



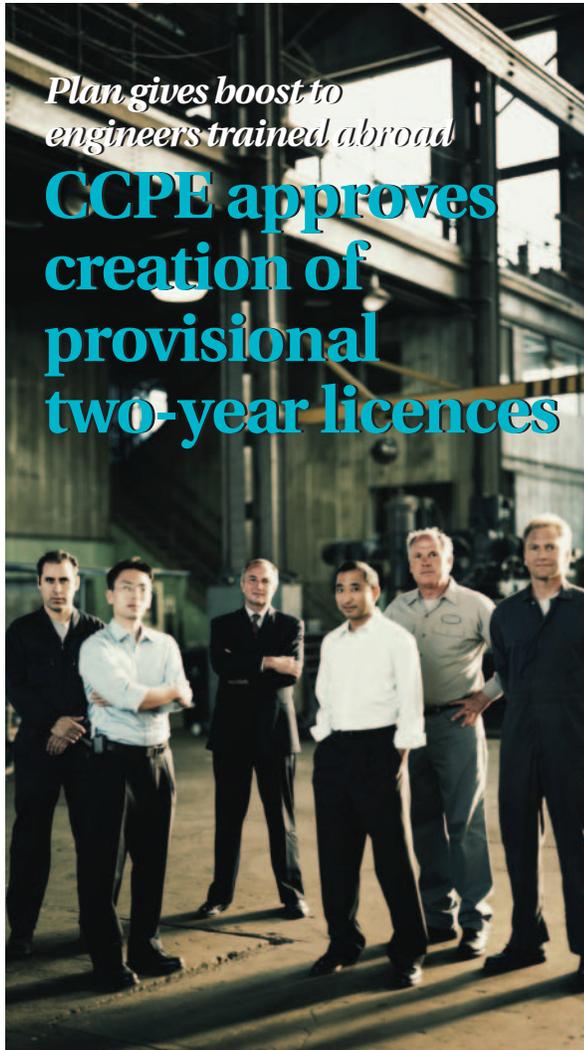
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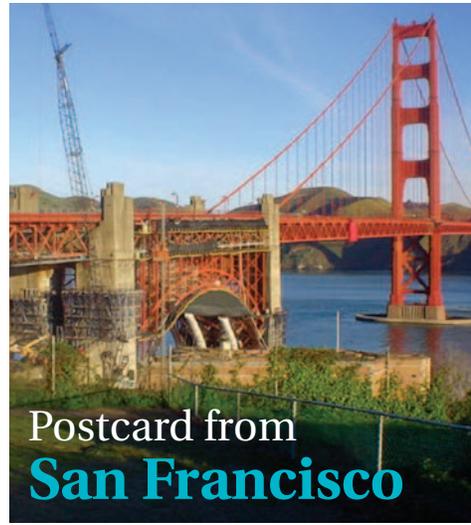
The Source of Engineering and Geoscience News in New Brunswick
La source d'information en ingénierie et géoscience du Nouveau-Brunswick

With the creation of two-year provisional licenses, foreign-trained engineers will be instantly qualified to work in Canada in an apprenticeship capacity. For more details, see page 24.



Plan gives boost to engineers trained abroad
CCPE approves creation of provisional two-year licences

UNB students caught a glimpse of the Golden Gate Bridge's quake retrofit in March. See what else they did on page 28.



Postcard from **San Francisco**

Three APEGNB members (and maple syrup maestros) spend their spare time in a sugar shack. Discover more delicious details about their on hobby on page 22.



Sweet Season

Association of Professional Engineers and Geoscientists of New Brunswick
Association des ingénieurs et géoscientifiques du Nouveau-Brunswick



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*No purchase necessary. The contest is open to residents of Canada who have reached the age of majority where they reside. The approximate value of the new Mercedes-Benz CLK320 Cabriolet is \$74,000. The contest runs from January 1st to December 31, 2004. In order to win, the entrant, selected at random, must correctly answer a mathematical skill-testing question. For the odds of winning and to learn how to participate, see the complete rules of the *Win the new Mercedes-Benz CLK320 Cabriolet* Contest at www.melochemonnex.com/apenb.

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Does Canada's Future Rely on Foreign-Trained Engineers?

A New Brunswick engineer shares his perspective.

Contributed by John Stevens, P.Eng.
 Manager, Business Development
 Neill and Gunter Limited (www.neillandgunter.com)

In 1899, my grandfather emigrated to Canada from Wales. He landed in his new country with not much money in his pocket, a strong Welsh accent and a determined work ethic.

Over the next 73 years, until his death at age 79, he managed to integrate himself into the customs and norms of a rapidly changing Canadian society.

His story is no different than the hundreds of thousands of both rich and poor, from around the globe, that throughout our history have helped make this country strong.

My grandfather married a local girl. Together they raised seven children who worked the woods, developed the farms, built the railways, mined the ore, sowed the crops, laboured in the factories, and went off to war. These children raised their own families and here I am, two generations later, raising my own family. The cycle continues.

In my career as an engineer, I have worked in factories producing goods for the world; I have helped mine the ore; I have helped refine petroleum; and I have helped build power plants to produce electricity. My brother, David, is also an engineer, and like myself, he has had the privilege of working in industry to make our country strong. My brother and I are only one degree of separation from our immigrant past.

A few weeks ago, I picked up a copy of the *Globe & Mail* and out dropped the **Report on Business** magazine. This issue featured their very popular "Top 40 Under 40: The Country's Best and Brightest." The



Presently, we have on staff, engineers and technical support personnel from approximately 15 different countries including China, India, Croatia, Russia, England, Vietnam, and New Zealand and many more who are second- or third-generation Canadians from other parts of the globe.

The international engineering graduates (IEG) whom we have employed at Neill and Gunter have generally been exceptional and have made a significant contribution to the growth and

honorees are recognized for their vision and leadership, innovation and achievement, and their potential to make a significant continuing impact in Canada's business community. As I read the profiles of these men and women, I began to see that many were from families that originated in South Africa, the Middle East, southeast Asia, Eastern Europe, or the United States. Some, like my brother and I, are only one degree of separation from their immigrant past, while others have come here directly from their homeland.

I work for Neill and Gunter Limited, and as a company, we face many challenges. However, **no challenge is greater than finding the right people.** Our growth and development as a company is directly linked to our ability to attract and retain the brightest and best minds in the industry. We would love to have Canada's "Top 40 Under 40" working for us, because we know that innovation and creativity are core factors in our success.

stability of our company.

Even though not everyone agrees, we believe that New Brunswick should increase its efforts to attract people with diverse engineering skills to the province and get them working as quickly as possible.

Our markets are no longer local but international. The more diverse, flexible and global our talent base is, the better we will compete.

There are, however, some sensitivities that we need to consider. Are we doing enough to employ our existing engineers? How do we ensure that the training and qualifications of foreign engineers are indeed equivalent to our own? How do we bridge the cultural, moral and language gap which is often the major barrier to employment for foreign-trained engineers?

When many international engineering graduates (IEGs) immigrate to Canada they are already seasoned engineering

(continued from page 3)



It is hard to believe that summer is here and my term as your president is approaching the half-way mark.

CCPE Annual Meeting

In mid-May, the annual meeting of the Canadian Council of Professional Engineers (CCPE) was held in Charlottetown. In addition to conducting the regular business of the board of directors of CCPE, it provides an opportunity for presidents and executive directors of all provincial and territorial associations to exchange information on programs, opportunities and difficulties that each association/Ordre is experiencing.

Darrel Danyluk, P.Eng., from Alberta, was installed as CCPE president and **Colin Smith**, P.Eng., from British Columbia, became the new president-elect. **Hollis Cole**, P.Eng., your CCPE director for the last four years, completed his term as past president.

Hollis has been a member of the executive committee of CCPE for four years which included one year as president. He has been a member of APEGNB Council since 1992 and on the executive committee of Council since 1995. Our by-laws provide that the CCPE and CCPG (Canadian Council of Professional Geoscientists) directors are members of the APEGNB executive committee to ensure seamless exchange of issues and concerns, but it necessitates a commitment of considerable time on the part of our volunteers to attend all the meetings. Hollis' attendance at both provincial and national meetings has been exemplary and his willingness to take on extra projects is second to none. On behalf of the membership, I am pleased to express our gratitude and appreciation for his contribution and dedication during the last 12 years.

New CCPE Director

Now that Hollis is decelerating his volunteer work at both the provincial and national levels, the need to appoint a new CCPE director has arisen. I am happy to announce that **Al Giberson**, P.Eng., will be assuming the role of APEGNB's director on the executive committee of CCPE. As many of you know, Al has an extensive volunteer record with our Association. In 2002, he

served as president of APEGNB and is a familiar face at numerous Association events. Congratulations Al! We know you'll make the most of this opportunity to advance the issues and concerns of Canada's engineering profession.

From Consideration to Integration

From Consideration to Integration (FC2I) is a three-phase, cost-shared program with the federal government to improve the integration of international engineering graduates (IEGs) to the profession in Canada. The phase II report, containing 17 recommendations, was approved by the CCPE board of directors. Their objective is to facilitate the timely licensure and employment of IEGs without compromising public safety or lowering professional standards. See page 24 for additional information on this program.

New Agreements Signed

The five-year term of the original Inter-Association Mobility Agreement (IAMA) has been completed and a second IAMA was signed by representatives of all associations/Ordre during the CCPE annual meeting in Charlottetown.

CCPE also signed a **Mutual Recognition Agreement with the Hong Kong Institution of Engineers (HKIE)**. The Agreement, which has been in the works for several years, will effectively enable engineers from Hong Kong to obtain the necessary qualifications so that they may practise engineering in Canada. Likewise, the Agreement will allow Canadian professional engineers to become members of the HKIE.

OIQ Wins Microsoft Case

I am pleased to report that the Ordre des ingénieurs du Québec (OIQ) was successful in prosecuting Microsoft Canada for its use of the word "engineer" in its international software certification program. The OIQ had charged Microsoft Canada for knowingly causing a person who is not a member of the Ordre des ingénieurs du Québec, by authorization or encouragement, to use the title of engineer, thereby committing an offense under section 188.1 of the Professional Code, R.S.Q., c. C-26. The decision by Judge **Claude Millette** of the Court of Quebec marks the first time in

Microsoft's history that it has been penalized over use of the term. Microsoft has indicated it will appeal the decision. Unfortunately, APEGGA was unsuccessful in a prosecution on title in Alberta and has made representation to government for an Act amendment.

On behalf of Council and staff, have a great summer and remember to support the social activities that most Branch executives will be organizing on your behalf during the holidays. ☺

(continued from page 3)

professionals within their own country yet are unable to find engineering employment. The Canadian Council of Professional Engineers (CCPE), its members, the provincial and territorial licensing bodies, and Human Resources and Skills Development Canada, have identified this as a critical issue. Together, they are embarking on a joint initiative to identify and improve the integration process, to better enable IEGs to earn licenses as professional engineers (P.Eng. or ing.) in their province or territory of residence and more quickly gain employment in Canada. This needs to be done without compromising public safety or lowering professional standards. Everyone recognizes that facilitating the employment and licensure of these skilled workers will help build a stronger knowledge-based economy by which all Canadians benefit.

Much has changed since 1899 when my grandfather first came to this great land. He endured many hardships and challenges, but, like so many others, he also helped build this great country we call home. My grandfather's descendants are now the very essence of who we are as a people. It is now our duty to embrace these new Canadians realizing that their children and the generations to follow will be the very essence of what it means to be Canadian. ☺



Incroyable! L'été est arrivé et, bientôt, j'aurai atteint la moitié de mon mandat à titre de président de votre organisme.

Réunion annuelle du CCI

La réunion annuelle du Conseil canadien des ingénieurs (CCI) a eu lieu à Charlottetown à la mi-mai. En plus de permettre au conseil d'administration de vaquer à ses tâches régulières, la réunion annuelle du CCI offre aux présidents et aux directeurs administratifs de toutes les associations provinciales et territoriales l'occasion d'échanger de l'information sur les programmes et de discuter des possibilités et des difficultés propres à chacune des associations et à l'ordre.

Darrel Danyluk, ing., de l'Alberta a été assermenté président du CCI, et Colin Smith, ing., de Colombie-Britannique est devenu le nouveau président élu du CCI. Hollis Cole, ing., votre représentant au conseil d'administration du CCI depuis quatre ans, a terminé son mandat à titre d'ancien président.

Hollis a été membre du comité exécutif du CCI pendant quatre ans, dont un an à titre de président. Il est membre du Conseil de direction de l'AIGNB depuis 1992 et membre du comité exécutif du Conseil depuis 1995. Selon nos règlements administratifs, les administrateurs du CCI et du Conseil canadien des géoscientifiques professionnels (CCGP) sont membres du comité exécutif de l'AIGNB, afin d'assurer un bon échange au chapitre des préoccupations; toutefois, cela exige de nos bénévoles qu'ils s'engagent à consacrer considérablement de temps pour participer à toutes les réunions. Hollis a été exemplaire en assistant aux réunions provinciales et nationales; de plus, sa bonne disposition à se charger d'autres projets a été remarquable. Au nom des membres, je suis heureux de lui dire toute notre gratitude et notre reconnaissance pour son apport et son dévouement au cours des douze dernières années.

Nouvel administrateur du CCI

Maintenant que Hollis réduit sa charge de travail bénévole aux niveaux à la fois provincial et fédéral, le besoin de

nommer un nouvel administrateur du CCI se fait sentir. Je suis ravi d'annoncer que Al Giberson, ing., assumera le rôle de représentant de l'AIGNB au comité exécutif du CCI. Plusieurs d'entre vous savez déjà que Al a d'excellents antécédents à titre de bénévole auprès de notre Association. En 2002, il a été président de l'AIGNB et on le voit souvent à nos nombreuses activités. Félicitations, Al! Nous savons que vous profiterez pleinement de l'occasion pour faire avancer les questions qui préoccupent la profession d'ingénieur au Canada.

De la considération à l'intégration

De la considération à l'intégration (FC21) est un programme en trois étapes, à frais partagés avec le gouvernement fédéral, qui vise à favoriser l'intégration des diplômés internationaux en génie (DIG) à la profession au Canada. Le rapport de l'étape II qui comporte 17 recommandations a été approuvé par le conseil d'administration du CCI. On y vise à aider les DIG à obtenir en temps opportun leur permis d'exercice du génie et un emploi, sans mettre en péril la sécurité publique, ni réduire les normes professionnelles. Vous trouverez d'autres renseignements sur ce programme à la page 24.

Signature de nouvelles ententes

L'accord de mobilité inter-associations (IAMA) d'une durée de cinq ans est échue et les représentants de chacune des associations et de l'ordre ont signé une nouvelle entente à l'occasion de la réunion annuelle du CCI à Charlottetown.

Le CCI a aussi signé un accord de reconnaissance mutuelle avec la Hong Kong Institution of Engineers (HKIE). En préparation depuis plusieurs années, l'accord permettra aux ingénieurs de Hong Kong d'obtenir les titres de compétences nécessaires pour pouvoir exercer la profession d'ingénieur au Canada. Elle permettra également aux ingénieurs canadiens d'adhérer à la HKIE.

L'OIQ obtient gain de cause dans sa poursuite contre Microsoft

Je suis heureux de vous informer que l'Ordre des ingénieurs du Québec (OIQ)

a eu gain de cause dans sa poursuite contre Microsoft Canada pour son recours au mot « ingénieur » dans son programme international de certification de logiciels. L'Ordre a intenté une poursuite contre Microsoft Canada pour avoir sciemment amené, par autorisation ou incitation, une personne qui n'est pas membre de l'Ordre des ingénieurs du Québec à utiliser le titre d'ingénieur, enfreignant ainsi l'article 188.1 du Code des professions, L.R.Q., c. C-26. La décision du juge Claude Millette de la Cour du Québec vient, pour la première fois de son histoire, pénaliser Microsoft pour l'utilisation de ce mot. La compagnie a indiqué qu'elle en appellera de cette décision. D'un autre côté, en Alberta, l'APEGGA a malheureusement échoué dans sa poursuite concernant l'utilisation d'un titre; l'association a fait valoir au gouvernement qu'il fallait modifier la Loi.

Au nom du conseil et du personnel, je vous souhaite un excellent été. N'oubliez pas d'appuyer les activités sociales que la plupart des membres de l'exécutif des sections organiseront pour vous durant les vacances. ☺

Hong Kong Signs Recognition Agreement



During CCPE's annual meeting in May, Gordon Sterling, P.Eng., CCPE past president signs a Mutual Recognition Agreement with Dr. Alex Chan, right, President of the Hong Kong Institution of Engineering (HKIE).



The results of mail-in balloting are in and the future is exciting for our engineers and geoscientists-in-training (EITs and GITs).

One part of the vote by members was to standardize the naming of our junior

members an opportunity to participate more fully in their Association. Many senior members recognized the risk of newly graduated engineers and geoscientists becoming somewhat disconnected from the Association as they spend four or more years building the experience needed

to get to the point of applying for professional status

Now, our members-in-training will be eligible to vote and hold office on Council. They can continue to participate on the Committees which are the backbone of the Association and influence the direction the Association takes in the years to come.

APEGNB feels this progressive step can only improve the quality of the Association. ☺

EITs and GITs Get New Name And New Privileges!

members to the single "member-in-training". This is consistent with the trend in other regulatory jurisdictions and reinforces the concept that they are on their way to becoming members of the Association.

The second, and more important, result of the vote is to recognize the need to allow the junior



result

Now, our members-in-training will be eligible to vote and hold office on Council.

member-in-training

Letters to the Editor

"I just received the latest edition of Engenuity. It is so attractive, well-presented and full of interesting articles and photographs...I am going to give the Canadian Bar Association, NB Branch, the last three editions of the magazine to review. I would be very proud to receive a comparable publication, touting the achievements of our profession."

- Gale L. MacDonald, LL.B.

Meloche Monnex Issues 1,000,000th Policy

Scott Harris, P.Eng., of London, Ontario, is Meloche Monnex's one millionth policy holder. Founded in 1949, Meloche Monnex is the largest group home and automobile insurance provider in Canada. It provides products and services to members of 190 professional groups and alumni associations and several hundred employer groups. Over the last few years, the company has ranked as one of the top insurers with respect to property and casualty insurance growth in Canada. ☺



From left to right: Alain Thibault, President and Chief Executive Officer, Meloche Monnex; the millionth policyholder, Scott Harris, P.Eng.; Lorelei Scott, Manager, Member Services, Canadian Council of Professional Engineers; and Jean R. Lachance, Executive Chairman, Affinity Market Group, Meloche Monnex.

Invitation 2004

APEGNB Awards Dinner

Dîner d'honneur DE L'AIGNB

Friday
October 22, 2004

Vendredi
22 octobre 2004

Join us for an evening of celebration as we honour our newest life members and recipients of this year's scholarships and prizes.

Nous vous invitons à être des nôtres pour rendre hommage aux nouveaux membres à vie et aux lauréats des bourses d'études et des récompenses de cette année.

Delta, Fredericton, NB
Reception: **6:00 pm**
Dinner: **7:00 pm**

Delta, Fredericton (N.-B.)
Réception: **18:00**
Repas: **19:00**

Friends and Family Welcome!
\$45 per person

Les parents et amis sont les bienvenues!
45 \$ par personne

For dinner reservation,
please contact APEGNB by
October 15, 2004
at **506-458-8083** or
e-mail rachael@apegnb.com

Réservations :
AIGNB a plus tard le
15 octobre 2004, **506-458-8083** ou
rachael@apegnb.com

"scholarships"
"lauréats des bourses"





The great outdoors is calling me for a canoe / fly fishing trip, so I'll make this article a quick update.

Branch events have hit an all-time high over the last few months thanks to lots of enthusiasm from local members. The spring technical program was filled with great opportunities to learn about wind-powered generation, project management and the construction of support services for our forces in Kabul, Afghanistan. While visiting CFB Gagetown for Major **Brian Smith's** presentation, we also received a tour of the Canadian Forces School of Military Engineering.



The 10th annual Pasta Bridge Finals were held at the Grand Falls Shopping Centre in April. This year's winner is **Marcel Rioux** from

Polyvalente Thomas-Albert whose bridge was able to withstand an incredible 481 pounds!

Coming in second place, also from Thomas-Albert, was **Chantal Morin** with 397 pounds. Third place went to **Denis Lang** from the Cité des Jeunes A.M. Sormany whose bridge withstood 245 pounds of pressure before collapsing. I'm pleased to report that many APEGNB members were present during the competition to encourage the students, and I would like to thank everyone for their efforts in making this year's contest another success.

Fredericton Branch

Martin Gordon, PEng – Chair

There were also a few social events during the past few months that allowed branch members to decompress. I think it's safe to say that everyone had a fun time attending the annual curling night, the interactive program for children, and the Spring golf tournament at Mactaquac.

The winners of this spring's UNB Engineering Student Paper Competition was **Kirsty Williamson**, (ME), with **Michael Wood** (ECE) placing second. Thanks to all those who came to our events so far this year, and I hope to see you at a few more. There were whispers of a potential softball tourney among the consultants and others in the branch this summer, so

keep checking your email/voicemail for further details.

If you missed our mail-out in the spring *Engenuity* requesting contact updates for our membership database, e-mail **Serge Levesque** (apegnbf@unb.ca) if your information has changed. Hope you have a great summer and get a chance to enjoy all the branch activities we have planned.



Northwestern Branch

Paul R. Cormier, PEng – Chair

Our annual branch meeting was held in Edmundston on June 3, with our very own **Marcel Lizotte**, P.Eng., as guest speaker. Marcel discussed the artificial vision projects his company is developing for various industries such as packaging and lumber.

The 2004-2005 Branch Executive was also elected at that meeting, and will be announced in the next issue of *Engenuity*. With that said, this will be my last Branch report.

I would like to take this opportunity to thank everyone who has contributed to the Branch during the past two years, and I wish the new Executive an exciting and productive year. Ongoing projects include the revision of our Branch by-laws and the creation of a university

scholarship—both of which should be finalized this fall.

Branch members are reminded that e-mail is used for upcoming event notices. If you are not currently receiving e-mails from the Branch, please contact any member of the Executive to be added to the list, or you can contact us at apegnb@canada.com.

We hope you enjoy your summer!



Saint John Branch

Lisa Woodworth, P.Eng. – Chair



Technical tours have been the talk of the city this spring in Saint John.

Kicking off the events was a presentation by

Major Brian Smith outlining the challenges of military work in Kabul, Afghanistan. Approximately 50 people were at UNBSJ to hear how the Canadian military sets up a base of operations in foreign lands. Major Smith gave us a guided tour of **Camp Julien** (the base and headquarters for the approximately 1,700 Canadian Forces personnel in Operation Athena)–from bare field to functioning water, sewerage and electrical systems in only 10 weeks. Try to remember that the next time your project has a “tight schedule”!

Members of the Saint John Branch also toured NB Power’s **Coleson Cove Refurbishment project**. This huge New Brunswick project is a great example of engineering teamwork that improves the Province’s power generation capabilities.

May brought another presentation at the Union Club in Saint John highlighting engineering innovations in the Saint John and surrounding area. “**Cooking with Gas**” gave our members a look at a natural gas project in Sussex. It was yet another example of New Brunswick’s natural resources being developed to meet the needs of the people.

The Branch’s **Annual Dinner** was a great success again this year. The Water Street Dinner Theater performers wowed the crowd with the play *Passion Place*. Dinner was delicious and we hope to see you all again next year.

Upcoming events include the **Annual Golf Tournament** at Rockwood Park Golf Course on **July 24**. Sign up now by e-mailing us at saintjohn@apegnb.com or calling our branch hotline (1-877-425-5500).

Next year’s events are being planned now, so let us know if you have any suggestions. Look for new events every month on our website www.apegnb.com/branch/saintjohn.html.

Coming soon – the ancient sport of **lawn bowling!**

Have a great summer!



La Section du Nord-Ouest

Paul R. Cormier, ing – président



La 10^{ième} édition du concours de ponts en pâtes alimentaires a eu lieu au centre d’achats de Grand-Sault en avril dernier. Le

grand gagnant est **Marcel Rioux** de la polyvalente Thomas-Albert avec son pont étant capable de résister à 481 livres de pression! En deuxième place, aussi de Thomas-Albert, nous avons **Chantal Morin** avec 397 livres. La troisième position est remise à **Denis Lang** de la Cité des Jeunes A.M. Sormany avec 245 livres. Beaucoup de membres étaient présents pour encourager les étudiants. J’aimerais vous remercier pour vos efforts qui ont

assuré la réussite de la compétition encore cette année.

La réunion annuelle de la branche a eu lieu le 3 juin à Edmundston. Notre conférencier invité fut nul autre que **Marcel Lizotte, ing.** Il a discuté des projets de vision artificielle que sa compagnie développe pour divers industries, tel que le sciage de bois et l’empaquetage.

Le nouvel exécutif de 2004-2005 a aussi été choisi, et sera annoncé dans la prochaine édition d’Engenuity. Ceci dit, ce présent rapport de la branche sera donc mon dernier, alors j’aimerais profiter de l’occasion pour remercier tous ceux qui ont contribué à la branche durant les deux dernières années. Aussi, je souhaite le meilleur pour le nouvel Exécutif. Les projets en marche inclus la

révision des règlements administratifs de la branche et la création d’une bourse d’études universitaire, qui seront finalisés à l’automne.

On rappelle aux membres de la branche que les annonces d’événements à venir se font toujours par courriel. Les membres qui ne reçoivent pas de courriel de la branche devraient contacter quelqu’un de l’exécutif, ou par courriel au apegnb@canada.com afin d’être ajouté à la liste.

Nous vous souhaitons un été agréable!





By the time this edition of *Engenuity* reaches you, the Moncton Branch will have held its Annual Meeting on Thursday, May 27

where the Executive for the 2004-2005 will be introduced. But before listing the new executive members, I would like to personally thank all 2003-2004 councillors for their excellent work in the past year.

I would especially like to thank **John Gallant**, P.Eng. for his valuable information as Past Chair; **Margot Bélanger**, EIT, and **Éliane Doucet**, P.Eng. for their tireless efforts in organizing the numerous technical and social events during the year; **Serge Doucet**, P.Eng. for organizing the first Moncton Branch Hockey Team; and **Jolaine Landry-LeBlanc**, EIT, for organizing and maintaining the Branch e-mail lists. Without these members, and the remaining Branch Executive, none of these activities could have happened.

Moncton Branch

Marc A. LeBlanc, P.Eng – Chair

As many of you will notice, seasoned members have stepped down and new members have joined the executive. On behalf on the new incoming chair, **Mike Cormier**, P.Eng. and myself, we would like to welcome our newest volunteers. Many thanks go out to **Alcide Richard**, P.Eng., for his many years of involvement as the Branch's treasurer.

Annually, the Moncton Branch recognises an individual who is registered as a full-time university student in a regular engineering program in the Maritimes and is a resident of the Moncton Branch district. This year, the **V.C. Blackett Scholarship** was awarded to **Marcel Richard** of St-Antoine. Marcel will be starting his fourth year of electrical engineering at the Université de Moncton in September.

June 4th was our Annual Lobster Supper, held at the Université de Moncton and

once again, the food was delicious and it was a great opportunity for people to re-connect with friends and colleagues!

Mark Your Calendars!

Friday, September 24, 2004

Annual Golf Tournament
Maplewood Golf and Country Club.
(Forms will be emailed prior to the event so start planning now!)

Saturday, January 23, 2005

Family Fun Day
Centennial Park.

February 2005

Curling Funspiel Month.

March/April 2005

Atlantic Engineer Hockey Tournament.

Keep checking the Moncton Branch web site (www.apegnb.com/branch/moncton.html) for upcoming events and planned technical sessions that will be beginning in the fall.

And finally, since this is my last chance, a special thanks is in order for the APEGNB staff in Fredericton. Their help this year has been greatly appreciated.

2004-05 Moncton Branch Executive

Mike Cormier, P.Eng.	Chair
Éliane Doucet, P.Eng.	Vice Chair
Marc A. LeBlanc, P.Eng.	Past Chair
Bernard LeBlanc, P.Eng.	Secretary
Margot Bélanger, EIT	Treasurer
Charles Michaud, P.Eng.	Professional Development
Serge Doucet, P.Eng.	Social Committee
Mustapha Bouhamdani, P.Eng.	Awards Committee
Jolaine Landry-LeBlanc, EIT	Communication / Web / Advertisement
John Gallant, P.Eng.	Provincial Councillor
Larry Dionne, P.Eng.	Provincial Councillor
Mark Bellefleur, EIT	Branch Councillor
Paul Chiasson, P.Eng.	U de M Faculty Representative
<i>To be determined in September</i>	<i>U de M Student Representative</i>



La Section de Moncton

Marc A. LeBlanc, ing – président



Avant que vous ayez reçu cette édition de l'Ingenuity, la réunion annuelle de la section de Moncton aura eu lieu le jeudi 27 mai et un nouvel exécutif

aura été formé. Avant d'introduire les nouveaux membres de l'exécutif, j'aimerais remercier tous les conseillers 2003-2004 pour leur excellent travail tout au long de l'année.

J'aimerais spécialement remercier **John Gallant**, ing. pour ses nombreux conseils; **Margot Bélanger**, EIT, et **Éliane Doucet**, ing. pour leur contribution dans l'organisation des sessions techniques et des événements sociaux durant l'année; **Serge Doucet**, ing. pour avoir mis en place la première équipe de hockey de la Section de Moncton; et **Jolaine Landry-LeBlanc**, EIT, pour avoir mis sur pied et maintenu la liste des courriels de la section. Merci encore à tous!

Comme plusieurs d'entre vous ont sûrement remarqué, des vétérans de l'exécutif ont fait place à des nouveaux membres. De la part du président entrant, **Mike Cormier**, ing. et moi-même, nous aimerions souhaiter la bienvenue aux nouveaux membres de l'exécutif. Mille mercis à **Alcide Richard**, ing. pour toutes ses années de service comme trésorier de la section.

À toutes les années, la section de Moncton reconnaît un étudiant qui est inscrit à temps plein dans un programme d'ingénierie dans une université des maritimes et qui réside dans la région desservi par la Section de Moncton. Cette année, **Marcel Richard de St-Antoine** est le récipiendaire de la bourse d'étude d'ingénierie V. C. **Blackett**. Marcel débutera sa quatrième année en génie électrique à l'université de Moncton en septembre.

Le **souper au homard annuel** a eu lieu le 4 juin à l'Université de Moncton. Je

suis convaincu que cette année le souper aura été un succès comme les années précédentes et que tous auront eu l'opportunité de déguster un excellent repas et de rencontrer plein de gens.

Il est déjà temps de planifier pour les activités à venir!

Vendredi le 24 septembre, 2004

Tournoi de golf annuel
club de golf Maplewood
(Les fiches d'inscription seront envoyées par courriel.)

Samedi le 23 janvier, 2005

La journée famille
Parc du centenaire.

février 2005

La journée de curling

mars/avril 2005

Le tournoi atlantique d'ingénierie de hockey

Veillez continuer de vérifier le site web de la section de Moncton (www.apegnb.com/branch/moncton.html) pour les activités à venir ainsi que les sessions techniques qui débiteront cet automne.

Et finalement, j'aimerais remercier l'équipe de l'AIGNB (Fredericton) pour leur assistance durant toute l'année. Votre support a été grandement apprécié.

Le exective de la Section de Moncton pour 2004-2005

Mike Cormier , ing.	Président
Éliane Doucet , ing.	Vice-président
Marc A. LeBlanc , ing.	Ancien président
Bernard LeBlanc , ing.	Secrétaire
Margot Bélanger , EIT	Trésorier
Charles Michaud , ing.	Développement professionnel
Serge Doucet , ing.	Comité social
Mustapha Bouhamdani , ing.	Prix de mérite
Jolaine Landry-LeBlanc , EIT	Communication / Internet
John Gallant , ing.	Conseiller provincial
Larry Dionne , ing.	Conseiller provincial
Mark Bellefleur , EIT	Conseiller
Paul Chiasson , EIT	Représentant de la Faculté – U de M
À être déterminé en septembre	Représentant étudiant – U de M





Ms. Walton's work on Martian meteorites has not gone unnoticed. A Douglas, N.B., native, she was honoured with one of five new national awards from the Canadian Space Agency (CSA). Ms. Walton is a PhD student in planetary geology at UNBF.

The CSA initiated a supplement to post-graduate Natural Sciences and Engineering Council of Canada (NSERC) scholarships totaling \$14,000 over two years. The aim is to encourage and support students working in space exploration, atmospheric environment and space astronomy fields.

The majority of Ms. Walton's research involves determining how Martian meteorites were blasted off Mars.

"This happens by large meteorites or comets striking the surface of the planet and launching smaller fragments off the Martian crust into space," said Ms. Walton.

"Eventually some of these then find their way into the Earth's gravitational field and land here on Earth."

There are 30 known Martian meteorites in worldwide collections with a total mass of 100-kilograms.

"It's very precious material," she said. "It allows us the only direct access to Martian rocks and how the planet works."

Ms. Walton's research could have an eventual role with the North American Space Agency (NASA) and European

Space Agency (ESA), considering Mars will be the focus of planetary exploration for the next 30 years.

"Erin's work is an important part of our building knowledge and expertise in Mars," said John Spray, the director of UNBF's Planetary and Space Science Centre. "Her work is being done with

Along with the CSA grant and NSERC post-graduate scholarships, Ms. Walton has been awarded a John S. Little International Study grant, a UNB Board of Governor's Award and the UNBF's department of geology's Wright Scholarship.

She recently returned from the United Kingdom where she was trained in the

There are 30 known Martian meteorites in worldwide collections with a total mass of 100-kilograms.

a view to assisting international agencies like NASA and ESA, as well as within Canada."

application of radiometric dating to determine the formation ages of Martian meteorites. ☺

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PTA Student Wins 10th Annual Pasta Bridge Contest

By Ian Scott – Reprinted from the Victoria County Record

When transportation workers begin repair work on the Ron Turcotte Bridge in Grand Falls later this year, they may want to consult with students at Polyvalente Thomas-Albert. PTA students captured first and second place in (APEGNB's) regional "Pasta Bridge" contest, held at the Grand Falls Shopping Centre on April 22. The winning entry belonged to Grade 12 student, Marcel Rioux, whose bridge withstood 481.2 lb/psi of pressure to take the title.

Rioux was the last of seven entrants to have his bridge tested. As a large crowd of onlookers gathered around, engineer Eric Ouellette, P.Eng., slowly applied pressure to the bridge, comprised of a glue and pasta mixture of the entrant's choice. Fellow engineer Mireille Vautour, P.Eng., resembled a bingo caller as she announced each level of pressure reached.

"Four hundred pounds," Vautour called out, as Rioux's bridge surpassed the nearest competitor's mark of 397 lbs., belonging to PTA Grade 8 student, Chantal Morin.

When Rioux's bridge passed the 481 lb. mark, the score he'd attained at PTA's contest in March, the competition ended. Rioux said there was no great secret to the materials used on his bridge.

"It's a fiberglass resin," Rioux said, "You can get it at Canadian Tire."... Rioux won \$200 for his efforts, while runner-up Morin won \$100. The third-place prize of \$50 went to Denis Lang, a Grade 11 student from Cité des Jeunes in Edmundston.

The regional and earlier individual school Pasta Bridge competitions were organized by the Association of Professional Engineers and Geoscientists of New Brunswick-Northwestern Branch. Held annually



2004 Pasta Bridge Winners

Left to Right:
Chantal Morin (2nd);
Marcel Rioux (1st);
Paul Cormier, P.Eng.
(Northwestern Branch
Chair); Denis Lang (3rd).

for the past 10 years, Vautour, (a resident of Edmundston), told onlookers they were hoping to have the title return to Edmundston, after years of victories by Grand Falls students.

"It's never left Grand Falls," one onlooker reminder her.

Thanks to Marcel Rioux, the town's streak remains intact. ☺

10th Annual Pasta Bridge Contest Entrants



The finals draw a large crowd of curious onlookers.

Shanghai Hosts World Engineers' Convention

The second World Engineers' Convention (WEC) will be held **November 2 to 6, 2004** in Shanghai, China. The

international event is held every four years in the fashion of an "Olympiad of Engineers". Sponsored by the World Federation of Engineer Organizations (WFEO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO), the Shanghai convention will focus on how engineers

shape the sustainable future. Highlights of the convention include a:

- Paper Submission
- Virtual Forum
- Exhibition/Shows
- Project Show for Future Engineers

For more information, visit the convention's website:

www.wec2004.org ☺

Liz Bartell thought she would major in Spanish or another of the liberal arts when she arrived at the all-women Smith College.

But she had always liked math, so, at her mother's urging, she took an introductory course in engineering her first semester.

"It was insanely hard and I didn't do well, but I loved it," Bartell said. "It was so challenging I just couldn't get enough."

In May, the Houston native will be among the first 20 graduates of the first engineering program at a women's liberal arts college in the United States. Then she's off for a job as a transportation engineer with a Florida company.

The Smith women aren't alone. Across the U.S., about one in five of this year's engineering graduates will be women. By comparison, women made up about 2 percent of the engineering class in 1975.

The old image of an engineer as a white man sporting a pocket protector and a bow tie - so his neckpiece doesn't drag across his drafting board - is quietly changing. Work forces have become more diversified and the higher buying power of women has raised demand for products designed to accommodate their shape and needs.

This year, Georgia Tech handed engineering diplomas to 325 women, about 24 percent of the class.

The percentages are higher at elite engineering schools such as MIT and Cal Tech and even more so at several historically black colleges and universities, where more than 40 percent of the graduating engineers are women.

Historically, a major stumbling block for female engineering students has been "an attitude that they have to prove themselves," said **Mimi Philobus**, director of Georgia Tech's support program.

"When you have to struggle all the time, it becomes tiring," Philobus said. "When a

Engineering educators reaching out to female students

By Trudy Tynan, Associated Press Writer

woman faces that struggle immediately as an undergraduate and can look forward only to continuing to do so in the work place, it becomes a major factor in applications and retention."

All the universities generating large numbers of female engineers have vigorous outreach, mentoring and other efforts, including special prizes, dinners and scholarships, aimed at attracting and keeping their female students. Georgia Tech now has a retention rate of more than 90 percent.

studied the growth of women in engineering.

Women have been especially drawn to relatively new fields such as bioengineering and environmental engineering, said **Thomas Magnanti**, dean of engineering at MIT, where more a third of this year's graduating engineers are women.

At MIT, women make up 40 percent of the undergraduates studying chemical engineering and more than half of those in the combined civil and environmental engineering program.

Out of the 50 engineering faculty members hired at MIT in the last three years, 19 have been women, he said. Still, women make up only 14 percent of the engineering faculty at MIT and less than 10 percent of the engineering professors nationwide.

But some believe the professors' attitude is much more important than their sex.



The most extensive and determined recruitment effort has come from women themselves. For decades the Society of Women Engineers has reached out to middle school girls in hopes of interesting them early.

"When women in the field realized they were not alone, it made a big difference," said **Amy Sue Bix**, who teaches science and technology history at Iowa State and has

"The women who come to us are well-prepared and win most of the top honors, but still you have to be encouraging," said **Joseph Monroe**, dean of engineering at North Carolina A&T, which prides itself on its long history of producing black engineers. About 43 percent of this year's 147 graduating seniors are women.

"It's just a warm, open atmosphere," said **Maranda McBride**, who recently completed her doctorate in industrial engineering at

North Carolina A&T after spending several years working in industry.

To industry the issue goes beyond simple equity.

"If you are going to design and sell a product you need the different perspective women bring," said **Andy Acho**, director of environmental outreach and strategy for the Ford Motor Co. and chairman of the Smith engineering program's advisory board.

Having more female engineers isn't completely replacing the drop-off in white men going into engineering, however. And overall, women still make up only about 12 percent of the engineering work force.

"Women still have a long way to go," said **Margaret Ashida**, director of university relations for IBM Corp.

The gains have been primarily around the edges, and increases may be slowing, she said.

The percentage of women getting doctorates has inched up to about 17 percent. But for the past five years the percentage of women receiving master's degrees has remained around 22 percent and those receiving bachelor's degrees has hovered around 20 percent, according

to annual surveys by the American Society for Engineering Education.

William Wulf, president of the National Academy of Engineering, had no answer for why the extensive efforts haven't resulted in greater gains for women, but he suggested engineers need to promote the field's creative aspects and banish the "dead-wrong stereotype of a nerd working on something without social relevance."

"Lord knows we do a lot of things in engineering that are not welcoming to women and we can work on those," Wulf said. "But people have to want to be an engineer first."

However, Wulf added that schools including Smith are trying broader approaches to teaching engineering.

"Maybe, we have to look at something new," Wulf said.

Instead of devoting their first two years to math, Smith students are introduced early to problem solving, exposed to a variety of engineering disciplines and encouraged - even required - to take courses outside the technical fields.

The specialization that normally comes in the junior and senior years is left to graduate school. Smith's president, **Carol**

T. Christ, said the program aims to give women a wider foundation so they can more easily enter management later in their careers.

"We want to develop a capacity for leadership," she said.

Domenico Grasso, Smith's dean of engineering, said students are also forced to confront issues of social relevance early and often.

In their first course, engineering students must design an educational tool that could be used in the local public schools. Another course, also open to non-engineering majors, examines the Brooklyn Bridge and Eiffel Tower from artistic, social and cultural perspectives as well as construction design.

Bartell said she got hooked on engineering because of that real-world connection. She said the broader approach didn't seem to stunt the technical side of learning.

"Every time I went home to Texas, I'd quiz my male friends who went to the big engineering schools to see if I was getting everything they were," she said.

Her conclusion: "Everything and then some." ☺

Inflatable Water Device Set To Bridge The Gap

By Tony Henderson, *The Journal* (Newcastle, England)

A device which could save lives, time and money has been unveiled on the Northumberland coast (of England).

The water bridge is the invention of The Engineering Business, which is based at Riding Mill in Northumberland.

And company boss Dr Tony Trapp predicted that the bridge is set to net the company around £1m (\$2.5 million CAN) this year and the figure could be double that next year.

The inflatable span is the answer to the dangers of transferring workers from boats to other boats or offshore installations such as oil and gas platforms or wind turbines.

A full production model of the bridge was demonstrated to potential customers from a wide range of companies at the New and

Renewable Energy Centre at Blyth.

The idea came from the company's engineering director **Mike Watchorn** as the father of four took his youngsters to play on bouncy castles.

The device works through a boat attaching two lines to the structure or vessel where the transfer is to take place.

The tough fabric bridge is inflated from a one-metre pack to a length of more than eight metres with handrails along the lines to form a safe crossing.

Demonstrations were carried out inside Blyth Harbour and Dr. Trapp said: "There is strong interest especially from the oil and gas sector. We have a lot of encouraging leads to follow up."

Dr. Trapp said that uses for the bridge included ship to ship, offshore work, military operations, and rescue boats.

It would enable work to go ahead where operations have to be called off because of weather conditions.

"We are excited about its potential and it could develop into a business in its own right," he said.

The launch follows a period of intensive development since the idea was first tested at an indoor pool in South Shields run by South Tyneside College.

Dr Trapp said the development of the entire project had been North-East based, with the vessel being used for the demonstration provided by Aln Maritec based in Alnwick and operated by North Sea Logistics, based in Blyth.

Permission to use the turbines for the demonstration was provided by Blyth Offshore Wind in conjunction with Amec Wind, based at Hexham.

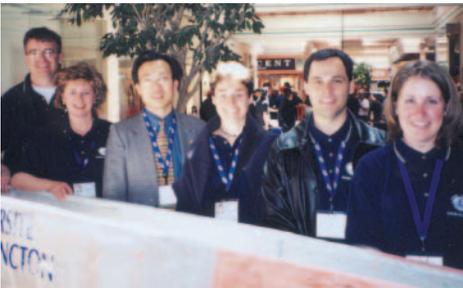
The Engineering Business works in the offshore oil and gas sector. ☺

It certainly wasn't our ancestors' canoe-making material of choice.

On May 9, nine canoes fashioned out of concrete hit the water at Irishtown Nature Park in Moncton for the 10th annual Canadian National Concrete Canoe Championships.

The lightest canoe, constructed by six-time champion Université Laval in Quebec, who were anticipated to place first overall, weighed in at 52 kilograms (116 pounds) and was seven millimetres (0.28 inches) or less in thickness.

*Judges (right to left)
Margot Bélanger, EIT, Gérard Poitras, P.Eng.,
Anne Marie Laroche, Buquan Miao, Sherry Sparks, P.Eng., Keith Manderville*



A light canoe helps mainly with acceleration, but also speed, explained l'Université de Moncton team captain, **Mathieu Gallant**, a fourth-year civil engineering student.



UdeM canoe cracked during practice runs.

Unfortunately, the canoe constructed by the UdeM team didn't survive the practice runs.

"It was floating. We got a few good runs out of it," Gallant said.

Université Laval sweeps concrete canoe event

Quebec university teams finish first in all events at Canadian championship held in Moncton

By Kristen Vernon – Times & Transcript



*Laval 1st place winner – \$1500 Scholarship
Laval canoe name: "Iceberg"*

UdeM's canoe, which had the second lowest weight at 61 kilograms (137 pounds), started to crack during the practice run. The eight-member team hauled it out of the water with the intention of patching the canoe with duct tape. But the canoe didn't survive that trip.

"They dropped their canoe. They broke their canoe, so they were disqualified," said **Pierre Plourde**, a competition organizer.

Problems for the UdeM team—the only Atlantic university competing—started when the team placed the canoe in the humidity room to dry.

"The room didn't work properly. For the concrete to cure properly, it needs a lot of humidity," Gallant said.

"We thought this might happen," he said of the crack, noting once problems



*Weighing ETS canoe
176 lbs*

Test

"The concrete canoe competition is an opportunity for civil engineering students to... test their ingenuity."

ingenuity

with the humidity room were identified, the team didn't have enough time to build another canoe.

Despite the broken canoe, a good spirited Gallant raved about the fun weekend-long competition.

The concrete canoe competition is an opportunity for civil engineering students across the country to apply their course material and test their ingenuity as they design and construct canoes to be able to float, maneuver easily and be speedy.

The teams were judged on a design paper, oral presentation, final product and the races—which consisted of a 200-metre (218-yard) sprint and a slalom that saw participants maneuver the canoes around buoys.

The sprints were divided into co-ed, male and female races, and the slaloms were divided into male and female races.



L'Université Laval placed first in all the races.

Dennis Burns, captain of the 16-member team, attributed the team's success to the right combination of all the elements—top-notch paddling skills, a well-presented oral presentation, superb design paper and the overall design and construction of the canoe.

The team put more than 3,000 hours of work into its concrete canoe, including 1,000 hours of sanding.

May 9th's winner is invited to participate in the national championships in the United States. For the past two years, l'Université Laval has placed second in that competition. 🏆

For the first time in its 10-year history, the APEGNB-sponsored National Canadian Concrete Canoe Competition was held in Atlantic Canada from May 7 to 9, 2004. Approximately 150 engineering and engineering technologist students from across Canada competed for the National Championship and the chance to represent Canada at the American national championships next June in Washington, DC. Participants included the University of Manitoba, St. Clair College (Windsor, ON), Ryerson University, University of



City of Moncton Firefighters come to the rescue of one boat that flipped.

Toronto, Queen's University, École de Technologies Supérieur (Montreal), Université de Sherbrooke, Université Laval and the Université de Moncton.

Engenuity thanks Sherry Sparks, P.Eng., a competition judge, for the photos. Other volunteer judges of the National Canadian Concrete Canoe Competition were Margot Bélanger, EIT, ADI Limited; Anne-Marie Laroche, P.Eng.; professor at UdeM; Gérard Poitras, P.Eng., Professor at UdeM; Keith Manderville, P.Eng., Lafarge Canada; Buquan Miao, P.Eng., Professor at UdeM

For more information on the 2004 National Canadian Concrete Canoe Competition visit website <http://www.umoncton.ca/cnccb2004>. Sponsors for the event included APEGNB and the Canadian Society of Civil Engineers.

Concrete Canoe Competition Final Results

1st Place Université Laval (\$1500 scholarship and trophy)	Best mix design	Sherbrooke University
	Best final product	Université Laval
2nd Place Sherbrooke University (\$1000 scholarship and trophy)	Best rookie team	Ryerson University
	Best design paper	Université Laval
3rd Place University of Toronto (\$500 scholarship and trophy)	Best Innovation	Sherbrooke University
	Best oral presentation	Sherbrooke University
	Races overall winner	Université Laval

Three New Brunswick engineering firms were honoured in a ceremony that recognized excellence in engineering across the province. The president of the Consulting Engineers of New Brunswick,

Consulting Engineering Association Recognizes Excellence in Engineering



Al Giberson, P.Eng., Project Manager, ADI International Inc., Dave Crandall, P.Eng., Manager, ADI Moncton, Hollis Cole, P.Eng., CEO, ADI Group Inc., Gerry Moore, CEO, Island Waste Management Corporation, Sean Cashin P.Eng., Project Manager, Jacques Whitford Environment Ltd, Dave Beattie, P.Eng., Vice-President, ADI International Inc., Dale Graham, Minister of Supply and Services, Reginald Petitpas, President of Acadia Waste Petroleum Management, Roland LeBlanc, P.Eng., CENB President, Darin Evans, P.Eng., General Manager, Geomembrane Technologies Inc., and Mike Lever, EIT, Project Engineer, Geomembrane Technologies Inc.

Roland LeBlanc P. Eng., presented the awards at the Annual Meeting and Awards Dinner held in Fredericton April 30.

The winner of this year's "Innovation Award" was Geomembrane Technologies Inc. for a Gas Collection Cover System for American Crystal Sugar Corp. in Moorehead, Minnesota.

The "Award of Technical Excellence" went to Jacques Whitford Environment Limited for an Industrial Oil/Water Treatment Facility at the Dieppe Industrial Park.

The third award, "Benefit to Society", was presented to ADI International Inc. for a Central Composting Facility designed and built for Island Waste Management Corporation in PEI. ADI Limited provided engineering services for this project.

At the Annual Dinner and Showcase Awards Gala, Roland LeBlanc stated, "These projects are indicative of the engineering excellence that is carried out in this province by New Brunswick engineers every day. People all over the world have benefited from the innovation and ingenuity of professional engineers based here in New Brunswick."

CENB is an association of 38 member firms which employ over 800 engineers across the province.

OPTIMIST: The glass is half full
 PESSIMIST: The glass is half empty
 ENGINEER: The glass is twice as big as it needs to be

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Hale Fund Helps UNB Students Visit Volcanoes



W.E. Hale

The W.E. Hale Fund, established by Dr. Earnest Hale, former chair of the Geology Department at UNB, partly defrays the cost of

student-initiated field trips. The Fund gives geology and geological engineering students the opportunity to travel abroad and be exposed to field sites that relate to their academic knowledge. In the past, the Hale Fund has sponsored trips to British Columbia, Washington, the Grand Canyon and Iceland. This year, from February 27 to March 8, UNB students had the opportunity to visit the Stromboli and Mount Vesuvius volcanoes as part of Hale Trip 2004— Exploring the Volcanoes of Southern Italy, Volcanic Hazards and Engineered Controls.



Stromboli, a small island north of Sicily, is one of the world's most active volcanoes. Smaller explosions occur several times a day, but larger eruptions (fortunately!) are less frequent. Sitting at the base of Stromboli are UNB students (left to right) William Thomas, Warno Downey, Kristin Knorr, and Perry Clarke.



Mount Vesuvius, which overlooks the southeastern Italian city of Naples, has erupted more than 50 times since its most famous eruption in 79 A.D. which buried Pompeii and its sister city, Herculaneum. In 1631, Vesuvius blew its top again—killing an additional 4000 people. Standing in front of the crater from the 79 A.D. Pompeii eruption (left to right) are UNB students Warno Downey, Perry Clarke, William Thomas and Kristin Knorr.

Couturier Appointed to the CEAB

One of the Canadian Engineering Accreditation Board's newest members is Michel Couturier, P.Eng.,—the associate dean of engineering at the University of New Brunswick.

Couturier, who obtained his bachelor's degree in chemical engineering from UNB, his master's degree from M.I.T. and his PhD from Queen's University, will be officially appointed to the 15-member Board on July 1, 2004 for a three-year term.

The CEAB is responsible for accrediting Canadian undergraduate engineering programs that meet or exceed educational standards acceptable for

professional engineering registration in Canada. In addition, the Board also ascertains the equivalency of accreditation systems in other countries and for monitoring the activities of those bodies with which mutual recognition agreements have been signed.

For more information on the CEAB, visit www.ccpe.ca/elacc_overview.cfm.

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Melissa Mertz
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The explosion of Internet technology over the past few years offers important opportunities for teaching, learning, research and engineering. A multimedia format and the potential for animation are two key advantages associated with using the Internet for instructional purposes.

Animation, because it creates real-time correlations between scientific theories and applications, can illustrate physics concepts and engineering techniques in a way even laypeople can readily

UdeM Professor Designs Web-Based E-learning Platform for Engineers

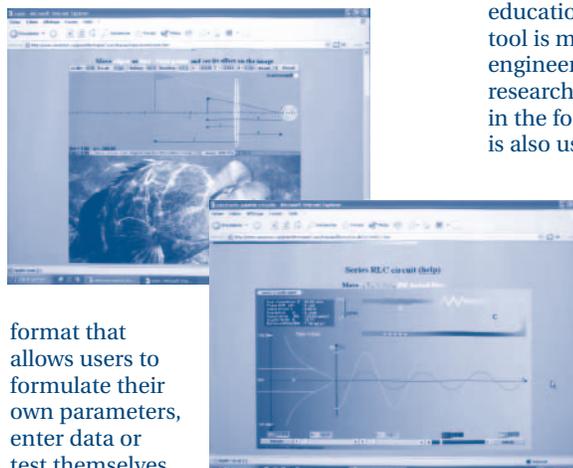
understand. Simply by clicking and dragging a mouse, without immersing themselves in mathematics, Internet users can visualize and understand difficult and complex concepts such as optical aberration, diffraction, the fractional Talbot effect, how light is injected into an optical fiber or how a token-ring communication system works. To be most effective, Web-based presentations of physical concepts or of engineering problems should employ an interactive



Dr. Habib Hamam, P.Eng.

multimedia for academic purposes as well as for research and engineering. This educational research and engineering tool is mainly oriented to students in engineering, graduate students and researchers. Though the tool is presented in the form of a popular scientific work, it is also useful for specialists in optical design, signal and image processing, communication systems, etc. The technique is based on the use of interactive, animated Java applets (more than 50), animated GIF images and sound clips to provide audio-visual reinforcement of the material presented.

For more information, contact:



format that allows users to formulate their own parameters, enter data or test themselves.

Dr. Habib Hamam, P.Eng., of the Faculty of Engineering, Université de Moncton, has developed a handy Web-based interactive tool using

Habib Hamam, P. Eng., Faculty of Engineering Université de Moncton hamamha@umoncton.ca ☎

Ancien de la Faculté d'ingénierie



Lors du banquet de la Faculté d'ingénierie de l'Université de Moncton, Campus de Moncton, le titre d'ancien de l'année a été décerné à Claude Degarie, diplômé du baccalauréat en génie civil en 1974. Originaire de Campbellton, M. Degarie habite la région de Fredericton depuis plusieurs années. Dans la photo, M. Degarie, à gauche, est accompagné de Michel Massiera, professeur de génie civil.

"Everything that can be invented has been invented."

Charles Duell
Office of Patents, 1899

"Wanna bet?"

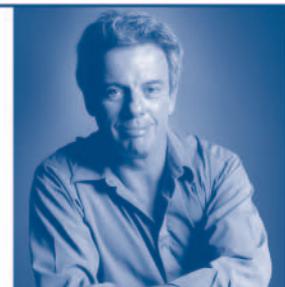
Bob McDonald, Quirks & Quarks, 2004

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Engineering professor wins national business book award

Republished from www.cbc.ca

A University of Toronto engineering professor is this year's winner of the National Business Book Award. Kim Vicente won for his book, *The Human Factor: Revolutionizing the Way People Live With Technology*.

Vicente said he was pleased that human factors engineering, a little-known body of knowledge meant to help people use technology more effectively, was being recognized.

"I truly look forward to witnessing a revolution in the way people live with technology, a revolution that will not only make our day-to-day life simpler and easier, but one that will also lead to fewer airplanes crashing down to earth, fewer nuclear power plant meltdowns spewing radioactivity into the sky, fewer catastrophic space shuttle explosions, fewer oil tanker accidents destroying our natural environment, fewer infectious disease outbreaks, and fewer children being killed by preventable medical errors," he said.

The book award includes a \$10,000 prize. The award is sponsored by PricewaterhouseCoopers and BMO Financial Group. Vicente's book was published by Knopf Canada 📖

A person with a new idea is a crank until the idea succeeds.

– Mark Twain

Ask The DPA

Tom Sisk, P.Eng.
Director of Professional Affairs



Q.

If an engineer or geoscientist appears in a court case, does the Association automatically investigate the case?

In today's business environment, it is not unusual for an individual engineer (or geoscientist) and/or their firm to be drawn into a civil court case. It may be that the engineer's firm provided significant design services to the case in question, or that as part of a consortium, the firm has accepted 'joint and several' liability. Or, the APEGNB member may appear as an expert witness for either the prosecution or the defense.

Cases might develop when a client feels he or she has not received the services contracted for or that the end result was not satisfactory. Or, it may be the APEGNB member who seeks to recover costs on a project that was delivered but not paid for by the project owner for one reason or another.

Our professions' Code of Ethics gives engineers and geoscientists some guidelines when dealing with clients and the public. A few relevant sections include:

Engineers and geoscientists should:

- 3.3 when giving testimony before a court, commission or

other tribunal, express opinions only when they are founded on adequate knowledge and honest conviction;

4.2 act with fairness and justice between the client or employer and the contractor when dealing with contracts;

4.4 ensure that the extent of their responsibility is fully understood by each client before accepting a commission;

The Engineering and Geoscience Professions Act, as it discusses discipline, does refer to the case where a member, licensee or holder of a Certificate of Authorization has been convicted of a criminal or quasi-criminal offence in Canada or elsewhere. Under these circumstances, if a complaint is received by the Association from a valid source, and the member has been convicted, the complaint will be referred to the Professional Conduct Committee.

Being drawn into court proceedings doesn't automatically trigger an investigation, but, there are cases where a conviction might lead to a complaint being filed that does get investigated by the Professional Conduct Committee.

A.

**If you have a regulatory question about discipline or enforcement,
e-mail sisk@apegnb.com.**

Production of pure maple syrup at Granite Hill Maple Products has changed over the years from a commercial operation to a “serious hobby.”

Ernie McLean, of Granite Hill, located south-east of Nackawic on Route 105, says that he ceased operation as a commercial producer of maple syrup a few years ago, but he missed it so much he returned to production, but only as a serious hobby.

“I never sell any of the product, it is only made to give away now. The maple syrup has been sent away as far as Australia, New Zealand, England, just about every province in Canada and the Northwest Territories and many states in the United States.”

It is now going to Haiti as a sweet treat in a package being sent to a member of the military. (It has also travelled) with McLean’s grandson to Mexico where he (was visiting) friends.

The men who join McLean in his venture (APEGNB engineers **Walter Nason, P.Eng.**; **Ed Smith, P.Eng.** and **John Bliss, P.Eng.**)

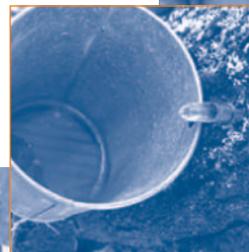
Sweet Season

By Brenda MacMinn – Reprinted with permission of the Daily Gleaner

jokingly call themselves the “Sapsuckers of America” as they don their caps that read Granite Hill Saps.

McLean says they sit around the cedar-lined sugar shack while the sap is put through the evaporator and tell lots of stories and some lies, he adds with a smile.

“Our boast is that it is the finest maple syrup obtainable, but you cannot buy it,” chimes in John Bliss as he stokes the fire of the evaporator using several cords of wood during the boiling-down process.



Approximately 700 spiles are used to obtain the sap in buckets hung on the sides of the Rock Maple trees on McLean’s Granite Hill property. A hole is pre-drilled and the tap inserted into the tree trunk about two and one half inches. A sap bucket is then hung on the spile.

When the ideal weather conditions arrive and the sap runs, a large four wheeler is used to bring the sap back to the sugar



scientific process

It’s a scientific process with the experienced men (three engineers, a banker, and an administrator) watching numbers on testers and gauges as the syrup is drawn off the Vermont-produced evaporator made by the Algier Evaporator Company.



“This machine evaporates about 25 gallons per hour,” explains McLean. “We had a 39 hour continuous boil last year. We worked in shifts to get it all done.”

McLean tells his secret uses for the golden liquid – all over vanilla ice cream, on baked squash, pork chops fried in a soya sauce/ maple syrup combo and grilled and a little drizzle on his mashed potatoes. And then, of course, there are pancakes and French toast, but that goes without saying.

shack in a large blue 45-gallon plastic drum. There it is pumped into a 500-gallon holding tank until the fires are started in the evaporator.

McLean is careful with his trees using the rule that a 10-inch diameter tree can only support one tap, and for each additional two inches, another tap can be inserted.

“If you do this judiciously and don’t put in more than you are supposed to, in

succeeding years you can move around the tree, up or down," says McLean.

Bliss explains that a good tap in a good tree with ideal weather conditions can fill the sap bucket in a day.

"Once you tap a tree, it becomes the taskmaster," laughs McLean, saying that it takes days that range in the 7 °C and nights that go down to -7 °C to make the sap flow upward from the roots.

"There is about a three-week window of opportunity, usually anywhere from the 18th of March to mid-April."

It was a little late this year, he says. "We tapped on the 24th this year and that's quite late."

"It all depends on the weather," he says.

"It is the slow boiling process that gives the syrup its flavour," says John Bliss, who stokes the fire with a combination of softwood and hardwood. "It takes about 30-40 gallons of the sap collected at the spile to make one gallon of pure maple syrup."

As soon as the buds begin to swell, sap collection ceases.

"It makes terrible tasting syrup then," says McLean, "and the season is over."

For 10 years, McLean was a commercial producer and was the first in the Maritimes to use the reverse osmosis process, but it became harder and harder to make a profit, he says.

"Quebec makes about 75 percent of the world's maple syrup and in those days there were all kinds of government subsidy programs for Quebec maple syrup producers. They could sell syrup down here cheaper than I could make it and sell it here. That's what I was competing against, so I finally went out of production."

It's a scientific process with the experienced men (three engineers, a banker, and an administrator) watching numbers on testers and gauges as the syrup is drawn off the Vermont-produced evaporator made by the Alger Evaporator Company.

When the thick syrup reaches a specific gravity of 1.25 to 1.27, it is filtered into large stainless steel buckets. It is then placed in a holding tank awaiting the final boiling, filtering through a seven lined filter.

It is finished up over a propane burner, says McLean, because there is a little more control than with the wood. Filling the slim-necked bottles finishes the process.

McLean seems content with his decision to make the syrup on a "hobby" level, although he still puts out 50 to 60 gallons of syrup which translates into about 650 bottles of the golden sweet treat.

His team of buddies looks forward to spring so they can help him with the project. With the label "pure maple syrup" you can be assured there are no additives or preservatives.

"It's federally legislated," says McLean, "that in order to call it pure there can be nothing added." ☺

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Foreign-trained engineers who arrive in Canada with high hopes, only to have their careers derailed, got a big boost in May when the Canadian Council of Professional Engineers (CCPE) took steps to change the way skilled immigrants are counselled, licensed and recruited.

The council approved a wide-ranging plan to help integrate thousands of highly trained workers who enter the country each year but can't practise in their field because of red tape and cultural obstacles to employment.

Barriers to foreign entry are common among the self-regulated professions in Canada, including medicine and law.

But the problem is most acute for engineers because they account for a majority of skilled immigrants. A 2001 survey by the 160,000-member engineers' council showed 63 per cent of skilled workers entering Canada with hopes of working in a regulated profession identified themselves as engineers.

A key element of the plan will be the creation of "provisional licences" in all provinces and territories. Similar to a driver's permit, the provisional licence, which will be valid for two years, will instantly qualify immigrants to work in an apprenticeship capacity as they pursue supplementary training toward a permanent licence.

A key element of the plan will be the creation of "provisional licences" in all provinces and territories.

Marie Lemay, P.Eng., chief executive officer of the CCPE, said that, until now, many foreign-trained engineers have been caught in a Catch-22 situation, unable to find permanent employment because they had no domestic work experience and unable to get that experience because their degrees had no currency with employers.

Plan gives boost to engineers trained abroad CCPE approves creation of provisional two-year licences

By Beppi Crosariol—Professions Reporter, The Globe and Mail

"To get that work experience, you have to get a job, but employers didn't know how to validate the credentials," Ms. Lemay said.

"With the provisional licence, the employer knows your educational credentials have been checked."

Provisional licences have already been adopted by several provinces, including Ontario, but they will now be rolled out nationally.

Under the changes, foreigners will also be able to prepare for certain Canadian requirements prior to emigrating, such as writing the professional practice exam.

"It's a lot easier when you do it in your home setting," Ms. Lemay said. "Right now, they can't do it until they get here."

A common complaint of skilled workers and employers alike has been that there is no official source of information to assess foreign qualifications.

In response, the engineers' council will set up an official database of recognized foreign degrees to provide would-be immigrants with foreknowledge of their chances of obtaining work, as well as the additional

education that may be demanded.

Also, the council resolved to create a single-source website detailing Canadian requirements in each province, bypassing the sometimes ad hoc and distorted advice given prospective engineers by provincial immigration officials, Ms. Lemay said.

"It's a multijurisdictional nightmare."

Not all of the resolutions are targeted at dismantling bureaucratic obstacles. Some are aimed at demystifying cultural idiosyncrasies that have sabotaged many a job interview.

In India, for example, "they find it rude and aggressive to look someone in the eye," said Deborah Wolfe, P.Eng., the CCPE's education, outreach and research director and a former military engineer who worked in India and Pakistan.

"In Canada, if you go to a job interview and someone doesn't look you in the eye, they're going to give an impression that they're shifty."

In view of such differences, the council plans to create a "working in Canada" seminar for new immigrants.

The changes, passed at the CCPE's annual general meeting in May in Charlottetown, are being touted as a potential model for other professions.

"The feedback that we've had is that the other professions have been paying attention," said Darrel Danyluk, P.Eng., an engineering professor at the University of Calgary and chairman of the steering committee that drafted the recommendations.

The recommendations were the product of 17 months of consultation between engineers, government officials, industry and new immigrants.

"It's not an engineers-for-engineers solution," Mr. Danyluk said. ☺



The Challenges & Rewards of Continuing Education

Contributed by Mary Lou Arsenault—Senior Education Specialist, Custom Technical Training

Canadian organizations that prevail in today's competitive economy will be the ones that take bold steps to increase their commitment to learning and focus their energies on building a learning culture that fuels innovation (Conference Board of Canada, 2003).

Challenges For the Organization:

Today's vision of corporate success increases pressure on organizations to become more strategic about addressing employee training and professional development. A 'learning organization' embraces four key dimensions: vision, culture, learning systems and knowledge management. Continuous learning is the driving force behind the organization's success in all four dimensions. Organizations that only pay lip service to continuous learning will not achieve this vision.

Engineering firms have traditionally had an 'ad hoc' approach to continuous learning, with most of the emphasis being on technical training. This approach reinforces the cultural message that 'soft skills' have less value in the technical world. Numerous studies, however, have shown that **effective 'people practices' are as vital to a company's success as cutting-edge technology.**

Investment in a corporate 'learning culture' goes beyond technical training programs. It requires a strong commitment from senior management to integrate continuous learning throughout the organization. A key component is the drive towards more interpersonal skills development for technical personnel.

The challenge for organizations today is to recognize that 'continuous learning' is not simply a cost, but a strategic investment that can act as a recruitment tool, improve employee retention and provide a competitive advantage.

The Rewards

The Conference Board of Canada's 2000 survey of all major industries, as well as private and public organizations, found those that defined themselves as a 'learning organization' are almost 50% more likely to report better overall levels of profitability. This included greater success with employee satisfaction and retention, product quality and customer satisfaction.

Similarly, a North American study by Watson Wyatt Worldwide indicated improved 'people practices' raised shareholder value creation up to 30%.

Investment in a true "learning culture" positively impacts an organization's recruitment and retention rates, performance outcomes, and executive development; as well as the bottom line.

Challenges for the Practicing Professional

Provincial regulatory bodies require engineers and other professionals in the engineering sciences to engage in a variety of developmental activities, in order to maintain registration.

(Engineering Institute of Canada)

With the shift to corporate 'learning cultures', career advancement in today's professional organizations demands a level of interpersonal skill (i.e. communication, team development, conflict resolution, problem-solving, etc) at least equal to technical expertise.

For professionals in the engineering field, technical skills training is paramount, and often viewed as the only developmental focus. Choosing programs that are accessible, address in-depth technical training needs, and accommodate application of the concepts and skills offered, is a big challenge. The emerging emphasis on interpersonal skill development adds another demand to their overloaded work /training schedules.

When pursuing continuing education, most practicing professionals know what technical knowledge they require, but have little experience with interpersonal or



'professional' development programs.

Finding interpersonal skills training that fits the particular culture and dynamics of the engineering world can

be a frustrating task. Continuing education programs that include both technical and interpersonal skill development would be an effective solution, but do they exist?

It is possible for a learning event to include both technical knowledge exchange and the opportunity to acquire interpersonal skill development. The key is the program's instructional design.

Technical professionals bring knowledge, skills and experiences to the learning event. A learning design that involves interaction with and between the participants, as well as the subject matter expert, creates a collaborative knowledge/skills exchange for both technical and interpersonal learning.

Technical and professional continuing education programs that offer the combination of knowledge-based information, designed specifically to meet the participants' practice needs, and a dynamic, action learning process, grounded in a small group-based experiential learning model, can create a learning environment most conducive to such knowledge/ skill development.

The Rewards:

Pursuing continuing education, as a professional development goal, results in the acquisition of knowledge, skills and experience that enhances professional status, increases marketability and ensures better work product.

Accomplished technical professionals balance the technical expertise required to understand the job to be done with the interpersonal expertise to communicate, motivate and collaborate effectively with all those involved in doing the job efficiently and cost-effectively.

• *Mary Lou Arsenault is a Senior Education Specialist with CTT-Custom Technical Training, a recently established training company that focuses on the continuing education needs of senior technical professionals in Atlantic Canada.* ☺

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Contest Corner

The Spring *Engenuity* contest generated a record number of responses from across the continent—from Edmundston to Edmonton and Nova Scotia to North Carolina!

As many of you know, the correct answer to “**Why Does a Golf Ball Have Dimples?**” was “D: Because they help provide lift.”

Dimples on a golf ball create a thin turbulent boundary layer of air that clings to the ball’s surface. This allows the smoothly flowing air to follow the ball’s surface a little farther around the back side of the ball, thereby decreasing the size of the wake. A dimpled ball thus has about half the drag of a smooth ball. This

aerodynamic principle is the same as the one that causes airplanes to lift off the ground.

Congratulations to the five winners listed below whose names were drawn on May 15.

- **Yvon Nowlan**, P.Eng.
Moncton, NB
- **Corey Wile**
Fredericton, NB
- **Ron Derworiz**, P.Eng.
Edmonton, AB
- **Tony Whalen**, P.Eng.
Fredericton, NB
- **Bill Luff**, P.Geo.
Lower Sackville, NS

Win a Handy, Trendy, Fall Prize Package!

Get ready to discover the splendor of autumn in New Brunswick with a fabulous fall APEGNB prize package. Answer the contest question correctly and you could win:

- **An APEGNB Rockin’ Clock.**
Designed in Sweden, it’s the perfect size and shape to take on a camping trip.
- **A 30+ -piece APEGNB Safety Kit** that includes bandages, blanket, flashlight and other emergency supplies. Perfect for your home, car, ATV or boat.

• A sturdy **APEGNB Backpack** with dual, zippered front pockets.
All you have to do is e-mail your answer to info@apegnb.com by August 15, 2004. The first five correct submissions drawn win the prizes.



Which province is Canada’s most heavily forested?

- A. Prince Edward Island
- B. British Columbia
- C. New Brunswick
- D. Alberta

Here, at the University of New Brunswick's department of civil engineering, we thought we would shake up our students a little this year and send them to San Francisco for a five-day technical tour.



Postcard From San Francisco

Contributed by Marty Gordon, P.Eng—Assistant Professor of civil engineering, UNB

On Monday, the long-awaited technical tours began. The first was a private tour of the **Bay Bridge construction project** that has begun to replace the eastern leg of this vital link between Oakland and San



UNB's civil engineering undergraduate students arrive at the Golden Gate Bridge

Once in San Francisco, it didn't take long for the locals to welcome us in classic style.

The trip was organized and primarily funded by the group of 11 undergraduate students who were determined to see the Golden Gate Bridge during March Break.

After months of planning and fundraising, the students and I packed our bags and set off for the West Coast in late February. Once in San Francisco, it didn't take long for the locals to welcome us in classic style.

Having arrived on a Friday, we spent the weekend visiting the Bay area's many tourist attractions. While exploring the parks at the **Golden Gate Bridge**, a stop at **Muir Woods National Monument** allowed the students to experience the unique ecosystem of an old-growth coastal redwood forest and the fantastic vistas of the foothills north of the bridge.

Of course, no trip to San Francisco would be complete without a tour of the former U.S. federal prison on **Alcatraz Island**—one-time home of Machine Gun Kelly and the Birdman. Stepping off the ferry, you immediately feel the isolation of the island in surreal style with audio tours.

To round out the weekend, some in the group ventured off to **Lake Tahoe** for a day of skiing while others explored the coastal beaches and lively San Francisco harbourfront.

Francisco. The tour started with a technical briefing, followed by a tugboat ride to tour the construction of the piers and footings for the eight-lane facility. In the afternoon, the tour shifted 60 miles inland to Stockton, to see



Golden Gate Bridge Visit

the pre-fabrication site for the bridge sections, and en route, we passed **one of the world's largest wind generation sites** in Altamont.

Tuesday began with an overview of the **Bay Area Rapid Transit's (BART) facilities** and their current refurbishment plans for earthquake readiness. BART staff also guided the students through an integrated community centre concept site



UC Berkeley Visit

they had just recently finished constructing at an existing BART station.

Next stop was a tour of **UC Berkeley** that was given by a civil engineering student



attending that university. Students were very impressed by this leading school and enjoyed getting the inside story from a colleague.

The group also received an excellent tour from engineering staff working on-site at

The Golden Gate Bridge undergoes a quake retrofit.



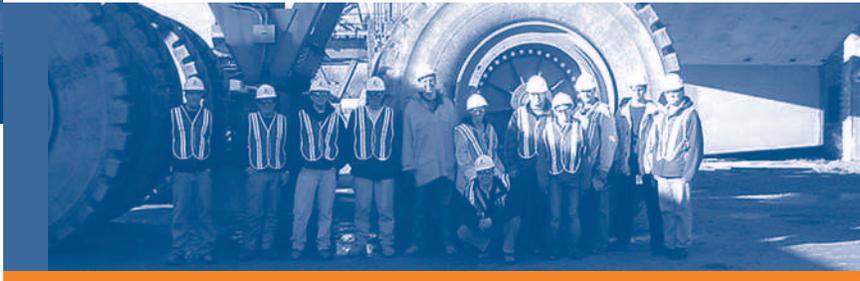
the **Golden Gate Bridge**. The bridge has been undergoing an earthquake retrofit recently, and students were given a project briefing followed by a

truly hands-on tour of the project. Students were shown innovative methods of strengthening the bridge's footings, anchor pier and metalwork superstructure. One of the biggest engineering challenges was to find a way to make the improvements without altering the historical appearance of the bridge.

The day finished with a tour of **Stanford University** in Palo Alto and a hockey game between the **Montreal Canadiens** and the **San Jose Sharks**. With a quick tour of the **San Francisco Giants** new baseball stadium, and some frantic souvenir shopping, it was time to head for Oakland Airport for the return trip.

After a red-eye flight, the group spent a night in **Boston** on their way home to partially recover from jet lag. They took in Beantown's sights including Harvard, the Fleet Centre and the Boston Market.

The civil engineering department considered the tour to be a complete success and has future plans for similar tours. Engineering education must expand student horizons in both the classroom and in the field. Tours like these help the University of New Brunswick produce our future engineers with a broader perspective of their profession. ☺



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ELECTRICAL

MA04-J351B.Sc. Electrical Université de Moncton 2001; B.Eng. Electrical (Co-op Program), 3.6/4.3 GPA, UdeM, 2001, Reg'd EIT; Seeking employment in any area of electrical engineering. Electrical design, project, budget and resource management of test benches for manufactured system, wrote and executed test processes for prototype designs, Micro Optics Design Corporation. Verified software of latest optical based product, wrote and executed test cases, tracked problems in database, provided feedback to design team, verified fixed problems, Nortel Networks. Co-op term: Designed electrical hardware (sensors and relay for valve) for controlling movement of nitrogen containment box. Wrote embedded controls software to control nitrogen box and coating pump. Drew schematics for new designs. Performed electrical troubleshooting on problematic systems, Micro Optics Design Corporation. Co-op term: Assistant Project Manager for work in relation with VIIIe Sommet de la Francophonie, worked in relation with RCMP to setup their various sites, worked with hotels to add extra connections for delegates, NBTel. Fluently bilingual (French and English). Personal and technical skills: Leadership, honest, hard working, motivated, analytical mind. Computer skills: Promis.e, Dynamic C, Unix, MS Project, MS Office.

MA04-J352B.Sc. Electrical UNB Student seeking part-time employment in Fredericton prior to graduation April 2004 and full-time after graduation. Background in repair and military. Completed control system and power system courses.

MECHANICAL

MA04-J451B.Sc. Mechanical UNB 2003; Currently have EIT status with APEGNB. Background in Manufacturing, Machine Design, R&D, and some quality management. Graduated from COOP. Available immediately for full time employment. Bilingual.

NON-REGISTERED

MA04-700 Bachelor of Engineering Electrical Zhengzhou U., China 1993; M.Eng. UNB Electrical Engineering Student; Seeking full-time employment as electrical engineer; In the process of registration as professional engineer with APEGNB; Extensive experience in power system design, test, protection and control; Proficiency in Matlab, AutoCAD, PSCAD; Excellent communication, analytical abilities, project management and problem solving skills. Relocation is not a problem.

CSCÉ Infrastructure Conferences – October 20-22, 2004

The Canadian Society for Civil Engineering (CSCE) Atlantic Region Conferences 2004 (comprised of two parallel

sessions on civil engineering and hydrotechnical engineering) will be held at the Fredericton Inn, Fredericton, NB, from October 20 to 22, 2004. The theme of the conferences will be *Atlantic Canada's Infrastructure – Challenges and Needs*. The conferences will provide an opportunity for the practicing engineers, public servants, municipal officials, faculty members and students to exchange information on recent and

ongoing projects, government programs, research and innovative approaches to engineering problems and infrastructure-related issues.

For more information or to register, contact:

Andy Small, P.Eng.
AMEC Earth and Environmental Ltd.
25 Waggoners Lane
Fredericton, NB E3B 2L2
Phone: (506) 458-1000
Fax: (506) 450-6124
andy.small@amec.com ☎

Newfoundland Scores Gold at the Annual Atlantic Engineers Invitational Hockey Tournament

From March 27 to 29, five teams from across Atlantic Canada arrived in Crapaud, Prince Edward Island, to play a little hockey and do a lot of socializing! Among the participants was APEGNB's Moncton Branch—the tournament's first-ever co-ed team.

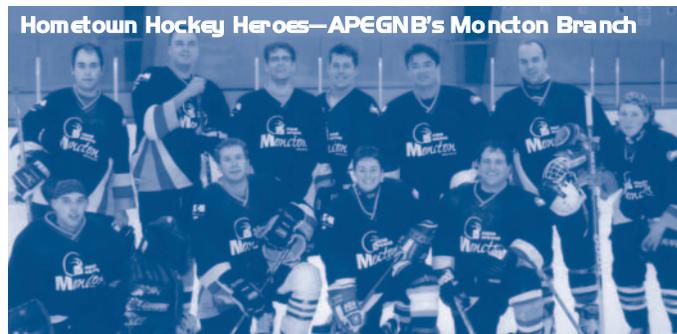
Although Moncton experienced a few respectable losses (well, actually all five preliminary games were lost), the APEGNB team was confident and energetic as they took on the mighty Newfoundlanders on the last day of the tournament. Unfortunately, despite a valiant attempt and determined spirit, the Moncton Branch was shut out by the undefeated Newfoundland team.

"We may not have had the most successful team on the ice," says Team organizer, **Serge Doucet, P.Eng.**, "but I know we had the best looking jerseys."

The APEGNB Moncton Branch Event would like to thank all their sponsors including Labatt, CSA Enterprises Limited, Focal Sales Inc., and Ultra Alarm Services. Eaton Electrical (Cutler-Hammer) paid for Moncton's jerseys and the APEGNB Moncton Branch covered the team's registration.

To register for next year's hockey invitational being planned for Halifax in April, 2005, contact:

Steve Murphy, P.Eng.—CBCL Halifax, NS
stevem@cbcl.ca ☎



Hometown Hockey Heroes—APEGNB's Moncton Branch

Back Row L to R:
Gilles Comeau, EIT;
Steven Lebouthillier, EIT;
Mike Cormier, P.Eng.;
Victor Cormier, P.Eng.;
Dave McAllister, P.Eng.;
Shawn Aucoin, EIT;
Margot Belanger, EIT
Front Row L to R:
Joey Duguay;
Rene Legacy, EIT; Anne-Marie Laroche, P.Eng.;
Serge Doucet, P.Eng.

APEGNB Celebrates 85 Years

February 18 & 19
Lord Beaverbrook Hotel
Fredericton, New Brunswick

The Economics of Ethics

Join colleagues and friends...

as we celebrate the 85th anniversary of APEGNB at the 2005 Annual Meeting.

The theme of this year's event is "*The Economics of Ethics*". Guest speakers will discuss

- the impact of ethics on the development of new technologies
- ethical considerations when doing business on a global scale
- how ethics contributes to your company's bottom line

at the
2005 Annual Meeting



In addition to Saturday morning's Annual Meeting, there will be:

- Technical sessions and tours
- Viva Las Vegas Casino Night
- Magical entertainment
- Annual Banquet

This is one Annual Meeting you can't afford to miss!

If you are interested in volunteering for the committee, please contact Usha Kuruganti, P.Eng. at ukurugan@unb.ca.

H.J. Irving - J.J.C. Picot Wind Tunnel

Accurate information about the size and frequency of droplets produced by any type of liquid dispersal system is the first and probably most important step to the most efficient design of any aerial spray application.

Relocated in the spring of 2003, and extensively upgraded, the H.J. Irving - J.J.C. Picot Wind Tunnel testing facility is used for droplet size determination and other research purposes. The 15 metre long (50 ft) wind tunnel is located at the Acadia Forest Research property 22 kilometres west of Fredericton (near Noonan) and is an open circuit tunnel with a one-metre (40 inch) diameter closed test section. A 250-horsepower, 550 volt electric motor with a computerized variable frequency speed controller produces a maximum velocity of 250 km/hr (155 mph) through the test section. A boom and test nozzle is placed within the air stream and a Malvern 2600C laser particle spectrometer is used to

measure the quantity and size of droplets produced. The 2.6 x 3.5 metre (8.5 x 11.5 ft) filter section at the outlet collects the droplets.

For more information, call Gerry Cormier, P.Eng., Wind Tunnel Manager at 506-446-6930 or e-mail gcmormier@forestprotectionlimited.com.



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*as featured on the cover of Air & Space (Nov. 2001)