as potential items to be acted upon by IEEE worldwide.

Another item of interest to our Section was presented by Dr. Wally Read. Wally reviewed the ongoing history project, which involves each Section putting a summary of its history on the web. The local NL Section is in the process of putting together a document in support with this initiative.

Most beneficial was the networking opportunity the meeting provided. It allowed us to share ideas and experiences with Section officers from all over Canada. We hope to continue to build valuable relationships within the IEEE Canada community. The next Regional meeting will be held in St. John's on May 1-3, 2009.

## **Awards**

### **Term 6 IEEE NL Section ECE Scholarships**

An IEEE NL Section Scholarship may be awarded yearly to a full-time ECE undergraduate student in Term 6. The student has to also be an active IEEE student member 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 2008, the Term 6 IEEE NL Section ECE scholarship was awarded to **Ms. Susan Ryan**. Susan has been actively involved in the activities of the IEEE Student Branch, currently acting as

Co-Chair. In addition, she volunteered for NECEC conferences, attended the IEEE Student Congress in 2007, and helped to organize the Annual Term 8 Student Night. We congratulate Susan and wish her all the best in her future education and career!

### **NECEC 2008 Awards**

For the last five years, the Technical Committee of the IEEE NECEC has provided awards in the following categories: (1) Best Student Paper, (2) Best Graduate of the Last Decade (GOLD) Paper, (3) Best Poster, and (4) Best Industry Paper. The first two awards bear the name of prominent local and international IEEE member

Dr. Wally Read, former President of IEEE and a founding father of the IEEE Newfoundland & Labrador Section. The Best Industry Paper Award bears the name of Mr. T. David Collett, in recognition of his contribution to the Hydro Group of Companies, the province, and engineering profession.

These awards were presented at the NECEC 2008, as follows:

**Wally Read Best Student Paper Award - J. Zhang**, E. W. Gill, J. Walsh, and K.-W. Gurgel in recognition of the paper "*Comparison of Simulated HF Radar Data with Field Data for a Frequency Modulated Continuous Wave (FMCW) Source*"

**Wally Read Best GOLD Paper Award - Q. Zhang**, O. A. Dobre, S. Rajan, and R. Inkol, in recognition of the paper "*On the Application of Second-Order Cyclostationarity to Signal Recognition*"

**Best Poster Award - J. Kong** and B. Jeyasurya, in recognition of the poster "*Constrained Optimization Methods for Power System Economic Dispatch*"

**T. David Collett Best Industry Paper Award - M. J. Khan**, M. T. Iqbal, and J. E. Quaicoe, in recognition of the paper "*Dynamics of a Vertical Axis Hydrokinetic Energy Conversion System with a Rectifier Coupled Multi-pole Permanent Magnet Generator*"



*Mr. Q. Zhang with Section Chair Dr. E. Gill*



*Ms. J. Kong with Dr. E. Gill*



*Dr. T. Iqbal with Mr. M. Collett*

## Student Branch Activities

The Student branch was pleased once again this Fall to help out with NECEC by providing assistance during the conference and producing the proceedings CDs. This is a great opportunity for the members to network

with the local technical community and attend the conference sessions.

In September Chad Levesque, Junior Representative, traveled to Mississauga for the annual Student Congress where he received training on running a student branch and was able to meet many of his peers from other student branches across the country.

Next year we will be having elections for Society B executive positions early in the winter semester. Any interested students should contact Robert Cove or Dr. Dennis Peters. Our major upcoming activities will be helping with the annual IEEE Night student project demos and helping with CCECE '09 in May. The Student Branch looks forward to a productive and exciting year ahead.

## Membership Development

Membership is growing in the Section, with a total of **176 members**, compared with 147 this time last year. Membership growth has been in the Member area. Traditionally, growth has often come from the Student member grade, with full Member numbers remaining more or less stagnant, so the change is welcome.

In June, Gerard Dunphy, MD Chair for NL, attended the IEEE Admissions & Advancement Committee meeting in Denver, Colorado as IEEE Canada's representative on the Committee. One important aspect of the annual A&A Committee meeting is the consideration of Senior Member applications. There were over 100 applications from members worldwide and approximately 85% of these are granted Senior Member status. This status is conferred on those members who have demonstrated significant contributions to the practice of engineering over a period of at least 10 years. We would like to encourage anyone eligible to apply for Senior Member status.

It is time to consider renewing your membership for 2009. You can renew your membership online at:

<http://iee.org/web/membership/renew/index.html>

## WISE News



Women in Science and Engineering (WISE) held their AGM on Thursday, Nov. 27. The meeting was a kickoff for the 20th anniversary celebrations for WISE and the Student Summer Employment Program. Carolyn Emerson, former WISE NL president, gave an informative overview of WISE history. Laura Halfyard, current WISE NL president and Erica Lester, WISE Vice-President, provided a review of 2008 and plans for 2009. Finally, Gloria Montano led the group in a short planning exercise, to envision the long term future of WISE NL and the plan to get there. If you would like more information on WISE NL, to become a member, or to volunteer your time, please contact Laura Halfyard at [laura.halfyard@mi.mun.ca](mailto:laura.halfyard@mi.mun.ca).

## GOLD seeks Volunteers



GOLD (Graduates of the Last Decade) is a designation of all IEEE members who have completed their first technical degree (B.Eng., B.Sc.) in the last ten years. Its purpose is to help student members transition to beoming young professionals, and young professionals transition to successful engineers and scientists. GOLD offers programs and services to graduating students, recent graduates and young engineers, but we need your help to offer those programs here in Newfoundland.

Are you a graduate student or a young (or young at heart) professional who is looking to gain experience in organizing activities, network with others in your field, and share your expertise with others? Do you have a few hours a month to spare? If so, we have a role for you. For more information on GOLD, please see: [www.ieee.org/gold](http://www.ieee.org/gold). To get involved, contact Lori Hogan, Section GOLD Chair, at [lori.hogan@ieee.org](mailto:lori.hogan@ieee.org).