

# ENGINEUITY



THE SOURCE OF ENGINEERING AND GEOSCIENCE NEWS IN NEW BRUNSWICK  
LA SOURCE D'INFORMATION EN INGÉNIERIE ET GÉOSCIENCE DU NOUVEAU-BRUNSWICK

N°145-Fall/Winter 2011 / N° 144-automne/hiver 2011



## GHOST FISHING

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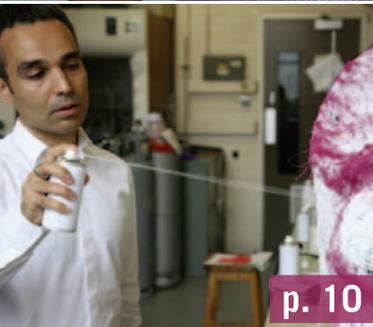
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# CDA ACB

Canadian Dam Association  
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# 2011

## ANNUAL CONFERENCE LE CONGRÈS ANNUEL

OCTOBER 15-20 / DU 15 AU 20 OCTOBRE

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Fredericton, NB/(N.-B.)

Abstracts are being accepted until December 15, 2010  
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The Canadian Dam Association (CDA) Annual Conference is the national forum for engineers, geoscientists, owners and operators of dams and other stakeholders who are interested in dams, to exchange ideas and information concerning the operations, maintenance and management of conventional water dams and mining dams. It also provides an opportunity for the participants to keep abreast of advancements in the fields of design, construction, and remedial works and new techniques for construction and remedial works.

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**BRUCE BROSTER, PH.D., P.GEO., FEC (HON.)**

# PRESIDENT'S MESSAGE



## CHEER FOR YOUR ENGINEERS!

As part of our 90<sup>th</sup> anniversary celebrations, we published "*Cheer for your Engineers*"—a 24-page supplement that was inserted in three of New Brunswick's daily newspapers and seven community newspapers in September. We received several calls (many from non-engineers) remarking on the excellence of the publication. Production of the tabloid-sized insert was made possible through the hard work of our director of communications, **Melissa Mertz, FEC (Hon.)**, and the strong support of several of our local engineering firms and municipalities that purchased advertising space in the supplement. On behalf of the

membership, I want to acknowledge and thank them for their support of this initiative.

## APEGNB GRAYDON NICHOLAS ABORIGINAL SCHOLARSHIP FOR ENGINEERING

Also part of our 90<sup>th</sup> anniversary celebrations, APEGNB Council established and presented the first APEGNB aboriginal engineering scholarship named after Lieutenant-Governor **Graydon Nicholas**. The scholarship was presented at Government House in Fredericton to **John Cloutier**, a student enrolled in the third year of UNB's mechanical engineering program.

Time seems to be flashing by and so is my term as president. Since my last update in the summer issue, your executive director, **Andrew McLeod, FEC (Hon.)**, and I, continue to represent your association at meetings of Engineers Canada, Ottawa (*see report elsewhere in this issue*) and at Engineers Nova Scotia's annual meeting in Wolfville, NS. At their annual meeting, we were informed that Engineers Nova Scotia continue to work towards a "Limitation of Actions" Bill similar to New Brunswick's; however, Engineers Nova Scotia will not be amalgamating with Geoscientists Nova Scotia.

### GOVERNMENT HOUSE, FREDERICTON

*Lt. Gov. Graydon Nicholas (left) and Bruce Broster, P.Geo., FEC (Hon.), present third-year UNB mechanical engineering student, John Cloutier (centre), with the Association's first Graydon Nicholas Aboriginal Scholarship in Engineering.*



## APEGNB STRATEGIC PLANNING

During July, APEGNB Council held a **strategic planning meeting** in St. Andrews, NB. Facilitated by **Jacques Paynter**, several outcomes were forthcoming, including:

- establishing electronic ballots
- maintaining dues at as low a level as possible, and;
- the creation of a building task force to look at solutions for our growing activities and needs for increased space.

## PROPOSED BY-LAWS

Proposed by-laws were reviewed and changes will be presented to the members at the annual meeting in February for approval. Two changes that are being proposed are the **introduction of electronic voting** and a **fee requirement for Life Members** who are still practicing professionals (in keeping with all other associations across Canada). APEGNB is working together with our sister associations towards constructing a national framework for assessments, membership classifications, and continuing professional development.

## INTERNATIONALLY TRAINED PROFESSIONALS

One of the major issues facing regulatory bodies is the fair and rapid assessment of applications from **internationally trained professionals (ITP)**. This is an issue for many associations across Canada (i.e. Ontario's Bill 68-Open For Business) and it is of particular interest to myself as a long-serving member of the APEGNB Admissions Committee and Examining Board and as a member of the Canadian Geoscientists Standards Board (CGSB). Bill 68 was passed on October 21 and it will remove some hurdles to licensing for ITPs.

With elimination of residency and the one-year Canadian experience requirement, qualified applicants could now arrive in Canada with a provisional licence in hand—ready to immediately enter the engineering and geoscience workforce.

## EURO-AGES MEETING

In October, I attended the **Euro-Ages** meeting in Budapest, Hungary, as part of the Canadian Geoscientists Standards Board Canadian delegation. Over the past two years following the Bologna agreements, that harmonized most European undergraduate programs at three years in length, approximately 22 Euro-Ages partners have worked towards developing the next cycles identified in the agreement. Emphasis was placed on pan-European mobility of professional geoscientists holding the European Federation of Geologists (EFG) 'EuroGeo' designation.

The meeting discussed the current goals:

- to establish a transparent assessment process for quality assurance;
- to implement continued professional development for members, and;
- to create a certification framework for professional geoscience based on expected outcomes.

(These goals have yet to achieve agreement by all stakeholders.)

The Canadian system for professional accreditation of geoscientists was suggested by some EFG members as an example to emulate. However, it will likely be some time before the process is wholly completed



### BUDAPEST, HUNGARY

*Bruce Broster, P.Geo., FEC (Hon.), stands in front of the Chain Bridge built by Scottish engineer Adam Clark in 1839-49. The imposing bridge is a major feat of engineering and the first permanent bridge across the Danube River in Hungary. By linking Buda and Pest, the Chain Bridge contributed to the unification in 1873 into the single city of Budapest.*

and the effects of the Bologna agreement, Euro-Ages and EFG quality assurance studies are realized and what consequences of this and Ontario's Bill 68 have on APEGNB. ■



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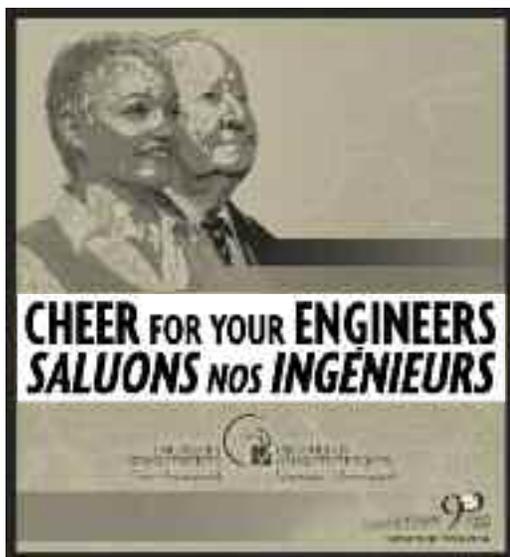
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**BRUCE BROSTER, PH.D., GÉOSC., FIC (HON.)**

# MESSAGE DU PRÉSIDENT



## SALUONS NOS INGÉNIEURS!

Dans le cadre des célébrations pour souligner notre 90<sup>e</sup> anniversaire, nous avons publié « *Saluons nos ingénieurs* », un encart de 24 pages qui a été inséré dans les trois quotidiens et dans sept journaux communautaires du Nouveau-Brunswick en septembre. Nous avons reçu de nombreux appels (dont plusieurs de non-ingénieurs) signalant l'excellence de la publication. La production de l'encart de format tabloïde a été rendu possible grâce au travail acharné de notre directrice des communications, **Melissa Mertz**, FIC (hon.), et de l'appui de plusieurs des sociétés d'ingénierie de notre région qui ont acheté des espaces publicitaires dans

l'encart. Au nom des membres, je tiens à signaler leur appui à cette démarche et à les en remercier publiquement.

## BOURSE D'ÉTUDES EN GÉNIE GRAYDON NICHOLAS DE L'AIGNB POUR ÉTUDIANTS AUTOCHTONES

Aussi dans le cadre des célébrations de notre 90<sup>e</sup> anniversaire, le Conseil de l'AIGNB a créé une bourse nommée en l'honneur du lieutenant-gouverneur **Graydon Nicholas**. Destinée aux étudiants autochtones, cette bourse en génie de l'AIGNB a été présentée pour la première fois à la Résidence du gouverneur à Fredericton à **John Cloutier**, un

**L**e temps passe à la vitesse de l'éclair et aussi mon mandat à la présidence. Depuis mon dernier compte rendu dans le numéro de l'été, votre directeur général, **Andrew McLeod**, FIC (hon.) et moi-même avons continué de représenter votre association aux réunions d'Ingénieurs Canada, à Ottawa (voir le reportage ailleurs dans ce numéro) et à l'assemblée annuelle d'Ingénieurs Nouvelle-Écosse à Wolfville (Nouvelle-Écosse). À sa réunion annuelle, on nous a informés qu'Ingénieurs Nouvelle-Écosse continue d'œuvrer pour l'adoption d'une loi sur la prescription semblable à celle du Nouveau-Brunswick, mais qu'Ingénieurs Nouvelle-Écosse ne se fusionnera pas avec Géoscientifiques Nouvelle-Écosse.

### RÉSIDENCE DU GOUVERNEUR À FREDERICTON

*Le lieutenant-gouverneur Graydon Nicholas (à gauche) et Bruce Broster, géosc., FIC (hon.), présentent à John Cloutier (au centre), étudiant de troisième année en génie mécanique à l'UNB, la première bourse d'études en génie Graydon Nicholas de l'AIGNB pour les étudiants autochtones.*



étudiant inscrit en troisième année du programme de génie mécanique de l'UNB.

## PLANIFICATION STRATÉGIQUE DE L'AIGNB

En juillet, le Conseil de l'AIGNB a tenu à St. Andrews (N. B.) une **réunion de planification stratégique** animée par **Jacques Paynter**. Plusieurs résultats en sont issus, notamment :

- l'instauration de scrutins électroniques;
- le maintien des cotisations à un niveau aussi bas que possible;
- la création d'un groupe de travail sur nos locaux qui cherchera des solutions à la croissance de nos activités et aux besoins d'espace supplémentaire.

## PROPOSITIONS DE RÉGLEMENTS

On a repassé les règlements proposés et on présentera les changements aux membres à l'assemblée annuelle de février pour solliciter leur approbation. Deux des changements proposés sont l'**introduction de scrutins électroniques** et l'**exigence d'une cotisation aux membres à vie** qui continuent d'exercer la profession (comme le font toutes les autres associations au Canada). L'AIGNB collabore avec ses homologues des autres provinces pour établir un cadre national d'évaluation, de classification des membres et de perfectionnement professionnel permanent.

## PROFESSIONNELS FORMÉS À L'ÉTRANGER

Un des principaux enjeux auxquels font face les organismes de réglementation, c'est l'évaluation équitable et rapide des demandes de **professionnels formés à l'étranger** (PFE). Plusieurs associations sont confrontées à cet enjeu partout au Canada (par

exemple le projet de loi 68 de l'Ontario favorisant une province propice aux affaires) et cette question m'intéresse particulièrement, car j'ai longtemps siégé au Comité des admissions et au Bureau des examinateurs de l'AIGNB, ainsi qu'au Bureau canadien des normes de la géoscience (BCNG). Le projet de loi 68 a été adopté le 21 octobre dernier et il éliminera certains obstacles à l'obtention du permis d'exercice par les PFE. Avec l'élimination de l'exigence en matière de résidence et d'un an d'expérience canadienne, les requérants qualifiés pourront dorénavant arriver au Canada en disposant d'un permis d'exercice provisoire, prêts à se joindre immédiatement aux effectifs en génie et en sciences de la Terre.

## CONGRÈS EURO-AGES

En octobre, j'ai assisté au congrès Euro-Ages à Budapest en Hongrie en tant que membre de la délégation du Bureau canadien des normes de la géoscience. Au cours des deux dernières années, par suite de l'accord de Bologne qui a harmonisé à trois ans la durée de la plupart des programmes d'études de premier cycle européens, environ 22 partenaires de Euro-Ages (organisme voué aux programmes européens d'études agréés en géologie) ont travaillé au développement des prochains cycles précisés dans l'accord. On a mis l'accent sur la mobilité paneuropéenne des géoscientifiques détenant le titre de géologue européen accordé par la Fédération européenne des géologues (FEG), c'est-à-dire le titre d'« EurGéol ».

En réunion, on s'est penché sur les objectifs actuels :

- établir un processus d'évaluation transparent pour assurer la qualité;

- instaurer le perfectionnement professionnel permanent pour les membres;
- établir un cadre d'agrément pour les professions des sciences de la Terre en fonction des résultats désirés.

(Il reste encore aux intervenants à s'entendre par rapport à ces objectifs.)

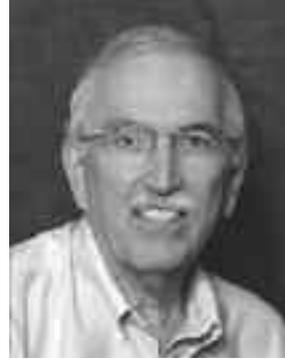


### BUDAPEST (HONGRIE)

*Bruce Broster, géosc., FIC (hon.), debout devant le pont suspendu à chaînes érigé par l'ingénieur écossais Adam Clark en 1839-1849. Cet imposant pont est un important exploit du génie et le premier pont permanent à enjamber le Danube en Hongrie. En raccordant les villes de Buda et de Pest, le pont à chaînes a contribué à leur unification de 1873 en une seule ville nommée Budapest.*

Certains membres de la FEG ont cité le système canadien d'agrément des géoscientifiques en exemple. Toutefois, il reste vraisemblablement encore un certain temps avant que le processus ne soit complètement terminé et que les effets de l'accord de Bologne, de Euro-Ages et des études d'assurance de la qualité de la FEG se fassent sentir et qu'on réalise quelles conséquences ces démarches et le projet de loi 68 de l'Ontario auront sur l'AIGNB. ■

TOM SISK, P.ENG., DIRECTOR OF PROFESSIONAL AFFAIRS



# ASK THE DPA

## Question

WHAT HAPPENS AT A DISCIPLINE HEARING?

## Answer

Perhaps the best way to answer this question is to discuss the results of two different complaints which ultimately came before our Association's Discipline Committee. Each resulted in sanctions and monetary penalties against the engineers complained against.

The decisions were made recently as a result of discipline panels held in the summer of 2010.

To set the stage, it must be pointed out that most of the complaints against engineers and geoscientists are as a result of some direct connection to the professional practice. It may be an allegation of misconduct in terms of carrying out some engineering or geoscience function or a breach of the Code of Ethics. Or, it may be an allegation of incompetence

as a result of practice outside an area of expertise or an error due to a medical or mental health issue.

The cases at hand are uncommon in that the complaints were based on circumstances outside the usual areas of engineering or geoscience.

In both cases, the complaint was made that, because the members (one an engineer-in-training; one a P.Eng.) had been convicted under the Criminal Code for charges related to child pornography, they should be investigated as to their suitability to practice. Each person had also been incarcerated and subject to a period of supervision as a result of the conviction.

While not seen often in our jurisdiction, being convicted of a criminal offence, or quasi-criminal offence, is indeed ground for a complaint being laid. Furthermore,

because the charges here were felt to be harmful to the profession's image among the public, **the actual complaint was laid by the Association itself**, rather than a member of the public or another professional member.

Following our normal process, each case was investigated and the information considered by the Professional Conduct Committee (PCC). They felt that the charges were significant in that **the Code of Ethics directs our members to uphold the honour and dignity of the profession and to avoid association of any enterprise of questionable character**. The PCC therefore directed that the case be referred to the Discipline Committee.

Two separate hearings were held, one for each member. The panels consisted of five APEGNB members and the hearing included a court stenographer.

While the first member had briefly contacted APEGNB's legal counsel in the course of preparing for the hearing, he ultimately elected to neither be present nor to have legal counsel present at the hearing. The

If you have a regulatory, enforcement or ethical question you'd like answered, e-mail APEGNB's Director of Professional Affairs.

[sisk@apegnb.com](mailto:sisk@apegnb.com)

panel heard the evidence prepared and presented by the Association's legal counsel.

A few days later, the second panel was convened. In this instance, the member complained against, accompanied by family members, appeared with his own legal counsel. Very similar to other court proceedings, each party made presentations, asked questions and submitted evidence. At the conclusion, the panel dismissed those present and withdrew to deliberate and compose the decision.

The **written decision**, developed over a period of weeks, contains several sections. First, it details the name of the complainant, the name of the engineer complained against, and the names of the panel members. It summarizes the evidence submitted and provides background information on the case. A discussion of the process used by the panel in considering the case is included as well.

In both cases, the Discipline Committee found that there was not compelling evidence that the actions of either member brought into question their

suitability or competence to practice engineering.

But, in both cases, the panel found sufficient evidence to conclude that the members' actions did not uphold the honour and dignity of the profession and that Association suffered damage to its reputation.

Public safety, with respect to the members' actions, was felt to have been dealt with by the provincial court and therefore, was not brought before the panel.

A separate section of the decision deals with the penalty imposed. A range of factors was considered, including:

- the serious nature of the criminal offence;
- that these were the members' first criminal offences;
- and the provincial court had judged them to be at the lower end of the scale for such an offence.

In view of the above, the following **penalties were imposed:**

- A written reprimand was placed in the members' files for period of five years in one case and a period of 10 years

in the other. The reprimand is to be provided to any other jurisdiction in which the members may apply for professional membership.

- Each member will be assessed the costs for the hearing including APEGNB legal fees, external costs and other direct costs (if any).
- The Discipline Committee reserves jurisdiction on the matters until the reprimand periods expire.
- The decision would not be published but it would be discussed in the Association's membership magazine (*Engenuity*) in summary form. This penalty was imposed to:

- outline the circumstances of the cases,
- to make the point that while the criminal acts were outside the members' professional practice, they do impact the profession and;
- the members were penalized under the *Engineers and Geoscience Professions Act*. ■

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BY COLIN SMITH, IMPERIAL COLLEGE OF LONDON

# SPRAY-ON HAUTE COUTURE UNVEILED

at *Science in Style* Fashion Show



A collection of spray-on haute couture was showcased September 22 at a fashion show at Imperial College London.

More than 300 key figures from industry, academia, fashion and the media came to the College

has collaborated with **Professor Paul Luckham**, a particles engineer at the Department of Chemical Engineering and Chemical Technology, to create a seamless material called Fabrican spray-on fabric. The technology enables designers to spray liquid

“The technology enables designers to spray liquid material directly onto the body, using aerosol technology, which dries instantly to make innovative clothes that can be washed and re-worn.”



“The fashion application of spray-on fabric is a great way of advertising the concept, but we are also keen to work on new applications for the medical, transport and chemical industries.”

— *Professor Paul Luckham, particles engineer*

to see **Dr. Manel Torres**, Spanish fashion designer and academic visitor at Imperial, unveil his 2011 Spring/Summer Collection at the *Science in Style* Fashion Show. The event celebrated design-led technology developed at Imperial.

The show is a culmination of 10 years of work by Dr Torres, who

material directly onto the body, using aerosol technology, which dries instantly to make innovative clothes that can be washed and re-worn.

During the show in the glass entrance of the College, models sashayed down the catwalk, showcasing a selection of gravity defying Fabrican spray-on haute couture.

“When I first began this project I really wanted to make a futuristic, seamless, quick and comfortable material,” says Dr Torres. “In my quest to produce this kind of fabric, I ended up returning to the principles of the earliest textiles such as felt, which were also produced by taking fibres and finding a way of binding them together without having to weave or stitch them. As an artist, I spend my time



A model wears a spray-on Fabrican blouse.

that delivers the fabric in liquid form and evaporates when the spray reaches a surface. The spray can be applied using a high pressure spray gun or an aerosol can. The texture of the fabric can be changed according to what fibres are used such as wool, linen or acrylic, and how the spray is layered.

Fashion is just one of the uses of this technology. Dr Torres has set up the spin-out company Fabrican Ltd with Professor Luckham to explore other applications, such as medicine patches and bandages, hygiene wipes, air fresheners and upholstery for furniture and cars.

Professor Luckham adds: "The fashion application of spray-on fabric is a great way of advertising the concept, but we are also keen to work on new applications for the medical, transport and chemical

industries. For example, the spray-on fabric may be produced and kept in a sterilized can, which could be perfect for providing spray-on bandages without applying any pressure for soothing burnt skin, or delivering medicines directly to a wound."

"Imperial is known for many good things in the worlds of higher education and science. But it is not every day we put on a fashion show to illustrate the creativity behind the scenes," said **Sir Keith O'Nions**, Rector of Imperial College London. "Imperial wants to work with more cultural organizations, and become involved in more, creative partnerships to show how science, technology and medicine can capture people's imaginations, and develop new ways of making life better," he added. ■

dreaming up one-off creations, but as a scientist I have to focus on making things reproducible. I want to show how science and technology can help designers come up with new materials."

The Fabrican spray-on fabric consists of short fibres that are combined with polymers to bind the fibres together, and a solvent



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### The TD Insurance Meloche Monnex Léopold Nadeau Scholarship of \$10,000

This scholarship will assist engineers returning to university for further study or research in the field of public policy development. The field of study chosen, whether it is engineering or another subject area, should favour the acquisition of knowledge pertinent to better serve the public interest by bringing the perspective of the engineering profession.

To be eligible, candidates must be accepted or registered at the time the scholarship is awarded in the fall of 2011, in a master's or doctoral program that will significantly enhance their engineering expertise, abilities and potential to influence the development of public policy.

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# APPLAUSE

## BLAINE HIGGS, P.ENG., APPOINTED TO PROVINCIAL CABINET



**P**remier David Alward and the members of the Executive Council were sworn in at a ceremony held on October 12 at the Legislative Assembly in Fredericton. From left: **Premier David Alward**; and **Hon. Blaine Higgs, P.Eng.**, who signs the register to become Minister of Finance, Minister of Human Resources, Minister responsible for the New Brunswick Liquor Corporation, Minister responsible for the New Brunswick Investment Management Corporation, Minister responsible for the New Brunswick Lotteries and Gaming Corporation, Chair of the Board of Management.



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**ANNA ROBAK, P.ENG. – NEW ZEALAND’S NEXT  
YOUNG ENGINEER OF THE YEAR?**



**A**s one of three finalists for the 2010 New Zealand Young Engineer of the Year Award, APEGNB member, **Anna Robak**, P.Eng., presented her submission to a group of peers on October 6. The winner will be announced on November 24, 2010, during the New Zealand Engineering

Excellence Awards Dinner in Wellington. Robak, an environmental engineer for Opus International Consultants in Auckland, is currently pursuing doctoral studies to evaluate the economic, environmental and social costs/benefits of water supply systems.



**PAUL CAMPBELL, P.ENG., BECOMES  
AWWA LIFE MEMBER**

**P**aul Campbell, P.Eng., an engineer with the New Brunswick Department of Environment, was awarded an American Water Works Association Life Membership for his long-time involvement with the association. Campbell has worked for the department since 1991 and has vast experience in the fields of water and

wastewater management. He received the award at the annual conference of the Atlantic Canada Water and Wastewater Association in Saint John. From left: Campbell and **Robert Gillis**, chair of the Atlantic Canada Water and Wastewater Association.



**AL GIBERSON, P.ENG., WALKS A MILE  
IN HER SHOES**

**A**l Giberson, P.Eng., past president of APEGNB and general manager of Enerplan, a division of ADI Limited, braved the rain and blisters to support local women’s initiatives. Wearing a pair of red patent leather shoes (with a 2” heel!), Giberson participated in the “Walk a Mile in Her Shoes Mens March” through downtown Moncton on

October 15. Proceeds from sponsored walkers in the event benefitted the Coalition Against Abuse in Relationship’s (CAAR) violence prevention efforts, and support services for victims.

# MY ROLE AS AN ENGINEER IS TO ...

## Fireball word cloud summarizes students' responses



“ Material presented in the workshops encourages students to think about engineering from a big-picture perspective and to consider how their decisions affect people and their communities, whether in a developing country or here in Canada. ”

**H**ow would you answer the question: What is the role of an engineer?

That was what first-year engineering students at McMaster University were asked as part of a workshop organized by the university's chapter of Engineers Without Borders (EWB).

How did they respond? Well, that has been neatly summarized in a colourful, computer-generated word cloud in the shape of McMaster Engineering's 'fireball'.

Some of the more prominent of the dozens of words that make up the word cloud include: *world, problems, better, solve, technology, make, improve, help, create, society, people, innovate, lives, build, and design.*

“This is who we are as engineers and the challenges we need to face,” interpreted **Erica Barnes**, past president of EWB McMaster and one of the main organizers of the exercise, after sifting through hundreds of responses written out on index cards. “This is a way to help break down the barriers to what engineering is and help students see the bigger picture.”

“I think it's important for the rest of the university and the community to understand what is of concern to today's engineering students,” added Erica.

The exercise was a new component of the “Root Causes of Poverty” workshop created by the EWB chapter at McMaster and now in its third year. It was profiled in the *Toronto Star* and contributed to the chapter winning EWB's national Most Improved Chapter award.

“This is a great example of the creative energy and broadening perspective that our EWB chapter brings to all McMaster's engineering students,” said **David Wilkinson**, dean of the Faculty of Engineering.

“Root Causes of Poverty” is a week-long series of workshops that EWB volunteers present to all first-year engineering students in the Introduction to Professional Engineering course (1P03).

Material presented in the workshops encourages students to think about engineering from a big-picture perspective and to consider how their decisions affect people and their communities, whether in a developing country or here in Canada.

“Students this year seem particularly engaged in understanding how they as engineers can help address the many problems they see in the world,” noted **Robert Fleisig**, assistant professor of mechanical engineering who teaches the course.

Here is a sample of some of the full responses submitted:

## CONTEST CORNER

The Summer 2010 Contest Corner was a tricky one! Some of the respondents detailed their well-reasoned thought process behind their answer.

We asked: *Who was the first woman president of Engineers and Geoscientists New Brunswick?*

The official answer was "C: Sherry Sparks, P.Eng." since Ms. Sparks was the first woman president elected *after* the inclusion of geoscientists.

However, since *Engenuity* is known for its generosity of spirit, we accepted any of the names as being correct because each were technically "first" woman presidents too.

Patricia Dineen, P.Eng., was the first woman president of APENB—*before* the Association added geoscientists to the membership roster.

Tanya Horgan, P.Eng./P.Geo., was the first president to hold dual designations during her term of office.

And Iris Auclair-Bernard, P.Eng., was the Association's first woman francophone president.

Congratulations to the folks listed at right who were the first five names drawn.

**“ This is a way to help break down the barriers to what engineering is and help students see the bigger picture. ”**

"My role as an engineer is to make my continent "Africa" a better place."

"My role as an engineer is to work towards the betterment of society through discipline, hard work and ethical choices. Also, to fight for the common good and equal opportunity through use of my skills."

"My role as an engineer is to use my knowledge and skill to take on and solve many of the challenges prevalent in today's society, and to do this while maintaining my professionalism."

"My role as an engineer is to change things for the better."

"My role as an engineer is to help those who have problems that need solving."

"My role as an engineer is to become a problem solver to the world." ■

### Summer 2010 CONTEST CORNER WINNERS

Huntley Wishart, P.Eng.  
Fredericton, NB

Deb Kumar Sen, P.Eng.  
Saint John, NB

Larry Lutes, MIT  
Marysville, NB

David M. LeBlanc, P.Eng.  
Fredericton, NB

Dwight Scott, P.Eng.  
Riverview, NB

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- B: MATH
- C: MUSIC
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To win this season's *Engenuity* prize package, e-mail your answer to [melissa@apegnb.com](mailto:melissa@apegnb.com) by **January 21, 2011**.

The first five correct submissions drawn will receive some very cool APEGNB-branded products like a laser-etched pen, a ball cap, a trendy messenger bag, and more.

SUBMITTED BY **ELMER BOURQUE**, P.ENG., SENIOR MEMBER, IEEE  
SENIOR ENGINEER, SYSTEM PERFORMANCE (RETIRED)—NB POWER

# SERENDIPITY INSPIRES SOLUTIONS

**C**an serendipity inspire simple solutions to complex engineering problems?

In my career in power control engineering, I have never felt the same kind of satisfaction as I did with this particular case of serendipity.

Usually, our engineering education and experience are what gives us an edge in solving problems. But we should also never underestimate the value of other knowledge input streams such as judging in science fairs or being curious about everything—related or not to our chosen field of practice.

The serendipitous case in point was an electrical power oscillation in a medium-sized hydro plant on NB Power's Saint John River hydro system.

These plants are run-of-the-river plants that utilize hydro energy collected in a large watershed encompassing a significant area of "La Gaspésie" as well as a portion of Maine. The Beechwood Power Plant consists of two 35 MW generators and a

third, built later, of 45 MW. Its size and location places it between Grand Falls' 60MW 4-unit facility and Mactaquac's 660 MW, 6-unit plant.

Beechwood's problem was reported to NB Power's head office as a "governor-

action. The weight of the device was balanced by a compensating spring. This device was the command for a hydraulic follower device, which would eventually move the turbine governor valves—opening or closing the gate valves and controlling the load.

## serendipity

The word was coined by Horace Walpole in a Jan. 28, 1754, letter to his good friend, Horace Mann. He said he formed it from the Persian fairy tale "The Three Princes of Serendip," whose heroes "were always making discoveries, by accidents and sagacity, of things they were not in quest of."

hunting" problem. This complaint had been heard before, on a number of occasions.

Foreign matter often restricts the freedom of the 1950s-vintage servo transducer.

This device is pushed up and down like a loud speaker by two coils—one for "raise load" and one for "lower load".

A single electronic vacuum double triode tube motivated the raise/lower coils into

On this occasion, the governor was functional and responsive in both raise and lower directions. This most likely absolved the governor of any fault.

Excitation problems can sometimes cause hunting problems, but this usually results in larger MegaVar (Mega Volt Amps Reactive) swings than MW swings. There were no undue voltage or MegaVar swings. The exciter was clean too.



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**Beechwood Hydroelectric  
Generating Station, Grand Falls, NB.**  
(Photo courtesy of NB Dept. of Energy)

So what else could it be? This is where serendipity entered the equation.

Three totally unrelated experiences contributed to the observations, which led to solving this problem with no modeling or calculations.

### SERENDIPITOUS MOMENT #1

A thought experiment was part of the puzzle. When you hear a jet airplane taking off from a distance of a few kilometres away, what do you hear? You hear a low rumble. No high frequencies at all.

As a result of my hobby of working on pipe organs, I really appreciate acoustic problems. In this case, if I sampled the sound at the output of the screaming jet engine, I should hear a large component of high frequency and virtually no low frequencies. So where do the low frequencies come from?

Thinking about this low frequency energy, I reasoned that initially, the jet would cause a high pressure just behind the engine. Now if this were a high pressure, the jet of hot gasses should move toward the next lowest pressure, I figured that the direction of the jet seeking the lowest pressure would be what causes the low rumble at a distance. (A commenting mechanical engineer assures me there is a different principle, but the result is similar.)

### SERENDIPITOUS MOMENT #2

During the rebuilding of turbine blades during Mactaquac hydro unit shutdowns, I became aware of cavitation. This is a process where water separates from the blade causing partial vacuum bubbles. The forming of vacuum bubbles is not a problem, except that it robs the turbine of a little bit of efficiency. The problem occurs when the bubble collapses. The imploding water causes a ping, which hits the blade like a ball peen hammer. (It also causes a "ping" sound.) Many pings sound like gravel going through the turbine while in operation. The pings



result in loss of metal by erosion. Replacing the cavitated metal with stainless steel which hardens over time when "pinged" virtually eliminates the problem.

### SERENDIPITOUS MOMENT #3

Years earlier, we took a little extra time at lunch, to visit a local entrepreneur's facility. It was known as the Hargrove Interconnection. Mr. Hargrove had some apartment buildings. He also had an ingenious streak and constructed a small hydro plant on a stream to supply energy to the apartment buildings. With time, he expanded the water works and added generating units. Extra energy was sold to NB Power through "the Hargrove Interconnection".

This particular noon hour was in the middle of a dry summer. The proud owner and builder of the plant showed us around after we had perused the water works and earth moving in progress. It happened that the water flow was so low that the inverted cones under the hydraulic turbines (draft tubes) were operating while suspended out of water. Mr. Hargrove pointed out that the tail

water level was low. Even at full hydraulic flow, the turbines could generate no more than 30% of the nameplate power in that state.

Draft tubes are arranged such that the water is made to flow easily and slow down before it is released to the brook or river. An expanding area, and slowing down of the water column before water exits the system, achieves this. It maximizes power out to the turbine shaft and minimizes erosion damage to the downstream waterway. This improves the pressure difference on either side of the turbine and therefore maximizes the electrical power at full load.

In other words, a draft tube increases turbine efficiency.

### SERENDIPITY + ANALYSIS = SOLUTION

Let's look back to the regulation problem.

The governor worked fine. The exciter appeared to keep the generator voltage constant and no MegaVar swings were observed.

CONTINUED NEXT PAGE >>>

>>> CONTINUED FROM PREVIOUS PAGE

Cavitation on Beechwood's unit 2 and its sister unit 1 were similar when heard from the lower turbine doors. There were gravel like sounds (similar to unit 2) and no wavering on either unit, as were the MW on unit 2.

Something else had to be amiss.

I had often looked over the rail at Mactaquac Generating Station into the tailrace and noticed the burbling of the water. I thought it was strangely like the sound of the jet engine mentioned earlier.

Unit 1's emerging water pattern was close to the side of the tailrace, but I thought I was looking at what was to be expected. For unit 2, the more I looked, the more I thought that the pattern was periodic and not chaotic as it should have been. Not only that—but after checking the MW meter in the control room (as described by an assistant), it appeared to be coincident with the periodic pattern in the tailrace burbles.

After contemplating this for some time, and consulting with other plant personnel, I concluded that there must be something wrong in the draft tube, as everything else appeared to be clean.

Expecting that the plant folk would have a look in the draft tube at the next

maintenance schedule, I went back to head office. I can't recall writing a report on the incident.

Much to my surprise I got a call only three days later. The plant personnel had isolated the penstock and a diver went down to investigate. He found the trouble in the draft tube.

A block of concrete was missing, leaving a hole, which would disturb the normal flow and cause turbulence.

During commissioning of units 1 and 2 in 1957, the two turbines came up short on guaranteed power. This would have been before computers and finite element modeling were available to work on this kind of problem. Slide rules and graphical methods abounded to solve engineering

problems with astounding results, most times. Other times, engineering had to more closely match its definition of "the iterative solution to a complex task". Here, another iteration was required to sufficiently satisfy the guarantees.

The turbine supplier had another look at the draft tube and ordered it be re-configured. In the re-configuration, concrete had to be removed and some re-contoured concrete added to modify the draft tube flow characteristics. A large segment of this concrete had become detached and this was the source of the turbulence causing the MW instability.

Sometimes magic in engineering really does happen.

We work in a most interesting field. ■

#### ABOUT THE AUTHOR:

**Elmer Bourque**, P.Eng., worked at the New Brunswick Research and Productivity Council for five years before joining NB Power as system performance engineer where he worked for 31 years. He was called upon to make certain plant and system control elements operate stably and reliably. He worked with fault recorder applications, governors, exciters, power system stabilizers and power quality. He feels volunteering with APEGNB and IEEE, judging science fairs, and working as a pipe organ technician rounded his education. Presently, he is associated with Kestrel Power Engineering of Toronto.



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**Dr. Randy Miller**, P.Geo.  
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# Energy storage system deals with **SUDDEN DRAWS ON THE GRID**

**T**ime for a quick cup of tea? When the final whistle blows, demand for electricity usually soars, causing a headache for energy companies.

Researchers at England's University of Leeds and the Chinese Academy of Sciences have now found a way to manage these short-lived draws on the electricity grid that could halve the fuel needed.

The amount of electricity drawn from the grid varies enormously at different times of day. It usually peaks in the early

evening for a couple of hours after the mass exodus from school and work. Short-lived spikes are also common after major televised sporting events, during commercial breaks and in the morning hours.

But matching the highs and lows in demand with a steady supply is a major challenge. Energy companies typically top up a 'base' supply of energy with electricity from power plants that are just switched on to cope with the peaks.

**“The key idea is to use excess electricity to run a unit producing liquid nitrogen and oxygen... The hot nitrogen gas would then be used to drive a turbine or engine, generating 'top up' electricity.”**



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However, the gas-fired generators often used to feed these peaks are notoriously inefficient, expensive to run and sit idle for long periods of time. In short, the system wastes both energy and resources.

University of Leeds professor of engineering, **Yulong Ding**, and colleagues are proposing a more

nitrogen gas would then be used to drive a turbine or engine, generating 'top up' electricity.

Meanwhile, the oxygen would be fed to the combustor to mix with the natural gas before it is burned. Burning natural gas in pure oxygen, rather than air, makes the combustion process more efficient and produces less

**“Using such an integrated system, the amount of fuel needed to cater for peak demand could be cut by as much as 50%.”**

environmentally friendly system that would also be cheaper to run. Crucially, the system would store excess energy made by a plant supplying the 'base' demand and use this to supply the 'peaks' in demand—as and when they happen.

“This integrated system is truly novel,” said Professor Ding, who led the research. “Because we are storing the excess energy for later, there is less need to ramp up the output of gas-fired plants whenever a peak in demand is expected, generating electricity that may simply not be used.”

The key idea is to use excess electricity to run a unit producing liquid nitrogen and oxygen—or 'cryogen'. At times of peak demand, the nitrogen would be boiled—using heat from the environment and waste heat from the power plant. The hot

nitrogen oxide. Instead, this 'oxy-fuel' combustion method produces a concentrated stream of carbon dioxide that can be removed easily in solid form as dry ice.

Using such an integrated system, the amount of fuel needed to cater for peak demand could be cut by as much as 50%. Greenhouse gas emissions would be lower too, thanks to the greatly reduced nitrogen oxide emissions and the capture of carbon dioxide gas in solid form for storage.

“This is a much better way of dealing with these peaks in demand for electricity. Greenhouse gas emissions would also be cut considerably because the carbon dioxide generated in the gas-fired turbine would be captured in solid form.”

“On paper, the efficiency savings are considerable. We now need to test the system in practice,” Professor Ding said.

Full details of the system will be published in the *International Journal of Energy Research*. ■

## HEAD TO THE WEB!

### SCIENTISTS AT THE UNIVERSITY OF CALIFORNIA HAVE PROVEN THAT WEB SURFING IS GOOD FOR THE BRAIN!

According to the 2008 study, computer-savvy middle-aged and older adults who surf the Internet trigger key centres in their brains that control decision-making and complex reasoning. The findings demonstrate that Web search activity may help stimulate and possibly improve brain function.

The tiniest measurable unit of brain activity registered by the functional magnetic resonance imaging scans (fMRI) is called a **VOXEL**. Scientists discovered that during Internet searching, those with prior experience sparked 21,782 voxels, compared with only 8,646 voxels for those with less experience.

So **TO INCREASE YOUR VOXEL COUNT**, we suggest surfing the following sites:

When the National Museum in Baghdad had been looted in the second Iraqi war, The Art Newspaper tracked down its very rare catalogues and put all its images on their web site. The website was also the first to publish the damage to monuments at the outset of the Balkan troubles in the 1990s. One of the site's journalists has even gone undercover to meet tomb-robbers in Italy and to find out the economics of the trade in illicit antiquities. The Art Newspaper is five print newspapers collated, covering the art scene around the globe.

[theartnewspaper.com](http://theartnewspaper.com)

If your child has always wanted a pet monster, this is the website for them! At [moshimonsters.com](http://moshimonsters.com), kids can adopt their very own Monster, give it a name and design its colour scheme. Each Monster has a personality that develops the more it is played with. Monster owners can nurture their pet by solving daily puzzle games to earn Rox, the in-game currency. Rox can be used to buy weird and wonderful things in the virtual shop to keep Monsters healthy and happy.

[moshimonsters.com](http://moshimonsters.com)

This website enables you to send questions directly to people who have hands-on experience with exactly the product, the service, the place, or the choice in life that you are interested in—for free! Join the forum of over 140,000 owners to exchange tips, get help with small and big problems, share your own test or review and get hold of that lost manual.

[askanowner.com](http://askanowner.com)

Combine particles, elements, gravity, slip, and density to create complex sand structures—online—with the Falling Sand Game. (It's strangely hypnotic and somewhat relaxing!)

<http://chir.ag/stuff/sand/>

*Interested students, faculty, industry, consultants and regulators packed the room. (Besides the networking opportunities the event presented, pizza and pop provided extra incentive for students to take a break from their studies and attend the event!)*



## Norm Miller, Corridor Resources, headlines

# CIM-NB MEET & GREET

**O**n September 28, CIM-NB (Canadian Institute of Mining Metallurgy and Petroleum-NB Branch) hosted their fall Industry/Student Meet and Greet at the Geology and Forestry Building on the University of New Brunswick's Fredericton campus.

The event introduced geoscientists and geological engineers, members of other

engineering disciplines and students interested in the minerals and mining industry, to industry representatives and regulatory agencies.

This year, Norm Miller, president and director of Corridor Resources Inc., was the invited speaker. He presented a talk on the shale gas development and production program in New Brunswick.

Corridor Resources is a junior resource company with gas reserves in the McCully Field near Sussex, New Brunswick. The company has also recently discovered crude oil reserves in the nearby Caledonia field.

In June 2007, Corridor completed the construction of the required midstream facilities to connect the McCully Field to markets through the Maritimes & Northeast

*Norm Miller, president of Corridor Resources and Michele Coleman, PGeo./PEng., CIM-NB executive member and co-chair of the CIM-NB student/industry meet and greet committee.*



Pipeline (M&NP). Miller described the geology involved in the gas finds. He also described how recent improvements in horizontal drilling, hydro-fracturing (fracking), and surface casing installations have minimized the impact of petroleum and gas production on the surface.

Even though the talk was arranged on short notice due to Mr. Miller's retirement at the end of September, more than 70 interested students, faculty, industry, consultants and government representatives attended the event. For more information about Corridor Resources and their gas and oil exploration and production projects in the Maritimes, visit [www.corridor.ca](http://www.corridor.ca) ■

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Cost Engineering - Effective Estimating and Cost Control of Construction Projects	12	Halifax			28-29
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*Dr. Randy Miller, P.Geo., the New Brunswick Museum's research curator, works in Fern Ledges, one of Stonehammer's 60 geosites. Dr. Miller is recognized as the initiator of the successful bid for Stonehammer Geopark to become North America's first Global Geopark. He is also the keynote speaker for APEGNB's Annual Meeting in Saint John on February 18, 2011. His presentation, "Stonehammer—A Billion Years in the Making" will discuss the newly minted global geopark's natural and historic features as well as an overview of the bid process.*

## New Brunswick's Stonehammer becomes continent's **FIRST GLOBAL GEOPARK**

**I**n October 2010, the Stonehammer Geopark, located in southern New Brunswick, became the first North American member of the Global Geoparks Network (GGN), an organization assisted by UNESCO.

The announcement was made at the 9<sup>th</sup> Annual European Geoparks Conference in Lesvos, Greece. With the acceptance of the Stonehammer Geopark application, the GGN has 77 members in 24 countries throughout Europe, Asia, South America, Australia, the Middle East and now North America.

### **WHAT IS A GEOPARK?**

The definition of a geopark, as described by UNESCO and the GGN, is "an area with a geological heritage of significance, with a coherent and strong management structure and where a sustainable economic development strategy is in place. A geopark

creates enhanced employment opportunities for the people who live there bringing sustainable and real economic benefit, usually through the development of sustainable tourism. In the framework of a geopark, geological heritage and geological knowledge is shared with the broad public and linked with broader aspects of the natural and cultural environment, which are often closely related or determined to geology and landscape."

UNESCO supports the development of the Global Geopark Network as a means to place geoscience on the agenda of decision-makers, including politicians, governmental representatives and private enterprises.

### **HOW BIG IS THE STONEHAMMER GEOPARK?**

The Stonehammer Geopark, named in part to recognize the early geological exploration of the 'Steinhammer Club' (1857-1862), encompasses 2,500 square kilometres of land in southern New Brunswick—stretching from Lepreau Falls to the Fundy Trail Parkway, north to Norton and Hampstead.

### **A BILLION YEARS OF STORIES**

Stonehammer Geopark includes 'a billion years of stories' not only about the rocks but also about the history of geological exploration and how people interact with geology.

The landscape of Stonehammer Geopark has been created by the collision of continents, the closing and opening of oceans, volcanoes, earthquakes, ice ages and climate change. The rocks have been witness to the evolution of life, from the

first discovery of Precambrian stromatolite fossils, to the 'Cambrian Explosion' of life, to the evolution of vertebrates and the emergence of life on land. The park includes geological stories from late Precambrian time a billion years ago to the most recent Ice Age, and almost everything in between.

Almost 60 'geosites' were identified in the geopark application as part of Stonehammer. These include significant fossil sites like the 'Fern Ledges'; parks like the City of Saint John's Rockwood Park, the Irving Nature Park, river centres in Hampton and Grand Bay-Westfield, and the Fundy Trail Parkway; outcrops like the sea caves at St. Martin's; the historic stone buildings in Uptown Saint John; and the New Brunswick Museum. As well, the vibrant human and cultural heritage, as well as active educational, tourism and community development sectors, are all vital elements for a successful geopark.

### **WHAT DOES THE ANNOUNCEMENT MEAN FOR STONEHAMMER?**

Up until now, the park has been coordinating existing geotourism activities and encouraging the development of new products such as a visitor information map, walking tour brochures and facts sheets about the geology of Stonehammer.

Now that the park is a member of the Global Geoparks Network, products and marketing will be developed to reflect that global brand.

Part of Stonehammer Geopark's role will be to work with its partners to encourage



*The Saint John Branch of Engineers and Geoscientists New Brunswick organized a 2009 field trip to Green Head, another Stonehammer geosite last year.*



sustainable use of the geosites. Existing businesses like the Reversing Falls Jet Boat, Day Tripping Adventures and GoFundy Events may expand their offering of geological tours and develop of new business opportunities in geotourism.

As before, the region will continue to be an area of geological research and Stonehammer Geopark will assist to encourage research and provide opportunities to translate discoveries to a broader audience.

The Canadian Federation of Earth Sciences hosts the new Canadian National Committee for Geoparks (CNCG), chaired by **Dr. Godfrey Nowlan** of the Geological Survey of Canada. In the future, CNCG will be the organization assisting aspiring geoparks in Canada wishing to make an application to the Global Geoparks Network.

**For more information about Stonehammer Geopark**, visit [www.nbm-mnb.ca/stonehammer](http://www.nbm-mnb.ca/stonehammer)

**For more information about the Global Geoparks Network**, visit [http://portal.unesco.org/science/en/ev.php-URL\\_ID=6400&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/science/en/ev.php-URL_ID=6400&URL_DO=DO_TOPIC&URL_SECTION=201.html)



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A photograph showing two fishermen on the deck of a boat. One fisherman, wearing a light blue long-sleeved shirt, orange overalls, a tan cap, and safety glasses, is reaching up to adjust a hydraulic hauler system. The hauler is lifting a large, rectangular lobster trap made of yellow mesh. The trap is partially submerged in the water. The background shows a vast, greyish-blue sea under an overcast sky. The boat's deck and railing are visible in the foreground.

SUBMITTED BY **PETER MCKELVEY, P.ENG.**, FUNDY ENGINEERING

*Two local fishermen raise one of the grappels with derelict lobster gear attached using the on-board hydraulic hauler*

# GHOST FISHING BY DERELICT LOBSTER TRAPS

**Fundy Engineering undertakes novel project to benefit lobster habitat**

**H**aving worked for more than 30 years on projects relating to fisheries and aquaculture, I knew that lost fishing gear could continue to catch fish and be a menace to fish stocks. This is referred to as "ghost fishing".

As part of the construction of the Canaport LNG marine terminal at Mispic Point, New Brunswick, Fisheries and Oceans Canada's environmental assessment and major projects division mandated a fish habitat compensation requirement under the *Fisheries Act*.

The first challenge was to select an appropriate project that would meet the objective of benefiting lobsters and their habitat. Initially, we were uncertain as to what kind of project to undertake as compensation.

After talking with fishers and reviewing several options, Canaport LNG decided to retrieve derelict lobster gear in the Saint John Harbour region to compensate for potential loss of habitat. This meant that the number one

lobster traps that, for whatever reason, had lost their lines and remained on the floor of the Bay of Fundy.

However, I also knew that the retrieval of the lobster traps would be complex, and a program had to be devised from scratch.

of which is an economic burden for lost gear and an environmental threat of derelict gear continuing to fish (i.e., ghost fishing).

Local fishers pointed out that ghost fishing lethally fishes for target and non-target species.

*Peter McKelvey, P.Eng., holds a local lobster in front of Billy's Seafood Company Fish Market & Restaurant in the City Market, Saint John, NB.*



**“ Based on the estimated 654 derelict lobster traps that were ghost fishing in the area, the total annual loss of lobster to local fishers may be about 9,624 animals worth approximately \$120,000— a considerable value to the small fishery. ”**

priority of the project was to benefit the lobsters.

**Fraser Forsythe**, HSSE manager at Canaport LNG, said the creativity involved in this project produced results that not only met the compensation requirements, but also provided additional data on the marine habitat. It was a win-win for both Canaport LNG and the people who fish the waters adjacent the terminal.

To me, the objective seemed quite straightforward: pick up old

Indeed, research obtained during the project established additional fishery data for the area, and lobster fishing in general.

## **BACKGROUND**

Bay of Fundy lobster fishers feared that construction of the Canaport LNG facility would increase the incidence of fishing gear loss due to increased commercial vessel traffic in the Bay.

Gear loss is a concern to fishers for several reasons, not the least

Derelict traps can be an economic burden to fishers, not to mention the impact on the lobsters!

To offset potential impacts to fishers' livelihood, approximately 2,500 square metres of seafloor was set for compensation under the *Fisheries Act*. Canaport LNG engaged Fundy Engineering to complete a "derelict lobster trap retrieval project" to protect lobster habitat and sustain the traditional lobster fishery.

# Ghost fishing



*Derelict lobster traps ghost fishing non-target species (i.e., crab)*

Being an environmental engineer at Fundy Engineering the project fell in my lap.

## APPROACH

In consultation with local fishers, the Fundy North Fishermen's Association, Canaport LNG, and Fisheries and Oceans Canada, we began the project.

Fundy Engineering selected side scan sonar technology for locating traps. Side scan sonar is a proven technology used for quickly performing underwater searches of vast areas. Side scan sonar has been used to effectively detect wrecks and other underwater debris. You may have seen them on TV being used by **Jacques Cousteau**. It functions well in environments similar to the Bay of Fundy; deep, turbid waters in total darkness.

We undertook a gridded search pattern across 50 square kilometres of seafloor which yielded 2,971 potential derelict traps! This certainly supported local fishers concerns.

It was estimated that 297 lobster traps are lost annually in the designated area and they ghost fish for up to two years, indicating that 654 derelict lobster traps could potentially be ghost fishing.



*One of the 578 lobsters caught within a derelict lobster trap. It was released back to the Bay of Fundy.*

Based on the estimated 654 derelict lobster traps that were ghost fishing in the area, the total annual loss of lobster to local fishers may be about 9,624 animals worth approximately \$120,000—a considerable value to the small fishery.

Specially designed lightweight grapnels were developed to retrieve derelict gear in the designated Saint John Harbour region in compensation for loss of habitat. We generated three original designs: cylinder style, bar style with a chain bridle, and bar style with a solid bridle and skids.

Although latitudinal and longitudinal data collected during the side scan sonar work helped boat captains navigate to the targets, wind, current and wave action had a considerable effect in getting the boat into position. However, it was the captain's local knowledge and experience

that placed the vessel in the best position to snag derelict traps with the grapnel.

It is of importance to also note that, for analysis of positioning data, the on-water retrieval activities used a combined

approach between Fundy Engineering and the fishers, their boats and equipment. The on-water experience of the boat captains and fishers was again invaluable.

The first day out, one of our dredges was lost at sea! We improvised with a jury-rigged design with good results. Success was nearly 100% for traps that were targeted for retrieval.

## RESULTS

The project successfully developed three grapnel designs and throughout 40 boat days of retrieval recovered 540 lobster traps ranging in age from one year to 23 years.

The retrieved traps contained 579 lobsters with a combined total weight of 610 kg. Based on the market value of lobster at the time, the yield was valued at over \$7,000. The retrieved traps

also contained by-catch, primarily crabs. We were all surprised at the number of lobster and crabs found in the traps. The quantity was much higher than anticipated.

The results suggested lobster traps can indeed continue to fish for extended periods of time once they are lost at sea.

The project exceeded Canaport LNG's fish habitat compensation requirements and established additional fishery data for the area,

impacts during construction of the marine terminal.

This cooperative effort was deemed a considerable success by all parties involved and provided valuable data to support fisher's livelihood.

Mr. Forsythe, on behalf of Canaport, concluded, "We, at Canaport LNG, were very pleased with the results of this project and believe it demonstrates how industry can work co-operatively

have been very pleased with the results of the lobster trap retrieval project. Retrieving these lost traps has saved countless lobsters that would have perished as the lost traps ghost fish. In addition, we have learned a lot about how well the escape panels on our traps are working and have improved our expertise in grappling for lost gear."

In addition, the Fundy North Fishermen's Association has mounted an education and awareness campaign aimed at 100% compliance with escape panel regulations and fishing codes of conduct to minimize gear loss in the harbour.

We are very grateful to have been involved in a project that provided real and immediate benefit to our community and its fishers. We all consider the Saint John Harbour a healthier place as a result of this project.

And for me, after having spent over a month working with lobster fishers, researchers and being on the Bay, I was looking forward to seeing my next lobster on my dinner plate! ■

**“ The project successfully developed three grapnel designs and throughout 40 boat days of retrieval recovered 540 lobster traps ranging in age from one year to 23 years. ”**

and lobster fishing in general. Retrieval of derelict traps appears to be the best method for reducing target and non-target species mortality by ghost fishing.

Using ArcGIS mapping software to calculate the total impact area by the recovered traps, Canaport LNG's recovery of 540 derelict traps provided a compensation ratio 4.5 times that necessary for their seafloor

with its community to the mutual benefit of all concerned, including the surrounding marine habitat."

As an environmental engineer, I was proud to be involved with a project that aided in protecting and sustaining local lobster habitat. I was particularly pleased to receive comments from **Maria Recchia**, executive director of the Fundy North Fishermen's Association: "We



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BY BRENT SMITH, P.ENG., FEC (HON.)

# ENGINEERS CANADA (CCPE) DIRECTOR'S REPORT

This report is a summary and covers some of the outcomes from the Engineers Canada summer activities and the Board of Directors meeting held in Ottawa this past October 2010. The Board discussed a variety of issues of concern to the Engineers Canada membership—the provincial and territorial licensing bodies.

## SYNERGY TASK FORCE

As Chair of the Synergy Task Force, I am pleased to report that another phase of our mandate has been completed towards a new

governance model for Engineers Canada and its members.

The new by-laws for Engineers Canada were approved by the constituent associations (CAs), at the Special Meeting of Members on October 5<sup>th</sup>. The by-laws had previously been presented to APEGNB's Council, with some minor changes, and reflect the recommendations for the new governance model that had been approved last May.

The final phase of the Task Force's work is underway and will deal with the financial sustainability

of Engineers Canada. A plenary was held last week in Ottawa with the Board members of Engineers Canada, the CAs and representatives of the CEOs/ Executive Directors Group of the members. I was pleased with the participation at this plenary and believe the Task Force has the necessary input to work on our preliminary report towards recommendations for a financing model that will serve the organization and its members for some time. Our goal is to present draft recommendations at a February plenary session with anticipated approval in May at the Annual Meeting of Engineers Canada. This phase is intended to ensure that there is continued transparency with the organization's strategic, business planning and budget development cycle.

## AGREEMENT WITH THE ASSEMBLY OF FIRST NATIONS

Engineers Canada, and the Assembly of First Nations, are pleased to announce that they have signed a statement of partnership to increase awareness of, and access to, careers in engineering for First Nations youth.

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A signing ceremony was held this past summer in Winnipeg between Engineers Canada, represented by **President Zaki Ghavitian**, FEC, P.Eng., and the Assembly of First Nations, represented by **National Chief Shawn A-in-chut Atleo**. The intent of the agreement is to formalize the organizations' collaboration on the development of educational material and new initiatives to increase the awareness among young people of indigenous origin of career possibilities in the engineering sector and of available, existing, or future training programs.

### AGREEMENT WITH THE TEXAS BOARD

As part of October meetings in Ottawa, the Mutual Recognition Agreement (MRA) with the Texas State Board of Professional Engineers was signed at a ceremony with the Chairman of the Texas State Board in attendance. Texas has always been a strong supporter of the P.Eng = PE concept.

### LONG-FORM CENSUS-RELIABLE DATA CONTRIBUTES TO ENGINEERING DESIGN

Like many other organizations, Engineers Canada has been monitoring the debate around the changes the federal government announced regarding the

collection of data during the 2011 census. The engineering profession relies on the data collected by the long-form census when making engineering design decisions. The president and the chief executive officer of Engineers Canada have written to Canada's Minister of Industry, **Hon. Tony Clement**, to highlight the importance of long-term, consistent information to engineers and the work that we do. The investments and work the engineering profession undertakes in transportation, infrastructure and public works contribute directly to the health, safety and quality of life of all Canadians.

### 2011-2013 BUDGET

The 2011 operating budget was approved by Engineers Canada's Board of Directors. This was part of our existing annual budget planning cycle and has been prepared based on the current assessment fee. It is essentially a balanced budget. The budget projected a deficit of less than \$194,000 which is within three percent of revenues. If realized, the deficit will be paid from the operating reserve. The operating reserve will remain above the

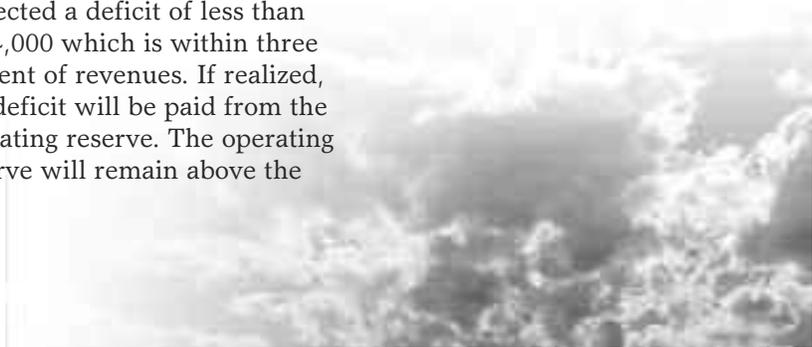
target level. The Finance Committee, of which I am a member, recommended the budget to the Board based on its assumption that the Board did not wish to cut existing programs that are important to our strategic goals.

### ENGINEERS CANADA WEBSITE

Finally, I encourage all APEGNB members to visit the Engineers Canada website ([www.engineerscanada.ca](http://www.engineerscanada.ca)). You'll find a wealth of information on:

- the boards and committees,
- the many programs that Engineers Canada undertakes on behalf of the Constituent Associations, as well as,
- publications and national position statements.

If there are any issues that the membership of APEGNB would like to have discussed at the national level, please contact me at [ccpedirector@apegnb.com](mailto:ccpedirector@apegnb.com). ■



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PAR BRENT SMITH, ING., FIC (HON.)

# RAPPORT DU REPRÉSENTANT AUPRÈS D'INGÉNIEURS CANADA (CCI)

Ce rapport présente un résumé de certains des résultats des activités d'Ingénieurs Canada au cours de l'été et de la réunion du conseil d'administration qui a eu lieu à Ottawa en octobre dernier. Le conseil d'administration a abordé divers enjeux qui préoccupent les membres d'Ingénieurs Canada, c'est-à-dire les instances qui accordent le permis d'exercer dans les provinces et les territoires.

## GRUPE DE TRAVAIL SUR LA SYNERGIE

En tant que président du groupe de travail sur la synergie, je suis heureux d'annoncer qu'une autre

phase de notre mandat a été réalisée en vue d'un nouveau modèle de gouvernance pour Ingénieurs Canada et ses membres.

Les nouveaux règlements administratifs d'Ingénieurs Canada ont été approuvés par les associations membres à leur réunion spéciale du 5 octobre dernier. Ayant déjà été présentés au Conseil de l'AIGNB, ces règlements ont été adoptés après quelques légères modifications qui correspondent aux recommandations relatives au nouveau modèle de gouvernance qui avaient été approuvées en mai dernier.

La dernière phase des travaux du groupe de travail est en cours et on

y abordera la viabilité financière d'Ingénieurs Canada. Une séance plénière s'est déroulée la semaine dernière à Ottawa réunissant les membres du conseil d'Ingénieurs Canada et des conseils des associations membres, ainsi que des représentants du groupe des chefs de la direction et des directeurs généraux des associations membres. Je suis heureux de la participation à cette séance plénière et je crois que notre groupe de travail a reçu l'apport nécessaire pour préparer son rapport préliminaire visant à présenter des recommandations pour un modèle de financement qui desservira l'organisme et ses membres à l'avenir. Notre objectif



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est de présenter des ébauches de recommandations à une séance plénière en février en espérant leur approbation en mai lors de l'assemblée annuelle d'Ingénieurs Canada. Cette phase vise à assurer le maintien de la transparence dans la planification stratégique des activités de l'organisme et lors des cycles d'élaboration du budget.

### ACCORD AVEC L'ASSEMBLÉE DES PREMIÈRES NATIONS

Ingénieurs Canada et l'Assemblée des Premières Nations sont heureux d'annoncer qu'ils ont signé une déclaration de partenariat pour sensibiliser davantage les jeunes des Premières Nations aux carrières en génie et pour leur en faciliter l'accès.

Une cérémonie de signature a eu lieu au cours de l'été à Winnipeg entre Ingénieurs Canada, représenté par son **président Zaki Ghavitian, FIC, ing.**, et l'Assemblée des Premières Nations, représentée par son **chef national, Shawn A-in-chut Atleo**. L'accord a pour objet d'officialiser la collaboration des deux organismes pour l'élaboration de matériel pédagogique et de nouvelles démarches pour mieux sensibiliser les jeunes d'origine autochtone aux possibilités de carrière dans le secteur du génie et aux programmes de formation actuels ou futurs.

### ENTENTE AVEC L'ORDRE DES INGÉNIEURS DU TEXAS

Dans le cadre des réunions tenues à Ottawa en octobre, l'accord de reconnaissance mutuelle (ARM) avec l'ordre des ingénieurs du Texas, le *Texas State Board of Professional Engineers*, a été signé lors d'une cérémonie à

laquelle assistait le président de l'ordre texan. Le Texas a toujours soutenu vigoureusement la notion de l'égalité entre les titres « ing. » et « PE ».

### QUESTIONNAIRE COMPLET DU RECENSEMENT – DES DONNÉES FIABLES NÉCESSAIRES À LA CONCEPTION TECHNIQUE

Comme plusieurs autres organismes, Ingénieurs Canada a suivi le débat au sujet des changements annoncés par le gouvernement fédéral en ce qui a trait à la collecte de données lors du recensement de 2011. Les personnes qui exercent la profession d'ingénieur comptent sur les données recueillies à l'aide du questionnaire complet du recensement pour prendre des décisions en matière de conception technique. Le président et le chef de la direction d'Ingénieurs Canada ont envoyé une lettre au ministre de l'Industrie du Canada, l'**hon. Tony Clement**, pour souligner l'importance pour le travail des ingénieurs de renseignements cohérents à long terme. Les investissements et les travaux que ceux qui exercent la profession d'ingénieur réalisent dans les domaines du transport, des infrastructures et des travaux publics sont d'un apport direct à la santé, à la sécurité et à la qualité de vie de tous les Canadiens.

### BUDGET 2011-2013

Le conseil d'administration d'Ingénieurs Canada a approuvé le budget de fonctionnement de 2011 dans le cadre de son cycle annuel de planification budgé-

taire. Élaboré en fonction du niveau actuel des droits d'évaluation, le budget est essentiellement un budget équilibré. Il prévoit un déficit de moins de 194 000 \$, ce qui se situe dans les trois pour cent des revenus. Si constaté, le déficit sera remboursé à même la réserve de fonctionnement qui restera supérieure au niveau souhaité. Le comité des finances, dont je suis membre, a recommandé ce budget au conseil en tenant pour acquis que le conseil ne souhaitait pas couper dans les programmes existants qui sont nécessaires à l'atteinte de nos objectifs stratégiques.

### SITE WEB D'INGÉNIEURS CANADA

Enfin, j'invite tous les membres de l'AIGNB à consulter le site web d'Ingénieurs Canada ([www.engineerscanada.ca](http://www.engineerscanada.ca)). Vous y trouverez des informations précieuses sur :

- les conseils et leurs comités;
- nombreux programmes qu'Ingénieurs Canada entreprend au nom de ses associations membres;
- les publications et les déclarations nationales.

Pour toute question que les membres de l'AIGNB voudraient voir soulevée sur la scène nationale, n'hésitez pas à communiquer avec moi à l'adresse [ccpedirector@apegnb.com](mailto:ccpedirector@apegnb.com). ■



# EARTH RING CEREMONY

## comes to New Brunswick

The tradition of the Earth Ring Ceremony began in Alberta in 1975 as a ritual of welcome for newly qualified geologists and geophysicists by senior practicing Earth scientists. This tradition has since been adopted by other universities and associations across Canada, including: British Columbia, Manitoba, Newfoundland, Nova Scotia and now, New Brunswick.

Like the Iron Ring of the obligated engineer, the Earth Ring is worn on the working hand to serve as a reminder to those who wear it of the values at the core of the profession and of the trust placed in them by society. Also, like the Iron Ring, the Earth Ring ceremony is conducted by a committee that is independent of Engineers and Geoscientists New Brunswick.

The simple design is an alternating pattern of the crossed hammers of geology and the seismic trace of geophysics—symbolizing both the immediate, and the remote, searching out of Nature’s mysteries and knowledge. Without beginning and without end, the ring represents the continuous and continuing interplay of ideas, of instrumentation and of material realities.

The first Earth Rings were made from an iron-nickel alloy to symbolize what is believed to be the composition of the Earth’s core. This proved inappropriate when many of the recipients developed dark green to black stains on their pinkie fingers as an unexpected result of contact with skin. A silver alloy was then selected as a suitable substitute and today Earth Rings are made of various metals including silver, white gold and titanium. (New Brunswick’s Earth Rings are available in silver only in keeping with the tradition.)

Receiving an Earth Ring is not conditional on being registered with a professional association. The ceremony is about a calling to service. It means you are part of a profession dedicated to seeking the truth in Earth Science and applying this to the service of mankind.

As 2011 will be the first year New Brunswick holds an Earth Ring ceremony, **all practicing geoscientists in New Brunswick wishing to receive a ring are invited to take part in the inaugural Earth Ring ceremony to be held at the Fredericton Inn on February 12, 2011.**

For more information on how to register for this historic event and to order your Earth Ring, visit [www.apegnb.com](http://www.apegnb.com)

**Deadline for ring orders for the inaugural ceremony is December 17, 2010.**



# APEGNB PUMPKIN FLING RAISES \$1508

## for NB Kids’ Breakfast Program

APEGNB’s annual Pumpkin Fling, held on September 25 in Miramichi, was a hit with both festival goers and School District 16’s Breakfast Program.

Despite rain, wind and wet pumpkins, the event still wowed the crowd with an amazing display of basic engineering principles such as aerodynamics, friction and gravity. As an added benefit, the APEGNB Pumpkin Fling raised \$1508.47 in support of the healthy breakfast program in Miramichi area schools.

Members of the Northeastern Branch of Engineers and Geoscientists New Brunswick blasted, rolled, and painted pumpkins to promote engineering awareness and community spirit.

The price to launch a pumpkin from the custom-designed air cannon hasn’t changed since the Fling’s inception. At \$5 per pumpkin blast over the Miramichi River, it provided great value for money! Prizes were awarded for those pumpkins that landed closest to the trampoline target in the river. Other activities of the day included pony rides, face painting, gourd Plinko and a pumpkin roller coaster.

New pumpkin-themed science exhibits are planned for the 2012 edition of the APEGNB Pumpkin Fling.

Presented by Engineers and Geoscientists New Brunswick (APEGNB), NBCC Miramichi and Sunny Corner Enterprises, the APEGNB Pumpkin Fling was conceived by members of the Association’s Northeastern Branch as a way to



(L to R): **Tom Jennings**, NBCC Miramichi; **Laurence Keoughan**, superintendent of School District 16 in Miramichi; **Emily Hanscomb**, owner of Her Clothes Closet and member of Historic Chatham Business District; and **Kevin Gallant, P.Eng.**, an event organizer and communications chair for APEGNB’s Northeastern Branch.

encourage kids to pursue careers in science and engineering. Local organizations such as Her Clothes Closet, Town Ford, All Decked-out, Bremner Farms, City of Miramichi Recreation Dept, Lockerbie Farms, Captain Dan Boat tours, and Downtown Historic Chatham business district and all its members have generously jumped on board to help promote and support the event.

The APEGNB Northeastern Branch also thanks the many staff and student volunteers from the Applied Arts department at NBCC Miramichi for their generous time and support. ■

Engineers and Geoscientists New Brunswick is leveraging the power of the internet to achieve better election participation and results. As of 2011, APEGNB members will be able to vote for their 2011 Council on-line.

#### HOW DOES E-VOTING (WEB-BASED VOTING) WORK?

1. Eligible APEGNB members will receive an official e-mail containing voting instructions, a web address and a unique, one-time use password.
2. Click on the web link provided...then enter your password.
3. After reading the online brochure featuring each election candidate, members simply "click to vote" for their choice.

#### I DON'T HAVE AN E-MAIL ADDRESS. CAN I STILL VOTE?

Yes. Paper ballots will be available upon request to those who don't provide a valid e-mail address.

#### HOW DO I UPDATE MY E-MAIL ADDRESS?

APEGNB will be distributing an information sheet and/or e-vote reminder to all members in the coming months. Members should take this opportunity to advise us if changes to their e-mail address are required.

#### CAN I TRUST THE ACCURACY OF E-VOTING?

The e-voting process is administered by an independent, experienced, third party organization. Data is presented to our scrutineers for inclusion in the Scrutineers' Report.

#### WHEN DOES THE VOTING START/FINISH?

Voting is slated to begin January 31, 2011 and finish on February 14, 2011. Results will be announced at APEGNB's Annual Meeting.

# APEGNB launches ONLINE VOTING

for 2011  
Council Election

***E-Vote for 2011 Council! It's...  
FASTER! EASIER! GREENER!***



# SHELL SPONSORS \$1.4 MILLION Wendy Schmidt Oil Cleanup X CHALLENGE

*Joint effort will spur breakthroughs in developing methods to remove oil from the ocean surface*

Shell Exploration and Production Company, a subsidiary of Shell Oil Company, has been named a contributing sponsor of the \$1.4 million Wendy Schmidt Oil Cleanup X CHALLENGE. The competition aims to inspire entrepreneurs, engineers and scientists worldwide to develop innovative, rapidly deployable and highly efficient methods of capturing crude oil from the ocean surface. As part of its collaboration, Shell will help with direct support for the technical, operational and scientific components of this competition.

The X PRIZE Foundation is best known for launching the ultra-fuel efficient vehicle market through the \$10 million Progressive Insurance Automotive X PRIZE

and the private spaceflight industry through the \$10 million Ansari X PRIZE.

Shell will work with the X PRIZE Foundation to bring in oil experts and other industry leaders to help promote, utilize and bring the winning technology to market. Additionally, Shell will have a representative on the competition's advisory committee and judging panel.

"Shell is proud to support this program. It reflects our commitment to invest in innovative oil spill containment and clean-up technologies that will protect the environment. Let's face it, one spill—no matter how small—is one too many," said **Dave Lawrence**, executive vice-president exploration and commercial, upstream Americas. "Shell is committed

to being among the industry leaders in oil spill preparedness and response—to ensure that our spill response capabilities keep up as technologies and drilling environments change."

"We must find the most effective and environmentally safe solutions for capturing oil from future spills," said **Robert K. Weiss**, president and vice-chair of the X PRIZE Foundation. "Shell's position in the industry, coupled with their knowledge and technology, are essential in helping develop an efficient method to remove oil from the ocean surface. We are proud to team with them as we take an important step forward not just for our generation, but for the generations to come."

Addressing the grand challenges of our time, the X PRIZE Foundation is an educational nonprofit prize organization whose mission is to create radical breakthroughs through incentivized competition.

Through the strategic design of groundbreaking competitions with significant, multi-million dollar prize purses, the X PRIZE Foundation spurs collaboration among the world's most brilliant minds to tackle the issues and also inspires the formation of new industries, jobs and the revitalization of markets that are currently stalled. Today, it is widely recognized as the leader in fostering innovation through competition.

To learn more about the Wendy Schmidt Oil Cleanup X CHALLENGE, including competition guidelines and registration information, visit [www.iprizecleanoceans.org](http://www.iprizecleanoceans.org). ■

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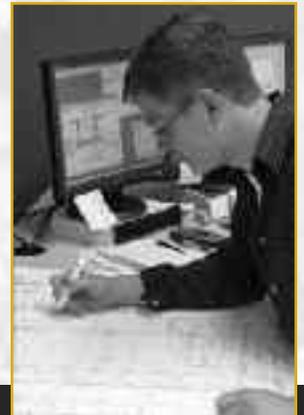
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# CO-OP ENGINEERING STUDENTS RETURN TO U DE M after completing work terms

The Université de Moncton offers civil, electrical and mechanical co-operative programs. The students are supervised and mentored throughout the work term with their personal and professional development monitored by the Co-op Education Office and the Faculty of Engineering. This is done by way of site visits, work term reports, and a post-work term oral presentation in front of their peers and professors. All students must complete four work terms of four months duration prior to their graduation—giving them a definite advantage when seeking employment after graduation.

Some of the most recent participants and employers in the co-operative program are:

Cloé Doucet and Stéphane Doucet, Roy Consultants Ltd (top photo); Guillaume Roy, Department of Transportation, Bathurst (middle photo); Charles Chiasson, Canadian Space Agency; Jérémie Poirier, Pomerleau (bottom photo); Yann Boudreau, P.Eng., Daniel Cormier and Mehdi Jemli, Industrial Rail Services; Ghislain Hachey, P.Eng., Joël Basque, Justin Mallet, P.Eng., Marathon Fluid Systems Ltd.; Alexandre Gosselin, Molson Canada



For more information on this program, please contact: **Conrad Melanson**, Engineering Co-op Coordinator  
UNIVERSITÉ DE MONCTON Tel: 506-858-4163 [conrad.melanson@umoncton.ca](mailto:conrad.melanson@umoncton.ca) [www.umoncton.ca/coop](http://www.umoncton.ca/coop)

## DES ÉTUDIANTS DU PROGRAMME CO-OP EN GÉNIE REVIENNENT À L'U. DE M. après leurs stages de travail

L'Université de Moncton offre des programmes d'enseignement coopératif en génie civil, électrique et mécanique. Les stagiaires sont supervisés par un mentor de stage et leur développement personnel et professionnel est évalué par le Bureau de l'enseignement coopératif et par leur faculté. L'évaluation d'un stage comprend une visite des lieux du stage, un rapport de stage, une évaluation finale de l'employeur, ainsi qu'une présentation orale devant leurs pairs et professeurs sous forme d'atelier Retour de stage. Tous les stagiaires doivent compléter quatre stages d'une durée de quatre mois chacun avant d'obtenir leur diplôme, ce qui leur donne un avantage important une fois diplômés.

Voici quelques-uns des plus récents participants et employeurs du programme co-op :

Cloé Doucet et Stéphane Doucet, Roy Consultants Ltée (photo du haut), Guillaume Roy, ministère des Transports, Bathurst (photo du milieu), Charles Chiasson, Agence spatiale canadienne, Jérémie Poirier, Pomerleau (photo du bas), Yann Boudeau, ing., Daniel Cormier et Mehdi Jemli, Industrial Rail Services, Ghislain Hachey, ing., Joël Basque, Justin Mallet, ing., Marathon Fluid Systems Ltd, Alexandre Gosselin, Molson Canada

Pour en savoir plus au sujet du programme, veuillez communiquer avec le coordonnateur co-op : **Conrad Melanson**  
Tél. : 506-858-4163 [conrad.melanson@umoncton.ca](mailto:conrad.melanson@umoncton.ca) [www.umoncton.ca/coop](http://www.umoncton.ca/coop)

## THEY SAID IT BEST

*"God answered the Chilean miners' prayers, and ours. But God had a big assist from the engineers."*

MARGARET WENTE, "CHILE'S MAN-MADE MIRACLE", *GLOBE AND MAIL* (OCTOBER 14, 2010)

*"We need to rediscover that fascination with that train set of our childhood. We've built our modern economy on the service sector, loans, banking and the dotcom bubble. Now that's collapsed, we should seek to base it on something long term with solid foundations. If we don't, we risk losing an already weakened position for good. Making money from money should be replaced with making money from making."*

JAMES DYSON, INDUSTRIAL DESIGNER, AS QUOTED IN "LET ENGINEERS MAKE GREAT BRITAIN GREAT AGAIN", *THE OBSERVER* (FEBRUARY 8, 2009)

*"One of the things that we learned in all this is that our focus on profitability may not have been the central thing we should have looked at. There are many new businesses building up now that don't focus on profitability, and that's certainly a change."*

JIM BARKSDALE, FORMER NETSCAPE CEO, ON GROWING A BUSINESS VS. TRYING TO MAKE MONEY (1999)

*"Tell the truth. All the time. About everything. What's the alternative to radical honesty? Waste. Wasted time, wasted money, wasted possibilities—a wasted life."*

BRAD BLANTON, PRESIDENT OF THE RADICAL HONESTY NETWORK

*"Don't spend time beating on a wall, hoping to transform it into a door."*

COCO CHANEL (1883-1971), FRENCH HAUTE COUTURE DESIGNER

# Legacy of APEGNB member lives on as inaugural **ROCCA SCHOLARSHIP** is awarded



**R**obin Rocca, EIT, was a young, vivacious 28-year-old. He was married, with a young son, and making a difference in the community. Then his life took a drastic turn. He was diagnosed with leukemia the day before Christmas, 2008.

The electrical engineering graduate and Saint John native bravely battled the debilitating disease while raising awareness about organ donation, always wanting to give back to the community that he cared for in a meaningful and enduring way.

Rocca passed away after his brief battle in September, 2009, at the age of 29.

In honour of his strength and selflessness, friends and family established the Robin Rocca Memorial Scholarship at the University of New Brunswick.

"Robin lived life to the fullest every day," said **John Rocca**, P.Eng., Robin's brother.

"He was passionate, intelligent, and a person everyone wanted to be around. He always demonstrated a strong work ethic, great respect for family and others, and a genuine desire to have fun. Robin

was simply a great role model for his family and friends. Helping others was important to my brother so I know he would be extremely proud of everyone for establishing, and contributing to this scholarship."

In keeping with Rocca's background as an engineering graduate, the scholarship benefits students studying science, engineering or computer science at UNB. Recipients will embody Rocca's character, high academic achievement and share his love of sport. They will also demonstrate his leadership skills and have a proven commitment to family and the community at large.

The inaugural recipient of the Robin Rocca Memorial Scholarship is **Rebecca Snow**. Snow is a graduate of Saint John High School, currently in her first year of the Bachelor of Science program at UNB Saint John. Like Rocca, Snow is a high academic achiever, is actively involved in sports, and volunteers with a number of community organizations.

University of New Brunswick president, **Eddy Campbell**, is proud to offer the scholarship.

"I did not have the good fortune of knowing Robin, but I understand he was someone who gave generously of his time and talent to his community," said Dr. Campbell.

"By partnering with UNB to offer this scholarship, Robin's family and friends are honouring his spirit and commitment, while helping deserving students to create new opportunities for themselves, and in turn, help others. This is a fitting legacy for someone who touched so many lives." ■

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## FOUNDATION AWARDS LUNCHEON — FREDERICTON OCTOBER 19, 2010

**D**uring two presentation luncheons in October, APEGNB's Foundation for Education awarded \$42,500 in scholarships to deserving engineering students attending the University of New Brunswick and the Université de Moncton.

Established in 1995 to grow and develop scholarship funding for the professions, the Foundation relies heavily on the support from APEGNB's membership.

"APEGNB's members, and local engineering companies like ADI and Stantec, understand the need to offset the financial burdens of students who want to become engineers and geoscientists," says Foundation chair, **Ed Smith**, P.Eng. "Their donation to the Foundation for Education is one way to help ensure that New Brunswick students are motivated to embark on a rewarding career. This country...this economy...needs more engineers and geoscientists to enrich our quality of life. And our scholarship program is a tangible way to help make that happen."

*Seated:* **Katie Hughes**, Grandy Gibson Holmes Memorial Scholarship; **Emily Jacobs**, D.O. Turnbull Memorial Scholarship; **Xiaomeng Wei**, Neill and Gunter Scholarship; **Jessica LeBlanc**, Ira Beattie/ADI Scholarship; **Sarah Marie Long**, APEGNB Entrance Scholarship

*Standing:* **David Crandall**, P.Eng., ADI; **Michael Rogers**, John R. Dean/ADI Scholarship; **Ed Smith**, P.Eng., Foundation Chair; **Don Belliveau**, P.Eng., Stantec

*Absent:* **Kynan Hughson**, APEGNB Prize; **Ryan Tait**, APEGNB Entrance Scholarship; **Gordon MacLean**, Ottis Logue/ADI Scholarship; **Conor McCullough**, Neill and Gunter Scholarship



# APEGNB AWARDS \$42,500 IN SCHOLARSHIPS



## FOUNDATION AWARDS LUNCHEON — MONCTON OCTOBER 20, 2010

*Front Row:* **Jason LeBlanc**, APEGNB Prize; **Sébastien Mallet**, APEGNB Entrance Scholarship; **Natalie Cormier**, Graham MacDonald Memorial Scholarship; **Pierre Gautreau**, APEGNB Entrance Scholarship; **Serge Johnson**, ADI Scholarship; **Rémi Noël**, ADI Scholarship

*Back Row:* **Ed Smith**, P.Eng., Foundation Chair; **Gilles Hébert**, P.Eng., Foundation Director; **David Crandall**, P.Eng., ADI; **Gilles Roy**, P.Eng., Université de Moncton; **Paul Chiasson**, P.Eng., Université de Moncton



## FREDERICTON BRANCH SECTION DE FREDERICTON

TAMMY LAMEY, P.ENG./ING., CHAIR/PRÉSIDENTE

### ROUNDUP

JANUARY 28, 2010

#### Pub Social at Wilser's Room

Approximately 10 folks showed up for an impromptu social at Wilser's Room in the Tannery downtown. Most arrived around 4 pm and stayed until 7 pm. We relaxed in the Friday afternoon sunshine with cold drinks and snacks on the second storey patio overlooking the Tannery. We all agreed "we should do this more often". Thank you to Peter Wedge, P.Eng., for bringing us together.

SATURDAY, JULY 10

#### TreeGo at Mactaquac

A predicted lightning storm threatened the event the day before but it was able to go ahead as scheduled! Those who braved the questionable skies were able to traverse most of the course before it was closed due to weather conditions. But they left with the experience and an invitation to return for free another day. For those who have never heard of TreeGo, it is located near Mactaquac Provincial Park. It is an athletic activity with about 50 obstacles in a row, including zip lines and walking rope bridges, separated by platforms in the trees. Thank you to Margaret Loughrey, P.Eng., for organizing this adventure.

SUNDAY, AUGUST 8

#### Family Fun Day at the Bucket Club

This year's Family Fun day was the best one yet! Over the past year, the Bucket Club has undergone major reconstruction. The new pools and new slides at the Bucket Club are fantastic, and we could not have wished for better weather. Kids, parents, grandparents, aunts and uncles all had a great time. We ate corn-on-the-cob, lobster, steak, salads, and hotdogs. Certainly there was no shortage of food! Along with the new water fun, there were still other activities to enjoy too, like B-ball hoops, the driving range, and miniature golf. Thank you to everyone who helped to organize and/or to run this event. Thanks also to Debbie at the Bucket Club.

FRIDAY, OCTOBER 1

#### Golf at Riverbend

Well, our annual Fredericton Branch golf tournament turned out once again to be a success! Even with the considerable challenges that good ol' Mother Nature sent our way, we still managed to recruit 27 intrepid engineers to join in on the fun at Riverbend Golf Club. The tournament was postponed once due to rain, and the forecast for the rain date was looking even worse!! In the end, we did get a reprieve from the rain and carried on with the event. Mother Nature cooperated for the most part, short of one torrential rain shower. Congratulations to the Opus team for winning the tournament again this year and to all of those who won prizes. Many thanks go to all those who donated prizes and to Riverbend for their excellent cooperation. We hope to see you all at next year's tournament! Thank you to Jean-Frédéric Lalonde, P.Eng., for planning this year's tournament and for helping with this event description!

OCTOBER 29 TO 31, 2010

#### APEGNB Haunted Tour at the Charlotte Street Arts Centre

As this report goes to press, Fredericton Branch members are putting the finishing touches on the 2<sup>nd</sup> annual Haunted Tour at the Charlotte Street Arts Centre! The event is in support of outreach programming at the Art Centre and has been designed to reinforce the fact that engineering is a creative, imaginative and community-minded profession. Teams from Fredericton area consultants and the provincial government are coming together to have fun and create "fright stations" which, when the stations are combined, will become a terrifying haunted tour! We plan to scare anyone who dares enter the doors of the creaky old building. Thank you to Bill Lamey, P.Eng.,



Christina Flogeras at TreeGo Mactaquac  
*Christina Flogeras au TreeGo de Mactaquac*

for being the leader of this event, and thank you to everyone who worked so hard to build their fright stations! A full report and photo spread will be available in the Spring 2011 *Engenuity*.

### UPCOMING

NOVEMBER 2010

#### Technical Tour of the CME Museum at Base Gagetown

A notice for a technical tour of the Canadian Military Engineers Museum at CFB Gagetown was sent out in October but we had few members register. So, this event will be rescheduled at a later date. Please watch for the new date and time. We look forward to this tour because the museum holds great pieces of our engineering history! It is home to some 35,000 artifacts that represent the history of all facets of the Canadian military engineers, from the 18th-century to present day.

NOVEMBER 2010

#### Technical Tour of the Fire Training Facility, Fredericton North

We are currently working on a technical tour of the new fire station and training facility located on Two Nations Crossing on Fredericton's north side. The four-storey firefighter training facility features two burn rooms with flames fuelled by propane, which produces non-toxic smoke. The building and related training pads can help firefighters train for a variety of scenarios related to residential and commercial structure fires. Stay tuned!

### RÉCAPITULATION

LE VENDREDI 9 JUILLET

#### Soirée sociale à la brasserie Wilser's Room

*Une dizaine de personnes se sont présentées à une soirée sociale impromptue à la brasserie Wilser's Room à la « Tannerie » au centre-ville par un beau vendredi après-midi ensoleillé d'été. La plupart sont arrivés vers 16 h et sont restés jusque vers 19 h. Nous en avons profité pour nous détendre au soleil à la terrasse du deuxième étage en dégustant des boissons rafraîchissantes tout en grignotant des chips et des arachides. Nous avons tous convenu « que nous devrions faire ça plus souvent ». Merci à Peter Wedge, ing., de nous avoir réunis.*

LE SAMEDI 10 JUILLET

#### TreeGo à Mactaquac

*Un orage de tonnerre annoncé menaçait l'événement la veille, mais nous avons quand même pu tenir l'événement comme prévu! Ceux qui ont affronté les cieux incertains ont pu franchir presque tout le parcours avant qu'il ne soit fermé en raison des conditions météorologiques. Et ils sont repartis en ayant acquis de l'expérience et avec une invitation à revenir plus tard et ce, gratuitement! Si vous n'avez jamais entendu parler de TreeGo, sachez que ça se trouve près du parc provincial Mactaquac. Il s'agit d'une activité sportive qui compte environ cinquante obstacles d'affilée, y compris des tyroliennes et des ponts de corde à traverser à pieds, reliés par des plates-formes suspendues entre les arbres. Merci à Margaret Loughrey, ing., d'avoir organisé cette aventure.*

LE DIMANCHE 8 AOÛT

#### Journée en famille au Bucket Club

*Cette année, la journée de plaisir en famille a été la meilleure de tous les temps! Au cours de la dernière année, le Bucket Club a subi des rénovations importantes. Ses nouvelles glissades et piscines sont fantastiques, et nous n'aurions pu souhaiter meilleure température. Enfants, parents, grands-parents, tantes et oncles se sont tous bien amusés. Nous avons mangé du maïs en épi, du homard, des steaks, de la salade et des hotdogs. Ce n'est certainement pas la nourriture qui manquait! En plus des nouveaux jeux aquatiques, il y avait d'autres activités, par exemple les cerceaux pour le basketball, le terrain d'exercice pour le golf et le minigolf. Merci à tous ceux qui ont aidé à l'organisation ou à la réalisation de cet événement. Merci aussi à Debbie du Bucket Club.*



A tropical paradise at the Bucket Club  
*Paradis tropical au Bucket Club*



Hear them scream!  
*Vous les entendez crier?*



Winning Team from Opus (left to right):  
**Craig Isherwood, Steve Charters,**  
P.Eng., and **Don Partington,** P.Eng.  
*Les gagnants de l'équipe OPUS (de gauche à droite) : Craig Isherwood, ing., Steve Charters, ing. et Don Partington, ing.*



Members enjoying a beverage!  
*Des membres dégustant une boisson!*

## LE VENDREDI 1<sup>ER</sup> OCTOBRE

### Golf à Riverbend

Encore une fois, le tournoi annuel de golf de la section de Fredericton a connu un grand succès! Malgré la température qui semblait décidée à nous mettre des bâtons dans les roues, nous avons quand même réussi à convaincre 27 participants à se joindre à nous et à se rassembler au club de golf Riverbend pour l'après-midi. Le tournoi avait été reporté une fois à cause de la pluie et les prévisions météorologiques annonçaient encore plus de pluie pour la reprise! Par contre, à la fin, la température s'est améliorée et l'activité a eu lieu (malgré une averse torrentielle qui nous a détrempés!) Félicitations à l'équipe d'OPUS qui a encore une fois remporté le tournoi cette année et félicitations aussi à tous ceux qui ont gagné des prix. Un grand merci à ceux qui ont donné généreusement les prix, ainsi qu'à Riverbend qui nous a si bien accueilli. Nous espérons vivement vous revoir tous lors du tournoi de l'an prochain! Merci aussi à **Jean-Frédéric Lalonde, ing.,** qui a planifié le tournoi et nous a aidé à son animation!

## DU 29 AU 31 OCTOBRE

### Soirée hantée de l'AIGNB au Centre des arts de la rue Charlotte

Des équipes d'ingénieurs et de géoscientifiques de la section de Fredericton travaillent présentement à préparer la 2<sup>e</sup> Soirée hantée annuelle au Centre des arts de la rue Charlotte! L'activité a pour objet de soutenir les programmes de sensibilisation du

Centre des arts tout en voulant démontrer que le génie est affaire de créativité et d'imagination et que ceux qui exercent la profession ont leur communauté à cœur. Des équipes de consultants de la région de Fredericton et des employés du gouvernement provincial s'unissent pour s'amuser et créer des « kiosques de l'effroi » qui, ensemble, constituent un terrifiant parcours hanté! Nous sommes déterminés à épouvanter toute personne qui ose franchir les portes de ce vieux immeuble grinçant. Merci à **Bill Lamey, ing.,** d'avoir pris la direction de cet événement et merci à tous ceux qui ont travaillé si fort pour ériger leur « kiosque de l'effroi »! On présentera un reportage complet avec photos dans l'édition du printemps 2011 d'Engenuity.

## À VENIR

### NOVEMBRE 2010

#### Visite technique guidée du Musée du génie militaire canadien (GMC) à la base de Gagetown

Un avis de visite technique guidée du Musée canadien du génie militaire de la base des Forces canadiennes de Gagetown a été envoyé aux membres en octobre, mais peu de gens se sont inscrits. Cette activité sera donc reportée, et on en annoncera la date et l'heure plus tard. Nous avons hâte à cette visite, car le musée contient de grands pans de notre histoire de l'ingénierie! Il abrite quelques 35 000 artefacts qui témoignent de l'histoire de toutes les facettes du génie militaire canadien, depuis le 18<sup>e</sup> siècle à nos jours.

### NOVEMBRE 2010

#### Visite technique guidée des installations d'entraînement à la lutte contre les incendies de Fredericton Nord

Nous préparons présentement une visite technique du nouveau poste d'incendie et des installations de formation à la lutte contre les incendies à Two Nations Crossing, au nord de Fredericton. Le nouvel établissement de quatre étages compte deux chambres à feu à flammes alimentées au propane qui ne dégagent aucun gaz toxique. Le bâtiment et les aires d'entraînement connexes permettent aux pompiers de s'entraîner en vue de divers scénarios propres aux incendies dans des installations résidentielles ou commerciales. Restez à l'écoute!

## 2010 BRANCH EXECUTIVE / BUREAU DE DIRECTION 2010 DE LA SECTION

Chair / présidente :	<b>Tammy Lamey, P.Eng./ing.</b>
Vice chair / vice-président :	<b>Kent Wiesel, P.Eng./ing.</b>
Treasurer / trésorière :	<b>Margaret Loughrey, P.Eng./ing.</b>
Secretary / secrétaire :	<b>Bethanie Parker, P.Eng./ing.</b>
Past chair / président sortant :	<b>Bill Lamey, P.Eng./ing.</b>
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Communications :	<b>Michael Hocquard</b>
Military Representative / représentant des militaires :	<b>Christina Flogeras, MIT/ms</b> <b>Kevin Beattie, MIT/ms</b>
MIT Representatives / représentants des membres stagiaires :	<b>Maikel Bonilla-Rodriguez, P.Eng./ing.</b>
Multi-cultural liaison / liens multiculturels :	<b>Tom MacNeil, P.Eng./ing.</b> <b>Jean Boudreau, P.Eng./ing.</b>
Provincial Representatives / représentants provinciaux :	<b>Michael Cyr, P.Eng./ing.</b> <b>Sean Bartlett, P.Eng./ing.</b> <b>Vernon Banks, P.Geo./geosc.</b> <b>Lynn Pilgrim, P.Geo./geosc.</b>
Event Committee / comité des activités :	<b>Jordan Hovey, EUS VP/v.-p. d'EUS</b>
UNB EUS Representative / représentant de l'Association des étudiants de premier cycle en génie (Engineering Undergrad Society; EUS) de l'UNB :	

## GET MORE / POUR EN SAVOIR PLUS

For more information on upcoming Branch events... to add your name to our mailing list... or to submit ideas on how your Branch can better serve you, contact one of your Branch executive or:

Pour d'autre information au sujet des prochaines activités de la section, pour faire ajouter votre nom à notre liste d'envoi ou pour donner des idées sur des manières dont la section peut mieux vous servir, communiquez avec un des membres du comité de direction de votre section ou :

### EMAIL / COURRIER ÉLECTRONIQUE

**Tammy Lamey, P.Eng./ing.,** Branch Chair/présidente de la section  
tammy.lamey@gnb.ca

### VISIT / CONSULTEZ LE SITE WEB :

www.engineersfredericton.ca  
www.geoscientistsfredericton.ca

### Facebook:

APEGNB Fredericton Branch / section de la région de Fredericton (AIGNB)





# MONCTON BRANCH SECTION DE MONCTON

RÉJEAN HALL, P.ENG./ING., CHAIR/PRÉSIDENT



## ROUNDUP

SEPTEMBER 24, 2010

### Annual Golf Tournament

Despite continuous drizzle and clouds, the golf tournament held at the **Memramcook Valley Golf Club** boasted an exceptional turnout. All 19 pre-registered teams showed up and enjoyed a great day on the links! A new element was added to the tournament this year. The "Blackjack for Scholarship—Beat the Dealer's Hand for a Chance to Win a Bottle of Rum" was a success—raising approximately \$135 for our Moncton Branch Scholarship. The lucky winner of the bottle of rum was **Yan Rail**.

Winners: With a tie of (-9) were Les Goélands du Inc. Arran (Rémi Valdron, Jean-Pierre Aubé, Pierre-Luc Pelletier, Patrick Allard)  
 Close Enough: Stéphane Godin, MIT; Daniel Gaudet, P.Eng.; Yan Rail; Martin Gionet, P.Eng.  
 Closest to the Pin (Women): Véronique Haché, P.Eng.  
 Closest to the Pin (Men): Yan Rail  
 Longest Drive (Women): Alyssa Savoie (UdeM engineering student)  
 Longest Drive Men: Jean-Pierre Aubé (UdeM student)

Most members joined us for an excellent supper after the tournament where everyone left with a prize. Thanks to **Geneviève McIntyre**, MIT; **Hélène Thériault**, MIT; **Véronique Haché**, P.Eng., **Tina Levesque**, MIT for their superb organizational skills! A big thank you goes to **Michel DeGrâce**, P.Eng., who volunteered to run the blackjack table.

NOVEMBER 9, 2010

### ASHRAE NB/PEI Chapter joint conference on professional liability

The American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc (ASHRAE), New Brunswick/Prince Edward Island Chapter, was very pleased to hold a joint conference with the Moncton Branch of Engineers and Geoscientists New Brunswick. The conference was held in the banquet room of the City Grill at 130 Westmorland Street in Moncton.

The conference opened with a social hour at 5:00 pm. The free technical presentation went from 6:15 pm to 7:00 pm, and was delivered by **Gregory MacLean** from MacLean Law. The presentation was followed by supper, which was provided at a cost of \$20, including a salad, the main course, and dessert.

The ASHRAE NB/PEI Chapter is looking forward to other joint conferences in the future.

## UPCOMING

DATE TBA

### Branch supports student in humanitarian effort

This past summer, **Joel Vallée**, a Université de Moncton mechanical engineering student went to Cuzco, Peru as a volunteer with *Mondiale solidarité*. The Branch granted financial support to Mr. Vallée who is VP-external affairs of UdeM's engineering student society and is also a student representative on the Moncton Branch Executive. His group helped a community centre rebuild a retaining wall to save a playground following landslides. Mr. Vallée will give a presentation of his experience at a meeting of the local branch of the Canadian Society of Civil Engineering. This will be held at the Université de Moncton at a time to be announced.

DECEMBER 2010 (TENTATIVE)

### Stade Moncton Stadium 2010

Check your email for details on a technical session featuring the **Stade Moncton Stadium 2010**.

JANUARY 2011

### Moncton Branch Members Reception

Brave the cold to enjoy a cozy evening of conversation and refreshments with your fellow engineers/geoscientists. Nifty door prizes to be won for those in attendance!

WINTER 2011

### Atlantic Engineering Hockey Tournament

The Moncton Branch will again be assembling one or two teams to participate in the Atlantic Engineering Hockey Tournament this winter. If you are interested in participating in this memorable event that will be hosted in Halifax, contact **Serge Doucet**, P.Eng. (SDoucet@mcw.com) for more details.

## RÉCAPITULATION

LE 24 SEPTEMBRE 2010

### Tournoi de golf annuel

*Malgré une bruine incessante et des nuages, le tournoi de golf tenu au Club de golf de la vallée de la Memramcook a connu une participation exceptionnelle. Chacune des 19 équipes préinscrites s'est présentée et a vécu une fantastique journée sur le parcours! Cette année, un nouvel élément a été ajouté au tournoi. Le « Black Jack pour la bourse d'études — battez la main du donneur pour une chance de remporter une bouteille de rhum » a été une réussite, permettant d'amasser environ 135 \$ pour la bourse d'études de notre section de Moncton. Le chanceux qui a remporté la bouteille de rhum est Yan Rail.*

Les gagnants :

À égalité (-9) :

les Goélands du Inch Arran (Rémi Valdron, Jean-Pierre Aubé, Pierre-Luc Pelletier, Patrick Allard)

Presqu'à égalité :

La plus près de la cible (femmes) :

Le plus près de la cible (hommes) :

Plus long coup de départ (femmes) :

Plus long coup de départ (hommes) :

Stéphane Godin, is; Daniel Gaudet, ing.; Yan Rail; Martin Gionet, ing.

Véronique Haché, ing.

Yan Rail

Alyssa Savoie (étudiante en génie à l'U. de M.)

Jean-Pierre Aubé (étudiant de l'U. de M.)

*La plupart des membres se sont joints à nous après le tournoi pour un excellent dîner dont tous sont repartis avec un prix. Merci à Geneviève McIntyre, membre stagiaire; à Hélène Thériault, membre stagiaire; à Véronique Haché, ing., et à Tina Levesque, membre stagiaire, de leur superbe travail d'organisation! Un grand merci aussi à Michel DeGrâce, ing., qui s'est porté volontaire pour diriger la table de black jack.*

LE 9 NOVEMBRE 2010

### Colloque conjoint sur la responsabilité professionnelle avec le chapitre du N.-B. et de l'Î.-P.-É. de l'ASHRAE

*Le chapitre du Nouveau Brunswick et de l'Île-du-Prince-Édouard de l'American Society of Heating, Refrigerating and Air-Conditioning Engineers Inc. (ASHRAE) était des plus heureux de tenir un colloque conjointement avec la section de Moncton d'Ingénieurs et géoscientifiques Nouveau-Brunswick. Le colloque s'est déroulé dans la salle de réception du City Grill au 130, rue Westmorland à Moncton.*



Le colloque s'est ouvert sur une heure de socialisation à 17 h. La présentation technique gratuite a été présentée de 18 h 15 à 19 h par **Gregory MacLean** du cabinet MacLean Law. Le tout s'est terminé par un repas servi au coût de 20 \$ et comprenant une salade, le plat principal et le dessert.

Le chapitre du N.-B. et de l'Î.-P.-É. de l'ASHRAE espère tenir d'autres colloques conjoints à l'avenir.

## À VENIR

LA DATE SERA ANNONCÉE PLUS TARD.

**La section soutient un étudiant dans ses efforts humanitaires.**

L'été dernier, **Joël Vallée**, un étudiant en génie mécanique de l'Université de Moncton, s'est rendu à Cuzco au Pérou en tant que bénévole auprès de Mondiale solidarité. La section a accordé un soutien financier à M. Vallée qui est vice-président aux affaires externes de la société des étudiants en génie de l'U. de M. et qui siège aussi en tant que représentant étudiant au Bureau de direction de la section de Moncton. Son groupe a aidé un centre communautaire à reconstruire un mur de soutènement pour protéger un terrain de jeu contre les glissements de terrain. M. Vallée présentera un exposé sur son expérience lors d'une réunion de la section locale de la Société canadienne de génie civil à l'Université de Moncton à une date qui sera annoncée plus tard.

**DÉCEMBRE 2010 (DATE PROPOSÉE)**

**Stade Moncton Stadium 2010**

Vérifiez votre courrier électronique pour des précisions sur une séance technique mettant en vedette le Stade Moncton Stadium 2010.

**JANVIER 2011**

**Réception des membres de la section de Moncton**

B-r-r-r-avez le froid pour passer une soirée relaxante en compagnie de vos collègues ingénieurs et géoscientifiques. Coquets prix de présence à gagner par ceux qui s'y rendront!

**HIVER 2011**

**Tournoi de hockey des ingénieurs de l'Atlantique**

La section de Moncton rassemblera encore une fois cet hiver une ou deux équipes pour participer au tournoi de hockey des ingénieurs de l'Atlantique. Si vous souhaitez prendre part à cette activité mémorable qui aura lieu à Halifax, communiquez avec **Serge Doucet**, ing. (SDoucet@mcw.com) pour des précisions.

## 2010 BRANCH EXECUTIVE / BUREAU DE DIRECTION 2010 DE LA SECTION

Chair / président :	Prof. Réjean Hall, P.Eng., FEC/ing., FIC
Vice chair / vice-président :	Véronique Haché, P.Eng./ing.
Past chair / président sortant :	Dave Kozak, P.Eng./ing.
Secretary / secrétaire :	Hélène Thériault, MIT/ms
Treasurer / trésorier :	Tony Desjardins, P.Eng./ing.
Professional Development and social committee / développement professionnel et comité social :	Geneviève McIntyre, MIT/ms Jocelyn Martin, P.Eng./ing.
Communications :	Tina Levesque, MIT/ms
Provincial Representatives / représentants provinciaux :	Mathieu Breau, MIT/ms Maryse Doucet, P.Eng./ing.
Councillors / conseillers :	Serge Doucet, P.Eng./ing. Mark Bellefleur, P.Eng./ing. Pierre Plourde, P.Eng./ing.
UdeM Representative / représentante de l'U de M :	Prof. Marise Gallant, P.Eng./ing.

## GET MORE / POUR EN SAVOIR PLUS

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**EMAIL / COURRIER ÉLECTRONIQUE**

Tina Levesque, MIT/ms  
Tina.Levesque@canadapost.postescanada.ca

**BRANCH URL / URL DE LA SECTION :**

<http://moncton.apegnb.ca>





## NORTHEASTERN BRANCH SECTION DU NORD-EST

CLAUDE MALLET, P.ENG./ING., CHAIR/PRÉSIDENT

### ROUNDUP

JUNE 25, 2010

#### Lobster/Miramichi River boat tour

The 43-passenger double decker boat, the Max Aitken, left the Ritchie Wharf with more than 20 people on board. We cruised the mighty Miramichi river with the MYPIE (Miramichi Young Professionals and Involved Entrepreneurs) and capped off the evening with a delicious feast of lobster prepared by the Rodd Miramichi Resort.

AUGUST 13, 2010

#### Golf Tournament

The golf tournament this year was a great success thanks to Claude Mallet, P.Eng., and the new golf venue location: the Gowan Brae Golf and Country Club. More than 45 attended this year's event with a young team winning the tournament with record scores. The Bathurst engineering golfers must have drive. No pun intended.

SEPTEMBER 25, 2010

#### APEGNB Pumpkin Fling

The APEGNB Pumpkin Fling was once again held on September 25<sup>th</sup> along the Miramichi waterfront. The Historic Chatham Business District community businesses and the Northeastern Branch of Engineers and Geoscientists New Brunswick raised more than \$1500 to help support School District 16's kids breakfast program. The Branch presented the School District with an oversized cheque. The APEGNB Pumpkin Fling has supported the breakfast program since its inception. Melissa Mertz, FEC (Hon), provided some much needed publicity for this event and we thank her every year for her continued support in marketing the Branch's events. Students from NBCC Miramichi helped Branch members with science exhibits and new pumpkin cannon targets. It was a great time and the kids were all smiles even though mist, rain and dampness reduced the turnout.



### UPCOMING

MID-JANUARY/EARLY FEBRUARY 2011

#### MIT Night at the Titans

For the fifth consecutive year, the Northeastern Branch will host a social night for our members-in-training at the KC Irving Regional Centre in Bathurst. The exact date will be selected in early 2011. All Branch members are invited to enjoy a fun evening of networking, door prizes and a buffet style meal before everyone gets ready to cheer on the Acadie-Bathurst Titans. Special thanks to last year's major sponsors—St. Isidore Asphalt, Boissonnault Mcgraw and Roy Consultants Group.

Getting ready for a great lobster feast.  
On se prépare à déguster un succulent festin de homard.



Enjoying the Max Aitken's on-board entertainment  
On se laisse divertir sur le pont du Max Aitken



### RÉCAPITULATION

LE 25 JUIN 2010

#### Homard et croisière sur la Miramichi

Le Max Aitken, un navire à double pont pouvant accueillir 43 passagers, a quitté le quai Ritchie avec plus de vingt personnes à bord. Nous avons vogué sur la majestueuse rivière Miramichi avec des membres du groupe MYPIE (Miramichi Young Professionals and Involved Entrepreneurs) et couronné la soirée d'un succulent festin de homard préparé par le centre de villégiature Rodd Miramichi.

LE 13 AOÛT 2010

#### Tournoi de golf

Le tournoi de golf de cette année a été un grand succès grâce à Claude Mallet, ing., et au nouvel emplacement : le club de golf Gowan Bræ. Plus de 45 personnes ont assisté à l'événement cette année et une toute jeune équipe a remporté le tournoi avec un pointage record. Les ingénieurs de Bathurst qui jouent au golf doivent faire preuve de génie... littéralement.

LE 25 SEPTEMBRE 2010

#### Projetez-la-citrouille de l'AIGNB

Le concours Projetez-la-citrouille de l'AIGNB a eu lieu encore une fois le 25 septembre sur les rives de la Miramichi. Les entreprises du Quartier des affaires historique de la rue Water et la section du Nord-Est d'Ingénieurs et géoscientifiques Nouveau-Brunswick ont amassé plus de 1500 \$ pour aider le programme des petits déjeuners des écoliers du district scolaire no 16. La section a présenté au district scolaire un chèque géant. Le concours Projetez-la-citrouille de l'AIGNB appuie le programme des petits déjeuners depuis sa création. Melissa Mertz, FIC (hon.), a assuré la publicité si nécessaire à cet événement et nous la remercions chaque année de son appui indéfectible au marketing de cette activité de la section. Les étudiants du NBCC de Miramichi ont aidé les membres de la section à monter des kiosques scientifiques et à fabriquer de nouvelles cibles pour les canons à citrouille. Nous nous sommes bien amusés et les enfants affichaient de grands sourires malgré le brouillard, la pluie et l'humidité qui en avaient découragé certains.

### À VENIR

MI-JANVIER/DÉBUT FÉVRIER 2011

#### Soirée des membres stagiaires chez les Titans

Pour la cinquième année consécutive, la section du Nord-Est tiendra une soirée sociale pour ses membres stagiaires au Centre régional K.-C.-Irving de Bathurst. On fixera la date au début de 2011. Tous les membres de la section sont invités à une soirée de plaisir pour établir des liens; des prix de présence seront distribués et un repas-buffet sera servi, puis tous pourront acclamer les Titans d'Acadie-Bathurst. Des remerciements tout spéciaux aux principaux commanditaires de l'an dernier : St-Isidore Asphalt, Boissonnault Mcgraw et le Groupe Roy Consultants.

Chair / président : Claude Mallet, P.Eng./ing.  
 Vice chair / vice-président : Gaëtan Benoit, P.Eng./ing.  
 Treasurer / trésorier : Serge Landry, MIT/ms  
 Secretary / secrétaire : Kelly Longval, P.Eng./ing.  
 Communication Officer /  
 agent de communication : Kevin Gallant, P.Eng./ing.  
 P.Geo. Rep /  
 représentant des géosc. : Dominique Bérubé, P.Geo./géosc.  
 Association Affairs /  
 affaires provinciales : Kirk Mullin, P.Eng./ing.  
 Councillor Northumberland /  
 conseiller Northumberland : Ray Ritchie, P.Eng./ing.  
 Councillor Gloucester West /  
 conseiller Gloucester-Ouest : Bernard Roy, P.Eng./ing.  
 Councillor Gloucester Est /  
 conseiller Gloucester-Est : Patrick Haché, P.Eng./ing.  
 Councillor Restigouche /  
 conseiller Restigouche : Vacant  
 Provincial Councillors /  
 conseillers provinciaux : Stéphanie Doucet-Landry, P.Eng./ing.  
 Ken Thibodeau, P.Eng./ing.

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EMAIL / COURRIER ÉLECTRONIQUE

Kevin Gallant, P.Eng./ing.  
 kevin.gallant@gnb.ca

BRANCH URL / URL DE LA SECTION :

<http://northeastern.apegnb.ca>



Engineers Canada invites professional engineers to enter the 2011 National Scholarship Program competition.

**Deadline : March 1, 2011**

**Manulife Financial Scholarships of \$12,500**

**Engineering.** Candidates must be accepted or registered in a faculty of engineering, beginning their studies no later than September 2011.

**TD Insurance Meloche Monnex Scholarships of \$7,500**

**A field other than engineering.** The field of study chosen should favour the acquisition of knowledge pertinent to enhancing the performance of the candidate in the engineering profession. Candidates must be accepted or registered in a faculty other than engineering, beginning their studies no later than September 2011.

**TD Insurance Meloche Monnex Léopold Nadeau Scholarship of \$10,000**

**Public Policy Development.** The field of study can be engineering or another subject area. Candidates must be accepted or registered at the time the scholarship is awarded (in the fall), in a master's or doctoral program that will greatly enhance their engineering expertise, abilities and potential to influence the development of public policy.

Refer to the application form for the complete list of eligibility requirements.

Application forms are available at: [www.engineerscanada.ca/e/pr\\_awards\\_2\\_1.cfm](http://www.engineerscanada.ca/e/pr_awards_2_1.cfm)

To contact the National Scholarship Program at Engineers Canada email: [awards@engineerscanada.ca](mailto:awards@engineerscanada.ca)



Engineers Canada is the business name of the Canadian Council of Professional Engineers.

\*The term ENGINEERING is an official mark held by the Canadian Council of Professional Engineers.



## NORTHWESTERN BRANCH SECTION DU NORD-OUEST

**KARINE SAVOIE, P.ENG./ING., CHAIR/PRÉSIDENTE**

### ROUNDUP

SEPTEMBER 10, 2010

#### 2<sup>nd</sup> Annual Northwestern Branch Golf Tournament- Cancelled

Unfortunately, due to bad weather, our 2<sup>nd</sup> Annual Golf Tournament was cancelled. A few of us did, however, go out for supper and drinks at Le Dek resto-bar in Edmundston. We'll try again next year and maybe Mother Nature will be more cooperative!

OCTOBER 16, 2010

#### Visit to the Suez Energy Wind Farm

Under rainy skies, a brave group of 10 set out to visit the new Suez Energy wind farm in Caribou, between St-Quentin and Bathurst, off Route 180—the Resources Road. **Mark Hachey**, P.Eng., a representative from Suez Energy, brought us to the site office, which is right next to the electrical sub-station, and showed us the entire wind farm control system on their computer network system.

He also gave us a very interesting overview of the whole project—from construction and logistics to the many physical and electrical details.

Finally, we got to go visit one of the giant electricity generating wind turbines. Here are a few of the impressive details he shared with us during the tour:

The Suez Energy Wind Farm:

- cost approximately \$200,000,000 to build
- has been in operation for more than one year
- is connected by approximately 45 kilometres of roads
- has a total of 33 wind propelled turbines
- has the capacity to generate 99 megawatts/hr (3 megawatts per turbine). This is enough energy to power as many as 30 000 homes

The wind turbines

- stretch 80m (262 ft) into the air
- have three propeller blades that are each 44m (144 ft) in length

Group photo / Photo de groupe



- tip speed of each blade is about 275 km/h
- footing holds thousands of pounds of rebar and approximately 200 yards of concrete

Thanks to everyone who participated and thanks again to Mark Hachey!

### UPCOMING

END OF NOVEMBER 2010

#### Branch Christmas Dinner/Year-End Meeting

This year, the Branch plans on holding its Christmas Dinner/Year-End Meeting at the end of November. By the time this report goes to press, Branch members should have received details regarding date, time and location. We hope to celebrate the season with a good turnout at this event!

### RÉCAPITULATION

LE 10 SEPTEMBRE 2010

#### 2<sup>e</sup> tournoi de golf annuel de la section du Nord-Ouest – annulé

*Malheureusement, en raison du temps inclément, notre 2<sup>e</sup> tournoi de golf annuel a dû être annulé. Quelques-uns d'entre nous sommes quand même allés dîner et prendre un verre au resto-bar Le Deck à Edmundston. Nous essaierons à nouveau l'an prochain en espérant une meilleure collaboration de Dame Nature!*

LE 16 OCTOBRE 2010

#### Visite du parc éolien de Suez Energy

*Sous des cieux pluvieux, un groupe de dix braves sont allés visiter le nouveau parc éolien de Suez Energy à Caribou, entre Saint-Quentin et Bathurst, le long de la route 180, le Chemin des ressources. **Mark Hachey**, ing., représentant de Suez Energy, nous a emmenés aux bureaux du parc, juste à côté du poste électrique, où il nous a montré le système de commande complet sur le réseau informatique du parc éolien.*

*Il nous a aussi fait un survol très intéressant de l'ensemble du projet, depuis la construction et la logistique jusqu'aux détails physiques et électriques.*

*Enfin, nous avons pu visiter une des gigantesques éoliennes génératrices d'électricité. Voici quelques-uns des détails impressionnants dont Mark nous a fait part au cours de la visite guidée :*



One tall tower!!  
Toute une tour!!



Two turbines behind part of the electrical sub-station  
Deux éoliennes derrière une partie du poste électrique.



Site Plan  
Plan du parc éolien

## 2010 BRANCH EXECUTIVE / BUREAU DE DIRECTION 2010 DE LA SECTION

Chair / présidente : **Karine Savoie, P.Eng./ing.**  
 Vice chair / vice-présidente : **Mariette Savoie, P.Eng./ing.**  
 Secretary / secrétaire : **Richard Daigle, MIT/ms**  
 Provincial Councillors /  
 conseillers provinciaux : **Marc Laforge, P.Eng./ing**  
**Georges Roy, P.Eng./ing.**  
 Councillors / conseillers : **Mireille Vautour, P.Eng./ing.**  
**Éric Ouellette, P.Eng./ing.**  
**Martin Benoit, P.Eng./ing.**  
**Alain Pelletier, P.Eng./ing.**  
**Jean-Louis Daigle, P.Eng./ing.**

### Le parc éolien de Suez Energy :

- a coûté environ 200 000 000 \$ à bâtir;
- est en activité depuis plus d'un an;
- est raccordé par environ 45 kilomètres de routes;
- compte 33 aérogénérateurs;
- a la capacité de produire 99 mégawatts à l'heure (3 mégawatts par éolienne). Cela correspond à l'énergie nécessaire pour alimenter jusqu'à 30 000 foyers.

### Les éoliennes :

- montent à 80 m (262 pi) dans les airs;
- ont trois pales d'hélice qui ont chacune 44 m (144 pi) de longueur;
- le bout de chaque pale atteint une vitesse d'environ 275 km/h;
- la fondation contient des milliers de livres de barres d'armature et environ 200 verges cubes de béton.

Merci à tous ceux qui ont participé et merci encore une fois à Mark Hachey!

## À VENIR

FIN NOVEMBRE 2010

### Banquet de Noël et réunion de fin d'année de la section

Cette année, la section espère tenir son banquet de Noël et sa réunion de fin d'année à la fin du mois de novembre. Au moment où ce rapport sera publié, les membres de la section devraient avoir reçu des précisions quant à la date, à l'heure et à l'endroit. Nous espérons célébrer la saison en grand nombre à cet événement!

## GET MORE / POUR EN SAVOIR PLUS

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### EMAIL / COURRIER ÉLECTRONIQUE

**Karine Savoie, P.Eng./ing.**  
karine.savoie@gnb.ca

### BRANCH URL / URL DE LA SECTION :

<http://northwestern.apegnb.ca>





## SAINT JOHN BRANCH

MARLO ROSE, P.ENG., CHAIR

### ROUNDUP

JULY 24<sup>TH</sup>, 2010

#### Annual Golf Tournament

Another successful and sold-out event organized by **Kevin Kyle**, P.Eng. A huge thanks on behalf of the Saint John Branch to Kevin for putting on this event each and every year!

SEPTEMBER 28<sup>TH</sup>, 2010

#### Saint John Branch AGM

The annual branch meeting was held at the Barrack Green Armoury. It was well attended by our Saint John Branch members with many new faces. I would like to take an opportunity to introduce our new and returning members for the 2010/2011 Branch Executive. (See 2010/2011 Branch Executive chart below)

### ONGOING

#### Stonehammer Geopark

Congratulations to **Dr. Randall Miller**, P.Geo., a member of our Saint John Branch, who was a key player in establishing the Stonehammer Geopark here along the southern coast of New Brunswick. He will also be the Keynote Speaker at APEGNB's 2011 Annual Meeting here in Saint John on February 18 at the Delta Brunswick.

The Stonehammer Geopark has become the first North American member of the UNESCO-supported Global Geoparks Network (GGN). The announcement was made October 3, 2010, at the 9<sup>th</sup> Annual European Geoparks Conference in Lesvos, Greece by the GGN Bureau.

### UPCOMING

NOVEMBER 25<sup>TH</sup>, 2010

#### Holiday Social

"Mix and a-mingle" with fellow Branch members for some pre-holiday cheer. Please join us at the Barrack Green Armoury for our annual Saint John Branch Holiday Social on Thursday, November 25th, 2010 from 4-7 pm. Members are invited to drop in after work for some light refreshments.

FALL/WINTER 2010/2011

#### Volunteer opportunity - District 8 Young Engineers Enrichment Program

The program provides students in grades 6 to 8, who have an aptitude for science and math, an opportunity to meet and learn from local engineers and geoscientists. We are looking for volunteers to spend their lunch break with students telling them about what you do at your job and why you chose engineering or geoscience. This is one of the best ways we can give back to the community and help inspire a new generation of engineers and geoscientists. Members who took part in this program last year found it quite rewarding and it only took half an hour of their time. In fact, many stated, "the students were the best audience they ever spoke to". Please contact **Robert Rowe**, P.Eng., ([Rowe.Robert@jdirving.com](mailto:Rowe.Robert@jdirving.com)) if you would like more information or to volunteer.

JANUARY 2011

#### Annual Curling Night

We are looking forward to another fun filled "themed" night of curling. What will it be this time...crazy sweater, Hawaiian, Totally 80's? We welcome any suggestions

from Saint John Branch members for theme ideas. What we know for sure is that it will be a night you won't want to miss. Friends and family of Branch members are also invited to attend.

TBD

#### Volunteer opportunity - Habitat for Humanity

We will be coordinating another opportunity where our members can volunteer their time and skills to assist Habitat for Humanity to build a home for a deserving family in the area. More details will be forthcoming.

### SHOUT-OUT

I would like to thank our outgoing chair **Robert Rowe**, P.Eng., and our entire executive of 2009-2010 for all of their efforts. We hosted many successful events last year and they would not have happened without your time and energy.

### 2010 BRANCH EXECUTIVE

Chair:	<b>Marlo Rose</b> , P.Eng.
Past chair:	<b>Robert Rowe</b> , P.Eng.
Vice chair:	<b>Jeff Underhill</b> , MIT
Secretary:	<b>Kim Kimball</b> , MIT
Communication Officer:	<b>Ken Fenwick</b> , P.Eng.
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APEGNB Provincial Councillors:	<b>Holly Young</b> , P.Eng. <b>Paul Holah</b> , P.Eng.
UNBSJ Student Representatives:	<b>Erik McLaughlin</b> <b>J.D. Carroll</b>
UNBSJ Faculty Representatives:	<b>Dr. Ken Sollows</b> , P.Eng.
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### GET MORE

For more information on upcoming Branch events... to add your name to our mailing list... or to submit ideas on how your Branch can better serve you, contact one of your Branch executive or:

#### EMAIL

**Ken Fenwick**, P.Eng.  
Communication Officer  
[kenfen@nbnet.nb.ca](mailto:kenfen@nbnet.nb.ca)

#### VISIT

[www.apegnb.com/saintjohn](http://www.apegnb.com/saintjohn)

We're also on Facebook!



It's the **1<sup>st</sup>** Annual

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**Friday, February 25**

Registration 8-10 pm  
Snacks  
Practice (optional)

**Saturday, February 26**

Games  
Banquet

**Sunday, February 27**

Games

**To register:**

*e-mail [president@fcc1854.com](mailto:president@fcc1854.com)*

*visit [www.fcc1854.com](http://www.fcc1854.com)*

**For more information, contact Ed Haggerty, P.Eng.:**

*ed @haggerty.ca*

tel 506-292-2627

Le 18 février 2011

**ASSEMBLÉE ANNUELLE**

Delta Brunswick  
Saint John (N.-B.)



# STONEHAMMER

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**Dr. Randy Miller** géosc.  
Conservateur à la recherche,  
Musée du Nouveau Brunswick

Auteur reconnu, chasseur de fossiles et membre de l'AGNB, Randy Miller, Ph.D., géosc., a joué un rôle essentiel pour que le géoparc néo-brunswickois de Stonehammer soit désigné premier géoparc de l'Amérique du Nord à faire partie du réseau mondial. M. Miller parlera de l'histoire du réseau mondial des géoparks, des obstacles à la création d'un géoparc, ainsi que de la manière d'en créer un et de préparer une bonne candidature internationale.

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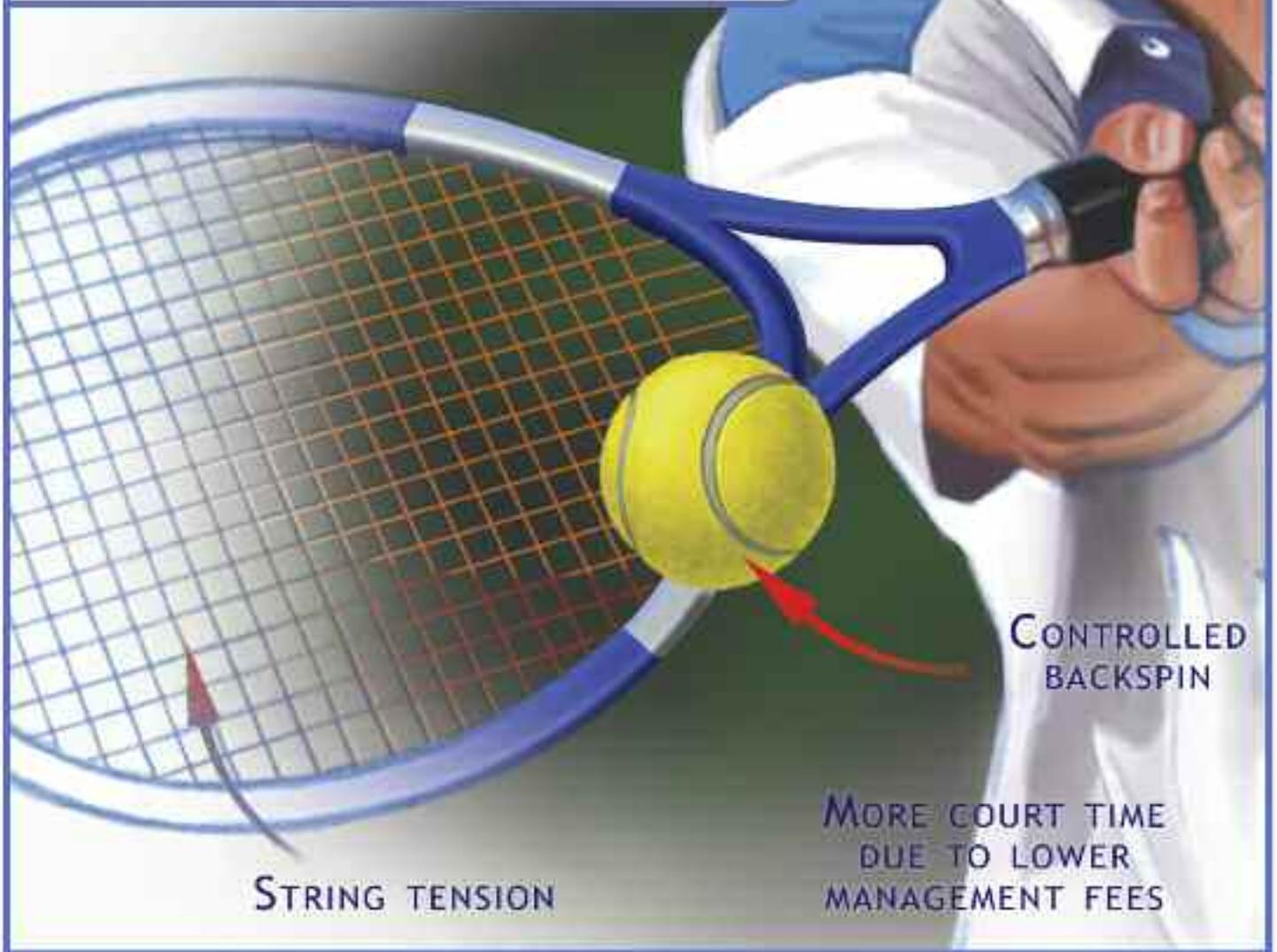
**Inscrivez-vous dès aujourd'hui au site <http://apegnb.isetevents.com>**

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