

The official  
publication of  
the Association  
of Professional  
Engineers and  
Geoscientists  
of Manitoba

# THE KEYSTONE PROFESSIONAL

FALL 2014

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Second MCWESTT  
Conference  
Coming in 2015

2014 MLEC  
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Engineering  
Licensee Category  
is Coming



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Design of Sanitary Sewer and Storm Water Drainage Systems - Workshop	05-1119-2297	Winnipeg, MB	November 24-27	28
Flood Control, Land Drainage and Stormwater Management	05-0230-2305	Winnipeg, MB	February 12-13	14
Structural Engineering for Non-structural Engineers	05-0224-2305	Winnipeg, MB	February 23-26	28
Flood Control, Land Drainage and Stormwater Management	05-0326-2305	Regina, SK	March 19-20	14
<b>ELECTRICAL</b>				
Modern Power System Protective Relaying	05-0222-2305	Regina, SK	February 2-4	21
<b>ENVIRONMENTAL</b>				
Understanding Environmental Regulations	05-0114-2305	Winnipeg, MB	January 28-30	19
Risk Assessment of Contaminated Sites	05-0225-2305	Winnipeg, MB	February 25-27	21
<b>MECHANICAL</b>				
A Practical Understanding of Industrial Piping and Associated Equipment	05-1205-2297	Regina, SK	December 3-5	21
Mechanical Engineering for Non-Mechanical Engineers	05-0223-2305	Regina, SK	February 9-13	35
Optimizing Equipment and Facilities Maintenance Programs	05-0319-2305	Regina, SK	March 9-10	14
Practical Understanding of In-Plant Cranes and Lifting Equipment	05-0320-2305	Regina, SK	March 11-12	14
<b>WEBINARS (All times are in EST)</b>		<b>TIME</b>		
Harness the Business Writing Process (Emphasis on Email)	1101-WEB14	12:30 - 2:00 pm	November 7	1.5
Google Apps for Engineers	0103-WEB15	12:30 - 2:00 pm	January 8	1.5
Wearable Computing For Engineers	0104-WEB15	12:30 - 2:00 pm	January 15	1.5
Social Media for Engineers (including Facebook, Google+, Twitter, LinkedIn)	0105-WEB15	12:30 - 2:00 pm	January 21	1.5
Tolerance Stack Analysis	0101-WEB15	12:00 - 2:00 pm	January 29	2
Unleash Your Inner Picasso: Data Visualization and Mapping Tools for Engineers	0204-WEB15	12:30 - 2:00 pm	February 11	1.5
Google is Not Enough for Engineers: The Best Search Tools You Aren't Using	0203-WEB15	12:30 - 2:00 pm	February 17	1.5



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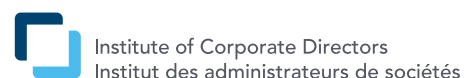
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**MODULE II:** January 16-18, 2015  
**MODULE III:** April 10-12, 2015  
**MODULE IV:** June 5-7, 2015

**APPLICATION DEADLINE:** October 2, 2014  
**SESSION CODE:** Winnipeg DEP 1

Enrollment is limited and admission criteria apply.



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## Fall 2014

Published by the Association of Professional Engineers and Geoscientists of Manitoba  
870 Pembina Highway, Winnipeg, Manitoba R3M 2M7  
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# THE KEYSTONE PROFESSIONAL

The official publication of the Association of Professional Engineers and Geoscientists of Manitoba



# FALL 2014

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Publication management and production by:



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[www.kelman.ca](http://www.kelman.ca)

Managing Editor: Scott Kelman  
Art Design/Production: Kiersten Drysdale  
Marketing Manager: Jeff Kutny  
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Send change of address to:  
The Keystone Professional, APEGM,  
870 Pembina Hwy, Winnipeg, MB, R3M 2M7  
e-mail: [apegm@apegm.mb.ca](mailto:apegm@apegm.mb.ca)  
[www.apegm.mb.ca](http://www.apegm.mb.ca)

Publications Mail Agreement #40065075 Return undeliverable copies to: [lauren@kelman.ca](mailto:lauren@kelman.ca)



# 5 not-so-true ideas about life insurance

(and how to get your facts straight)

1

## Employer benefits are enough

Employers usually provide life insurance that's 1–2 times your salary. Is that enough for your family? If you change jobs, will you be able to take your coverage with you?



1–2 times your annual income is usually provided by employers



7–10 times your annual income is often cited as the rule of thumb for coverage amount<sup>1</sup>

2

## Optimists need not worry

Plan like a pessimist — hope for the best but prepare for the worst — especially when going through a life-changing event.

Marriage

Mortgage

Children

New job

4

## They're all the same

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3

## It's complicated

How much insurance is right for you? It depends on your situation. Here's a formula you can use to figure it out:<sup>2</sup>

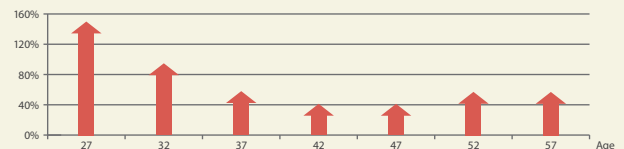
**A - (B + C + D + E) = Insurance amount**

- A** = Your family's **assets** and income
- B** = Your family's monthly **budget** needs
- C** = **Costs** associated with your death
- D** = **Debts** to be paid off
- E** = **Exceptional expenses** (e.g., education costs)

5

## The lowest price is right

Many advertised rates may seem low at first. But see how the average rate of our 3 lowest-priced competitors **exceeds** our rates over 15 years.<sup>3</sup> For example, a 32-year-old male non-smoker who buys \$100,000 coverage from them would end up paying **95% MORE** over 15 years.



<sup>1</sup> [http://money.cnn.com/retirement/guide/insurance\\_life.moneymag/index11.htm](http://money.cnn.com/retirement/guide/insurance_life.moneymag/index11.htm)

<sup>2</sup> [www.gailvazoxlade.com/articles/just\\_in\\_case/how\\_much\\_insurance.html](http://www.gailvazoxlade.com/articles/just_in_case/how_much_insurance.html)

<sup>3</sup> LifeGuide® Release 2013.7A



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## A Community to Build Professional Identity

**“Living my life is taking up all my time!”**

When I heard an engineer say this to another engineer, I understood it as a comment on how our day to day obligations can easily delay the opportunity to take stock of ourselves. In the midst of schedules, responsibilities, and unexpected difficulties that shape our weeks, months, and years, we often forget to take the time to ask ourselves why we're doing the things we're doing, where our best qualities are lived out, and what kind of life we want to craft for ourselves.

An organization can also fall into this pattern, focussing on the current fire to be put out and continually delaying a hard look at its sense of purpose and its organizational health. As the engineering and geoscience professions, we have a long-standing concern that our professions are not well-understand by the public and by government. In fact, two of APEGM's strategic priorities through 2017 are to enhance our perception with the public and our visibility with government.

Yet, rather than focussing firstly or solely on what we think we need the government or the public to know, understand, or do in relation to our profession, I firmly believe that our external goals and priorities flow most naturally and effectively when we've first spent time on our own corporate health and well-being.

I have pondered how APEGM's strategic priorities of recruiting & retaining a diverse membership, enhancing our public image, and government relations can find a greater sense of action around the Council and committee tables and indeed in the life of the membership. Rather than jumping on the moral weight of policies or calls of duty to get people on board with an organizational vision, I believe that engaging people comes down to each person feeling a sense of personal identity and belonging within the larger community.

APEGM is a community of 7000+ professional engineers & geoscientists that wants to be *your* community and help you build your professional identity as engineers and geoscientists.

For newly-graduated engineers, APEGM is a community within which supervisors and colleagues have committed to providing meaningful supervision and career support as EITs become a P.Eng.

At every career stage, APEGM is a community that offers us the context within which to shape our understanding of our ethical responsibilities and perspectives, give and receive mentorship, and create a space where discussions of technical, professional, and ethical issues extend each other's horizons.

The APEGM community invites us all to embrace the identity of an engineer or geoscientist beyond our technical contributions in employment, and to consider ourselves as part of a community that has an active role in shaping our world. In a world that will approach 9 billion people in many of our lifetimes, where consequences of climate variation confront us, where economic development and social upheaval often exist in an uneasy tension, our attention turns to sustainability: sustainable and healthy communities and countries built



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on things like solid infrastructure, reliable energy supply, clean water, accessible medical care, safe and secure food production and distribution, and access to education. These are not solely technical issues, but they are all issues where our profession plays a role.

Being a part of APEGM is being part of a community that engages us with other people who also want to explore how our work as individuals and how our profession collectively promotes economic development, environmental sustainability, and ultimately human justice and equity.

At any career stage we may find ourselves at a desk, a construction site, a shop floor, or a boardroom mired in the details of a bug in the code, an excavation unexpectedly filling with water, quality problems on a production line, clients changing their minds, and a myriad of other circumstances that command our situational attention. In this, the effort to step back and remind ourselves how our work contributes to greater objectives requires deliberate effort.

APEGM is here to help promote the connections, the conversations, and the relationships that help us work out these

possibilities in our own professional lives.

Some of you may be thinking that I've got it all wrong – that APEGM is really not about a community for engineers and geoscientists to help us develop our professional identity, but that APEGM is really there to govern the profession on behalf of the public of Manitoba. That is absolutely correct. APEGM exists for the public, regulating the profession, and in doing so, the members of APEGM benefit from the trust and esteem of the public who can rely on regulation as an indication that they are receiving competent and qualified engineering and geoscience services. Further, the public knows that through APEGM, accountability exists when the public interest is compromised. We're doing well in this regard, and strong self-governance has led to a high degree of public trust in engineers and geoscientists.

So how does this fit together? How is community tied to governance?

Paul Amyotte, P.Eng., president of Engineers Canada, recently said "Engineers Canada is in the business of building community. If we're going to gain and maintain the trust of our owners, we first have to build community".

I agree with Paul: If APEGM is going to gain and maintain the trust of our moral owners – the public of Manitoba – then we first have to build community, and that community begins with ourselves. A strong community facilitates an individual sense of identity and commitment while honouring diversity and differences in its composition. A professional identity and sense of belonging in the community in turn lead to service in the broadest sense: service as finding our personal fit and contribution in the larger profession. When we focus on being a healthy community where everyone can see themselves reflected, then our external strategic priorities of recruitment & retention, public perception, and government relations will flow naturally.

In the next issue of this magazine, you'll be introduced to Howard Procyshyn, P.Eng., the next president of APEGM. Howard has already been an important part of my own experience of the APEGM community. I've watched and learned from his consistent efforts to find outcomes on issues that reflect all participants' interests and priorities. I look forward to supporting Howard's leadership of the APEGM Council in 2014/2015. ☺



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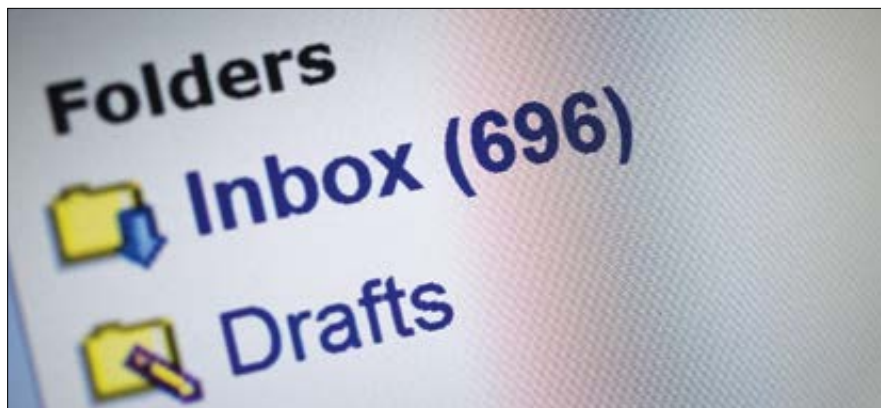
## Scan Reading Disorder

There's a new disease out there. It's called SRD – Scan Reading Disorder. Have you heard of it? It's a newly diagnosed behavioural problem resulting from the overuse of email and online browsing. It's closely associated with the visual impairment that sometimes results from squinting and staring at your mobile device or tablet for long periods.

Some of the symptoms include: reading and immediately forgetting what was in the email; spying your name in the third paragraph and skipping the first two; reading every other line; reading but mixing-up the details; looking for action items connected to your name and disregarding all others; ignoring the email because your name is in the "CC" line and not the "TO" line; composing an email and forgetting to send it while thinking that you had; reading and not remembering a thing. These are just a few symptoms – there are likely many more. What are you experiencing?

### Too Many Emails

We get too many emails; hundreds per week. Some of you may get a hundred or more per day. One researcher says we send and receive on average 121 emails per day.<sup>1</sup> According to the CIRA – the Canadian Internet Registration Authority, the average Canadian spends 41 hours on the internet each month.<sup>2</sup> Too many emails and too much time browsing. I know one engineer that has given-up trying to empty their inbox. Too many unread messages and too little time to read and respond. It's no surprise that we get fatigued by the electronic overload caused by computers, mobile devices and the internet. With all the information coming-in, we're unable to keep up. In an attempt to cope, we scan-read. Are you succumbing to SRD?



### There is a Cure

Is there a cure? Are we all destined to succumb to this disorder over time? No. There is hope. How do you prevent SRD? Consider the following steps:

- Try harder. Don't quickly scan through an email. Make a deliberate attempt to

slow down and resist the bad habit of jumping ahead.

- It takes self-discipline; knuckle-down and slow down.
- Print the page and use a high-lighter to make notes. Carry the page to a meeting for easy reference.

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- Set a quota for the day, and take a break when you've achieved your quota. Decide what number is right for you.
  - Talk to your co-workers at the next staff meeting about the proper use of "CC" to reduce unnecessary emails. Set a staff policy for everyone to follow.
  - Try using the telephone as a remedy for typing fatigue. Make a phone call; answer multiple questions raised in an email; save time and typing.
- Unplug on weekends. Make a break with your device. Go camping, golfing or bike-riding. Leave the device turned-off in the vehicle. You'll have it in the event of an emergency, but it won't be tormenting you with texts, tweets, emails or Amazon daily deals. Right now, you might be asking yourself: "Is he making this up? I've never heard of this SRD before." Well, it's not verified by bonafide research yet, but I'm sure it's coming. ;)

I've received comments and feedback from members that our web site is bad. Not the content, but the appearance. "It looks 10 years old" one member said. The site was never meant to be sexy and attractive, but a simple, uncluttered compendium of relevant information. Our goal is to get you the right topic, detail or file download; without spending 20 or more minutes clicking-around the various menus and pages. I am confident the minimalist approach is best when it comes to web sites. Some web sites drive me crazy with their density of layers and the multiple clicks required to access simple look-ups like a member directory or guideline document.

### Web Site Makeover

The graphic designers and copy writers at TAG Creative have spent the past year working with Systems Analyst Andrew Reddoch and Communications Coordinator Angela Moore to give the old web site a makeover. Although a new logo and colour scheme are not ready (due to other overlapping projects), we've decided to go ahead and launch the new web site to provide improved functionality for members and the general public; without further delay. By the time the September *KP* is in your inbox the new site will be uploaded. Go to [APEGM.mb.ca](http://APEGM.mb.ca) and have a look. I'm sure you will find it visually attractive, efficient clicking and some new features like web bots and widgets. The same reliable content will be presented in new fonts, formatting and colours. I hope you like the new minimalism.

Remember our slogan: **"My life's work, makes life work better."** As always, your feedback is invited and welcomed. If you have any thoughts on anything you read in the *KP*, please email me at [gkoropatnick@apegm.mb.ca](mailto:gkoropatnick@apegm.mb.ca). ☘

<sup>1</sup> Radicati Group source page [www.radicati.com](http://www.radicati.com), Sara Radacati, PhD, Research Consultant.

<sup>2</sup> CIRA source page [www.cira.ca/factbook/2014/the-canadian-internet.html](http://www.cira.ca/factbook/2014/the-canadian-internet.html)



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# Thoughts on Design

## ...and who does the teaching?

M.G. (Ron) Britton, P.Eng.

In the 2014 Summer Edition of ASEE PRISM (<http://www.asee-prism.org/refractions-2/>), Henry Petroski discussed the current circumstances relating to the selection and promotion of engineering academics. In the USA, as in Canada, those who have concentrated on Engineering Science rather than Engineering Applications are typically given priority. He is concerned that this strengthens the tenancy toward theoretical rather than practical undergraduate programs.

Petroski's basic assumption, as I see it, is that undergraduate degree programs should be structured to prepare students to become practising Engineers. This academic goal can only be met if at least some instructors possess the type of knowledge that enables them to speak to the application side of our profession. These instructors can provide the *"beneficial exposure to real world experience"*. This really boils down to determining the skills and knowledge that students are exposed to.

Here in Canada, the Graduate Attributes found in the CEAB's Accreditation Criteria and Procedures document (<http://www.engineerscanada.ca/accreditation-resources>) provide a well defined base upon which undergraduate programs can be assessed. Clearly, to me at least, these Attributes are intended to provide the underpinnings for careers in which graduates focus on application of their knowledge, not the expansion of the information base. Notwithstanding their value, the Attributes are simply a list of necessary "skills" and "knowledge". The manner in which those "skills" are delivered within any given program depends on the knowledge, experience and interests of those responsible for delivery.

In his 2003 book, *Engineering Philosophy*, Louis Bucciarelli spoke of difference types of "knowledge" that should form a part of engineering education. Specifically he defined scientific knowledge as *"knowing that"*, and engineering knowledge as *"knowing how"*. He also observed that *"... engineering knowledge is not primarily textual."* This, in turn, suggests that engineering knowledge (knowing how) requires experience beyond theory.

While pondering this mix of skills, information and knowledge required to learn to be as an engineer, it occurred to me that a similar mix exists in sports.

Many years ago, while working in England, I had the opportunity to participate with a

local service club in a game of cricket. I had watched the game on the "telly" and observed that it required skills associated with throwing a ball, hitting a ball, catching a ball, and running. I felt some comfort that those were the same skills I had gained (well maybe not in their

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entirety) while playing baseball in my youth. However, out there on the "pitch" I quickly realized that the application of those fundamental skills was very different. That "discovery" ended up "parked" somewhere in the trivia section of my memory. But Petroski's and Bucciarelli's material, and the CEAB Attributes caused that "discovery" to resurface, and parallels between the requirements of coaching and academic instructing began to emerge.

Clearly both coaches and professors seek to enhance the skills and knowledge associated with their respective undertakings. I believe it is fair to suggest that coaches "teach" athletes how to apply their skills to the specifics of a particular sport just as engineering professors "teach" students to apply their skills to the specifics of being an engineer.

However, a major difference in this comparison is that coaches are typically drawn from among the ranks of those who have played, not just studied, their specific sport. They are experts in application, not theory. That being the case, is it logical to assume that a cricket coach could be successful as a baseball coach, or vice versa? Why then is it logical to expect persons steeped in the challenges and requirements of research and Engineering Science to deliver programs that should be aimed, for the most part, at the application of engineering skills to the needs of the engineering profession and the industries it supports?

Like sport programs, academic programs need to integrate many different inputs in order to reach their final objectives. In sports the overall objective is to win games and ultimately championships. In engineering academe, the overall objective, as stated in the CEAB Accreditation Criteria and Procedures, is to produce graduates who "...are academically qualified to begin the process to be licensed as professional engineers in Canada."

Engineering education is a complex undertaking. It should include both "knowing that" and "knowing how". It should be delivered by persons with strengths in "knowing that" and/or "knowing how". Obviously the collective backgrounds of the academic "coaches" will shape the manner in which the CEAB Attributes are delivered. And that takes us back, full circle, to the concerns Petroski raised about the selection and promotion of engineering academics.

Yogi Berra's once observed that "In theory there is no difference between theory and practice. In practice there is." Doesn't this support the need for a breadth of backgrounds among those who do the teaching? ⊕





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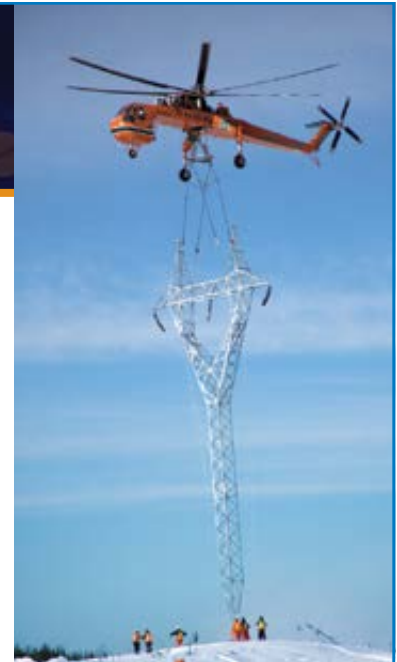
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# Engineering Licensee Category is Coming!

Grant Koropatnick, PEng, FEC • Executive Director & Registrar

At the meeting of March 15, 2012, council passed a motion to create a task group to study the topic of limited licensure for non-engineers. The Engineering & Geoscientific Professions Act of Manitoba does not presently have a licensee category (which exist in many other provinces). Adam Pawlikewich, P.Eng. chaired the “Licensee Task Group” comprised of P.Eng. and CET (Certified Engineering Technologists) volunteers. The task group has provided a licensee membership category proposal to council.

The Labour Mobility Act allows certified workers from other Canadian jurisdictions to practice their occupations in Manitoba in accordance with Chapter 7 (Labour Mobility) of the Agreement on Internal Trade (AIT). In particular, it requires Manitoba regulators to comply with Chapter 7 when workers who are certified for an occupation in another jurisdiction apply to obtain Manitoba certification for that occupation. This law affects the regulated professions in the following ways: (i) ensures that the measures used by regulatory bodies to certify individuals to work in occupations comply with the obligations of Chapter 7 (Labour Mobility) of the AIT and (ii) any by-law, directive, guideline, program, policy or administrative practice or procedure used by a regulator must be compliant with the Labour Mobility Act.

## Act Amendment

As a result, it is necessary for the Association to ask the government to amend the Engineering & Geoscientific Professions Act to include the membership category called “engineering licensee” or “geoscience licensee.” The new membership category is proposed to make the EGP Act compliant with the Labour Mobility Act (and Chapter 7 of the AIT). Other provinces currently have

licensee categories in their legislation (eg. BC, Alberta, Saskatchewan, Ontario); making it necessary for Manitoba to adopt a similar category. The licensee category will recognize that certain individuals who do not have the academic qualification for registration as a Professional Engineer (P.Eng.) or Professional Geoscientist (P.Geo.) in Manitoba can be permitted to carry out certain specific functions normally within the definition of the practices of professional engineering or professional geoscience. The restricted license which may be granted to an applicant, is an official authorization to engage in the practice of professional engineering or professional geoscience within a strictly limited scope. A licensee will be entitled to use the designation “Engineering Licensee” or “Geoscience Licensee” following his or her name.

The practice of the licensee will be governed by the Association through *The Engineering and Geoscientific*

*Professions Act of Manitoba*, the by-laws and Code of Ethics.

## Moving Forward

The licensee category proposal is moving forward and it is anticipated to take more than a year for legislative approval. The timing is indeterminate. However, here are the steps in the process:

- Letter to the Minister.
- Obtain consent from the Minister/ government.
- Drafting of legal language by legislative drafters.
- Communication with stakeholders.
- Introduction of the Bill to the legislature.
- Approval by the legislative assembly.

In addition to the creation of the licensee category, some administration changes to the Act will be included. For example, Section 24(2) “Penalty for Non-payment of Dues” will be amended to reflect online payment capabilities and timing. ⊕



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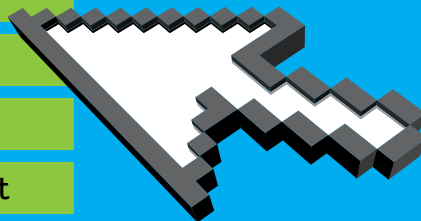
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This year's conference explores the theme of Leadership. The opportunity to demonstrate leadership exists at every career stage, and Ingenium offers something for everyone as we each make our contributions to the engineering and geoscience community in Manitoba and Canada.

On behalf of APEGM Council and the members of the Association, thank you for attending Ingenium and I wish everyone a rewarding experience.

Sincerely,  
Marcia R. Friesen, P.Eng.  
President, APEGM

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## EVENTS

### Tuesday, October 21

#### New Members Luncheon

This luncheon is held bi-annually to recognize new members and present them with their license certificate. Attendance is by member invitation and additional purchased tickets, offering approximately 100 new members and guests the opportunity for more intimate conversation and socializing adding to the appeal of this enjoyable and informal gathering.

### Wednesday, October 22

#### Recognition Wine and Cheese

This reception is to honor APEGM Past Presidents, new APEGM Life Members, and those receiving their new Engineers Canada FEC and Geoscience Canada FGC designations. Attendance is by invitation and additional purchased tickets, and it is a wonderful opportunity for this intimate group to gather and socialize while receiving their certificates and pins.

### Thursday, October 23

#### Professional Development Seminar

The popularity of this well-attended event speaks to its value in supporting the professional development of APEGM's members. Multiple track sessions on Manitoba 'Leadership' through our Profession, in the Workplace, in the Province, and in members' Personal Career will be offered at this informative event.

## EVENTS

### Thursday, October 23 & Fri October 24

#### Partners Program

The Partners Program runs during the same time as the Professional Development Conference and the Business Meeting and Breakfast to provide activities and networking opportunities for the companions of AGM attendees.

### Friday, Oct 24

#### Business Meeting and Breakfast

The Annual General Business Meeting is an opportunity for members to become directly involved in the business of the Association, vote on current matters, and acknowledge Councillors completing or just beginning their terms.

#### Awards Gala Dinner and Dance

Fine cuisine and highly enjoyable entertainment set the stage for a first-class evening honoring member achievements and corporate contributions to the professions. Approximately 300 guests will be joined by representatives from government and industry on this special evening followed by an evening of great entertainment and dancing. An additional Wine Sponsor is available to provide wine (1 bottle of Red, 1 bottle of White) on each table for dinner.

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- Acknowledgement in AGM article in the Winter issue of the *Keystone Professional* and on the APEGM website
- Acknowledgement in all event material for members and guests
- Booth Opportunity

**Silver Level** ..... **\$650\*\***

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- 1 Conference Registration (includes Professional Development Seminars, Annual General Meeting, Breakfasts, Lunch, and coffee breaks)
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- Acknowledgement on event signage
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## Professional Development Seminars

Thursday, October 23 • The Fort Garry Hotel				
7:45 - 8:30	Registration & Continental Breakfast – Loggia, Lobby Floor			
8:30 - 9:15	Welcome and Keynote – Provencher Ballroom, Lobby Floor Keynote Speaker: TBA			
	<i>... As a Profession</i>	<i>... In your workplace</i>	<i>... In the province</i>	<i>... In your personal career</i>
9:20 - 10:20	"ABC's of P.Eng." – Grant Koropatnick, P.Eng.	"Great Canadian Corporate Melting Pot: Part 1" – Dr. Jitendra Paliwal, P.Eng.	"Preparing Engineering Graduates for Leadership Positions in the Profession" – Douglas Ruth, P.Eng.	"Understanding Personalities: Myers Briggs Type Indicator" – Lisa Moretto
10:20 - 10:40	Coffee Break & Booths – Mezzanine Level			
10:40 - 11:40	"Leaders in Canada: Internationally Educated Engineers and Geoscientists" – Claudia Shymko	"Great Canadian Corporate Melting Pot: Part 2" – Dr. Jitendra Paliwal, P.Eng.	"Emergency Preparedness for Manitoba" – Mike Gagne	"Spiritual Health for Engineers" – Doug Koop
12:00 - 1:30	Lunch & Keynote - Provencher Ballroom , Lobby Floor Keynote Speaker: TBA			
1:40 - 2:40	"Volunteering: 100 Hours in 365 Days" – Michael Gregoire, P.Eng.	"Conflict Management" – Lisa Moretto	"Leadership in Strategic Innovation" – Victor Cui	"Communicate with Confidence" – Ann Christoffersen
2:40 - 3:00	Coffee Break & Booths – Mezzanine Level			
3:00 - 4:00	"ProDev – Recent Developments" – James Gunning, P.Eng.	"Emergency Preparedness at Work and at Home" – Jay Shaw	Indigenous Access to the Engineering Faculty" – Randy Hermann, P.Eng.	"Getting it Done: Time Management Techniques" – Ann Christoffersen

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## Thursday, October 23

### ABCs of P-E-N-G

Did you know that every aspect of professional practice as an engineer or geoscientist is covered by the ABCs? The Act, By-laws and Code – the ABCs!!! Attend this session and here an overview of the 3 governing documents: The Engineering & Geoscientific Professions Act of Manitoba, the APEGM By-Laws and the Code of Ethics for the Practice of Professional Engineering and Professional Geoscience. The session includes some history, a fun ethics quiz and ample time for questions and answers with the Registrar.



**Speaker: Grant Koropatnick, P.Eng.**

Grant Koropatnick, P.Eng. is the Executive Director & Registrar for the Association of Professional Engineers and Geoscientists of Manitoba (APEGM). He is a graduate Civil Engineer and holds a certificate in Human Resource Management from the

University of Manitoba. With more than 20 years experience, has held technical and managerial positions in human service environments including the University of Manitoba and the Pembina Trails School Division. Born and raised in Winnipeg, Grant enjoys a variety of interests in his spare time including running for fitness, writing, public speaking and philanthropy.

### The Great Canadian Corporate Melting Pot Part 1

The demographics of Canadian workplaces are going through a dramatic transformation as more internationally trained professionals are joining the workforce. The new comers bring with them personal and professional traits that, at times, do not adhere to conventional practices. To make this transition smoother requires some effort from both Canadian supervisors and the newly arrived. This two-fold workshop offers assistance to both the parties.

**Part I: Being the Chef**, is geared towards Canadian supervisors and peers who frequently deal with recently arrived immigrant employees. The talk highlights differences in behavioral traits amongst different cultures and educates Canadians on how to help transition the internationally educated professionals into the Canadian workforce.



**Speaker: Jitendra Paliwal, P.Eng.**

Growing up as a child in India, Jitendra Paliwal wondered if it would ever be possible to tell how sweet an apple is without actually taking a bite out of it. Now as a professor with expertise in the area of machine vision and vibrational spectroscopy, he researches

ways to peek inside biological tissues and cells – so we can assess much more than just the sweetness of a fruit.

Jitendra joined the University of Manitoba as a graduate student in 1995 and continued on as a faculty after completing his PhD in 2002. He is a Professional Engineer registered with the Association of Professional Engineers and Geoscientists of Manitoba (APEGM). In his free time, he likes to read about and discuss languages, religion and pop-culture.

### Preparing Engineering Graduates for Leadership Positions in the Profession

This session will discuss preparing our graduates to take leadership positions in the profession. More specifically, concentrating on how the Centre for Engineering Professional Practice and Engineering Education will change the way we educate our students, on how we will bring the profession into the classroom, and how the profession can get involved.



**Speaker: Douglas Ruth, P.Eng.**

Douglas Ruth holds BSc and MSc degrees in Mechanical Engineering from the University of Manitoba and a PhD from the University of Waterloo. He spent four years with Petro-Canada Research and three years with GEOTECHnical resources before returning to an academic position at the University of Manitoba.

Doug is a Technical Achievement Award holder from the Society of Core Analyst and has been a member of the board of SCA for over 15 years. He is a Fellow of the Canadian Academy of Engineering, the Engineering Institute of Canada, and Engineers Canada. He is currently a Professor and Dean Emeritus, Associate Dean (Design Education), NSERC Chair in Design Engineering, and Director of the Centre for Engineering Professional Practice and Engineering Education.



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### Understanding Personalities: Myers Briggs Type Indicator

In the words of the singer “Lady Gaga”: *We were born this way!* Each of us enters this world with an innate personality that determines how we interact, engage, energize, think, and navigate our surroundings. Understanding who we are and being able to recognize traits in those around us can help make our teams and relationships more effective. Have you ever come away from a meeting with a completely different understanding of the outcomes than those of others who attended? What we hear, perceive and decide is affected by our personality. This session will introduce you to the Myers Briggs Type Indicator tool and walk you through a self-assessment. You will also learn about additional resources to help you further your knowledge in this vast field and apply type research to conflict, team building, communication, and leadership.



#### Speaker: Lisa Moretto

Lisa is the President of RGI International, Inc. with offices in Winnipeg, MB and Rochester, NY. She has 20 years experience teaching business and technical communication courses for government agencies, private corporations,

consulting firms and professional societies. Her courses consistently receive positive reviews. She is an engaging and interactive presenter and a frequent invited speaker at international conferences.

She has experience as an Information Developer for IBM in the US and as a Learning Products Engineer for Hewlett-Packard in the UK. Lisa holds a BS in Technical Communication from Clarkson University, Potsdam, New York, and an MS in User Interface Design from the London (England) Guildhall University.

She has co-authored four books with Ron Blicq: *Get to the Point!*, *Guidelines for Report Writing*, and *Technically Write!* with Prentice Hall, and *Writing Reports to Get Results* with the IEEE Press.

Lisa is an adjunct professor at the Rochester Institute for Technology, where she teaches Technical Writing, Business Communication, and Effective Technical Communication. She is the Immediate Past President of the Rochester Engineering Society and contributes a monthly article to the RES Magazine. She is an active member of the Society for Technical Communication and the IEEE Professional Communication Society.

She has presented to various industries and organizations throughout Manitoba including Manitoba Hydro, Cangene, Richardson International, Health Canada, Cargill, APEGM, MTS/Allstream, and several engineering firms including Genivar, KGS Acres, and Tetra Tech/Wardrop.

### Leaders in Canada When it Comes to Dealing with Internationally Educated Engineers and Geoscientists

APEGM leads the country, in many ways, when it comes to the academic assessment process of internationally educated engineers and geoscientists. Did you know that APEGM was one of the first provincial associations to offer internationally educated candidates the option of taking courses in lieu of exams? We were the first to formalize the IEEQ program (which was the first of its kind in Canada and is now nationally recognized). We were also the first to create chapters based on ethnicity (Filipino Members Chapter in 2011 and the Chinese Members Chapter in 2014). This session is for anyone who would like to learn about APEGM's academic assessment program.

#### Speaker: Claudia Shymko

Claudia Shymko is the Assessment Officer at APEGM. She meets with internationally educated engineers and geoscientist to discuss licensing requirements and assists them throughout the academic assessment process. Currently there are 424 candidates on APEGM'S academic assessment program. Claudia has been with APEGM for seven years and truly enjoys working with internationally educated engineers and geoscientists.

### The Great Canadian Corporate Melting Pot Part 2

The demographics of Canadian workplaces are going through a dramatic transformation as more internationally trained professionals are joining the workforce. The new comers bring with them personal and professional traits that, at times, do not adhere to conventional practices. To make this transition smoother requires some effort from both Canadian supervisors and the newly arrived. This two-fold workshop offers assistance to both the parties.

**Part II: In the Soup and Loving It**, on the other hand, looks at the problem from an immigrant's perspective. It highlights what behavior is acceptable (and unacceptable) in order to minimize cultural faux pas and awkward situations while working in a Canadian environment.

#### Speaker: Jitendra Paliwal, P.Eng.

### Emergency Preparedness for Manitoba

Disaster mitigation, preparedness, response, and recovery efforts involve multiple stakeholders including private citizens, first responders and law enforcement agencies, municipalities and First Nations, government departments and agencies, private industry, critical service and utility providers, operators of critical infrastructure, and non-governmental organizations. Responsibility for emergency management is shared by multiple levels of government. As legislated in the Manitoba Emergency Measures Act, the Manitoba Emergency Measures Organization (EMO) is responsible for overseeing all aspects of emergency preparedness in Manitoba and for managing, directing, and coordinating the response of all Manitoba Government departments to a major emergency or disaster.

These tasks are easier said than done; EMO is a small organization asked to engage a wide array of stakeholders and guide departments and agencies whose people, activities, agendas and priorities are not always geared towards emergency management. During this presentation, the representative from Manitoba EMO will provide a brief overview of the current emergency management paradigm in Canada, describe the role of Manitoba EMO in leading preparedness and response activities, and discuss leadership from a Provincial perspective during major emergencies using recent examples.

#### Speaker: Mike Gagne

Mike is currently the Director of Operations for Manitoba EMO. Originally from British Columbia, Mike retired from the Canadian Armed Forces Regular Force in 2012. He has commanded at the infantry company, combat team, and headquarters level and has deployed on operational duty to Croatia, Bosnia, and Afghanistan. A graduate of both the Canadian Army Command and Staff College and the Canadian Forces Joint Command and Staff Program, Mike has a BA in History from the Royal Military College of Canada and is pursuing his Masters in Defence Studies and a Masters in Arts in Emergency and Disaster Management. He continues to serve as a Reserve officer and commands a training organization here in Winnipeg on evenings and weekends.

Since joining Manitoba EMO as Director of Operations in September 2013, Mike has had the experience of directing the Provincial response to the January pipeline explosion near Otterburne, the Spring flood, and the recent rain inundation disaster in Western Manitoba. In July, Mike was tasked to form and lead the all-hazards incident management team responsible for coordinating Provincial support to municipalities preparing for high water along the lower Assiniboine River while Manitoba Infrastructure and Transportation prepared the Portage Diversion and Assiniboine River primary dikes.

### Spiritual Health for Engineers

Engineers may be thoroughly grounded in the material world, yet they know that life is somehow more than the sum of its physical components. Professionals who focus on practical matters also hunger for beauty and yearn for good relationships. Along with the durability of structures, they seek peace of mind and sustainable living patterns. While this isn't about religion, it is the realm of the human spirit. This workshop cultivates awareness about what it means to be fully human and how to live in ways that account for realities beyond the merely material.

#### Speaker: Doug Koop, CPE

Doug Koop works as a full-time Spiritual Health Specialist at HSC Winnipeg, providing emotional and spiritual support to patients, families and staff. A long-time friend of Executive Director & Registrar Grant Koropatnick, Doug has been invited to discuss attributes of healthy living, with a primary focus on paying attention to our spirits. Doug will define spiritual health and provide insights with recommended practical steps for achieving balanced health for professionals working in the demanding technical professions of engineering and geoscience.

### Volunteering: 100 Hours in 365 Days!

APEGM's Professional Development (ProDev) Program recognizes the value of volunteer work activities performed by Professional Engineers and Geoscientists. As described in the Participation section, the ProDev Program provides credit for "community activities that require professional and ethical behaviour, but not necessarily your technical knowledge." Michael Gregoire, P.Eng., FEC will present his experiences with volunteering after pledging to give 100 hours of volunteer time in a one year period. Michael will give insight into a myriad of volunteering options available to all members, including mentoring, coaching, and construction.



#### Speaker: Michael Gregoire, P.Eng. B.Env.D, FEC

As the Director of Professional Standards at APEGM, Michael works in the areas of Investigations, Discipline, Enforcement, Legislation, Standards, and the Continuing Competency. Prior to taking on this role in 2008, Michael worked in the world of consulting engineering, where he provided solutions to problem buildings.

### Conflict Management: How to Prevent, Contain, and Resolve

Conflict doesn't have to be a bad thing. Many creative solutions have been a result of differing opinions. If a team agrees 100% of the time, then someone is hiding something. This session introduces the signs and effects of conflict and presents strategies on how to turn what may feel like a negative situation, into a neutral (or possibly a positive) situation. Participants will be exposed to the Third Side concept of conflict resolution and the different roles and contributions parties bring to the situation. The Third Side is an outcome of the Global Negotiation Project at Harvard University.

**Speaker: Lisa Moretto**

### Leadership in Strategic Innovation



**Speaker: Dr. Victor Cui**

Professor Victor Cui joined the Asper School of Business of the University of Manitoba in 2012. He obtained his Ph.D. (business administration) from the Sauder School of Business at the University of British Columbia, and Ph.D. (industrial engineering) from the City University of Hong Kong.

His research focuses on internal and external determinants of firms' innovation process and performance. In particular, how innovation is influenced by firms' incentive systems (i.e., compensation structure) and inter-firm relationships (i.e., collaboration and competition). His research appears in top tier academic journals such as *Strategic Management Journal*. He was a winner of the **Best Paper Award** of the Technology and Innovation Management (TIM) Division of the Administrative Sciences Association of Canada in 2011, the **Best Student Paper**

**Award** of the TIM Division of the Academy of Management (AOM) in 2010, and the **Best Student Paper Award** (finalist) of the Human Resource Management Division of the AOM in 2010.

His current teaching interest is strategic management. He was a winner of the **Graduate Teaching Award** of the University of British Columbia in 2009, and was nominated for the **Associates' Teaching Award** of the Asper School of Business in 2013.

### Communicate with Confidence

Often a firm's leaders are promoted from within and although they have the technical knowledge to excel, they lack an understanding of the importance of interacting with clients and team members. This session provides an overview of successful interpersonal communication skills including oral, written, and non-verbal communication skills and the impact they have on our interactions. Lisa will also address active listening and questioning skills.



**Speaker: Ann Christoffersen**

Ann has been an RGI Consultant for 17 years and has been in the technical communication field since 1990. She has developed and delivered written and oral communication skills courses in both the United States and Canada.

She holds a BS in Computer Science and Mathematics from Clarkson University and has a Masters of Science degree in Instructional and Performance Technology from Boise State University. She is a Certified Human Performance Analyst specializing in Front End Analysis, developing training programs to support major systems acquisitions. Ann is retired from the US Army Reserve, with over 20 years combined service from Active Duty, National Guard, and Reserve components.

Ann has been a technical writer for Accelerated Technology, Inc. working with programmers and customer support to develop effective user guides. As a consultant, she has worked with companies to comply with various portions of the Americans With Disabilities Act. She was also an outreach instructor for South Western Oregon Community College and the University of Southern Alabama teaching business writing skills and editing skills. Ann has also worked with the IEEE press reviewing and editing several books prior to publication.

Ann teaches regularly to the General Electric, APEGM, Manitoba Hydro, SaskTel, and TetraTech, an engineering consulting firm. Her teaching experience is extensive, across varied audiences, and she has mentored many other presenters.



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## ProDev - Recent Developments

APEGM's Professional Development (ProDev) Program provides members with a platform through which they report their professional development activities. Since the ProDev Program began in January 1, 2012, it has been managed by APEGM's Continuing Competency Committee (CCC). The CCC is tasked with interpreting the requirements of the ProDev program from time to time. They are also tasked with reviewing applications for abatement made by APEGM's Professional Engineers and Geoscientists. In this presentation, James Gunning, P.Eng., Chair of the CCC, will provide an overview of the ProDev Program as well as some of the interpretations that the CCC has made to date.

### Speaker: James Gunning, P.Eng.

James Gunning is currently the engineering maintenance manager of the CertainTeed Gypsum wall board factory on Empress Street here in Winnipeg. In this role he maintains, upgrades and automates equipment and facilities that range in age from 1939 to present day technology. He has spent the last 25 years in local manufacturing in both operations and engineering roles that include Canada Wire and Cable, REHAU Industries, Brunswick Steel and CertainTeed Gypsum.

James started volunteering for APEGM committee's in 2001 and joined the newly developed Continuing Competency Committee (CCC) in 2011. A driving reason for him joining the CCC was to find out more about ProDev (formerly CPD) and how it would affect APEGM members like himself. In 2013 he became the chair of the CCC and as a team are preparing for the start of the first reporting window on December 31, 2014.

## Emergency Preparedness at Work and at Home

What is a go bag, a 72-hour disaster kit, a car kit, an evacuation kit, a shelter in place kit, and a disaster bucket? How do all of these products and/or suggested items that overlap their supplies and instruction work together? What information do I need for work and at home in an emergency or disaster situation? What are ABCs and 123s of home and work emergency preparedness? Jay Shaw covers the who, what, where, when, and why of disaster preparedness in a fun and dynamic presentation that will have you up on your feet, laughing, and learning some insightful tips on how you can prepare to stay alive when disaster strikes.

### Speaker: Jay Shaw

Jay Shaw has been involved in the emergency services for over 17 years, working in hospital emergency rooms, rural EMS departments and the fire service. Currently Jay is in his 13th year as a member of the Winnipeg Fire Paramedic Service as a Firefighter Paramedic where he has been a part of both the technical rescue and water rescue teams.

Currently Jay writes for Firefighting in Canada Magazine and has been published in Canada and the US for article relating to the emergency services and disaster management.

Jay also consults for Workplace Education Manitoba as an independent education and training consultant focusing on assessing need, instruction design, and delivery in leadership, management and communication courses. Jay has done work with companies such as Boeing, New Flyer, American Biaxis, as well as many smaller private companies.

Jay holds a Master's degree in Disaster and Emergency Management from Royal Roads University where his research interest is focused in risk perception and barriers to emergency preparedness.

## Indigenous Access to the Engineering Faculty

Presentation will highlight what has been learned over the last 29 years about Indigenous inclusion in Post-Secondary Education. Presentation will focus on the experiences of the Engineering Access Program (ENGAP) including a brief overview of the program, challenges they have faced over the years, solutions to these challenges, and the process followed to ensure student success. After the presentation the speaker will accept questions from the audience.

### Speaker: Randy Herrmann, P.Eng.

Randy is the Director of the Engineering Access Program (ENGAP) at the University of Manitoba. He graduated from the University of Manitoba in 1988 with a Bachelor of Science Degree in Geological Engineering. He is a member of the Association of Professional Engineers and Geoscientists of Manitoba and the Professional Engineers of Ontario.

Over the years Randy's life and work within Indigenous communities and within the engineering field has shown him the lack of engineers of Indigenous ancestry and the obstacles faced by native students to obtain a degree. His desire to help change these factors and make it easier for Indigenous students to pursue an Engineering Degree led him to become Director of ENGAP, a position he has held since 1998.

## Getting It Done: Time Management Techniques

Let's face it: there is never enough time to do all we need to do. This is true at home and at work. We are all given exactly the same number of hours in the day but some people seem to accomplish more than others. How do they do it? This session will explore why we procrastinate, understand how we can overcome procrastination, discuss how to set effective goals, provide rubrics for determining task priority and develop personal ways to increase efficiency.

### Speaker: Ann Christoffersen



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## is more than just talk

As we continue to deliver valuable information through the pages of this magazine, in a printed format that is appealing, reader-friendly and not lost in the proliferation of electronic messages that are bombarding our senses, we are also well aware of the need to be respectful of our environment. That is why we are committed to publishing the magazine in the most environmentally-friendly process possible. Here is what we mean:

- We use lighter publication stock that consists of recycled paper. This paper has been certified to meet the environmental and social standards of the Forest Stewardship Council® (FSC®) and comes from responsibly managed forests, and verified recycled sources making this a RENEWABLE and SUSTAINABLE resource.
- Our computer-to-plate technology reduces the amount of chemistry required to create plates for the printing process. The resulting chemistry is neutralized to the extent that it can be safely discharged to the drain.
- We use vegetable oil-based inks to print the magazine. This means that we are not using resource-depleting petroleum-based ink products and that the subsequent recycling of the paper in this magazine is much more environment friendly.
- During the printing process, we use a solvent recycling system that separates the water from the recovered solvents and leaves only about 5% residue. This results in reduced solvent usage, handling and hazardous hauling.
- We ensure that an efficient recycling program is used for all printing plates and all waste paper.
- Within the pages of each issue, we actively encourage our readers to REUSE and RECYCLE.
- In order to reduce our carbon footprint on the planet, we utilize a carbon offset program in conjunction with any air travel we undertake related to our publishing responsibilities for the magazine.

*So enjoy this magazine...and **KEEP THINKING GREEN.***

# Making Links Engineering



1st place team – Travis Clarke, Mike Miller, Jeff Scharaud, and Sean Baldwin



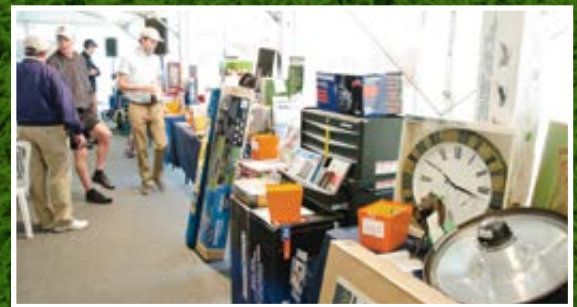
2nd place team – David Krahn, Lance Vigfusson, Brad Sacher, and Dwight Gibson



3rd place team – Julien Lavergne, Brad Draward, and team from Lavergne Draward Associates



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Tournament Registration

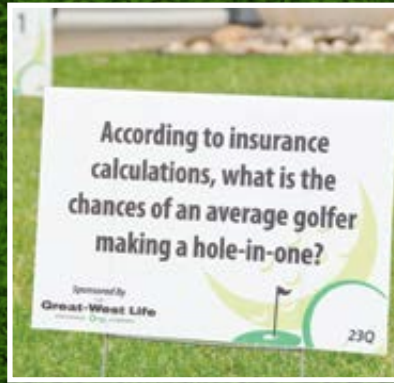


Golf Clinic

# Classic 2014



Roger Petursson, P.Eng., MLEC Chair, David Devine, Great West Life Representative, and Jonathon Beddoes, P.Eng., Dean, Faculty of Engineering, University of Manitoba



Tournament Quiz



Vinegar & Wine Tasting



Golfers on the Driving Range prior to tournament



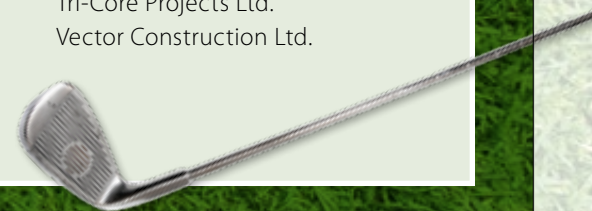
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S. Athitakis	B.T. Cox	I. Iakovlev	K.M. McGarry	J.P.C. Sawatzky
D. Badaoui	J.E. Craig	J.W. Ilott	A.G. Mouradian	Y.A. Shah
V. Balaban	P.J. Crossman	M.R. Islam	R. Mustajab	H.H. Shakarchi
P. Balasingam	S.M. Crow	B.S. Jablonski	R.L. Nalezty	V.P. Sharma
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B.J. Bhatt	M.D.W. de Monye	C.N. Kao	X. Ni	S. Sopterian
A.S. Bhogal	Y.A. Deng	J.T. Keinanen	S.J. Nicholson	R.P. Stahl
M.F. Bowman	J.S. Dhaliwal	J.C. Kerkhoff	S. Noel	D.J. Steer
M.J.A. Boyd	N.C. Dizon	I.I. Kovacevic	J.L.S. Ogrodnick	T.P. Theaker
S.W. Boyd	J.R. Doucet	S.M. Kovnats	K.R. Parson	L.C. To
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P.J. Brearton	E.A. Durand	P.D. Lacoursiere	J.D. Pearson	R.T.Y. Tse
F.A. Breen	L.L. Duyile	M. Langlois	C.C. Peters	D.R. Van Hooren
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D.R. Clark	M.K. Guyot	Y. Margulets-Shatsky	Y. Robitaille	H.D. Zhang

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## Manitoba CEMF Scholarship Winner Amanda Pushka

The Canadian Engineering Memorial Foundation (CEMF) was formed as a result of the tragedy in Montreal at École Polytechnique and is committed to creating a world where engineering meets the needs and challenges of society by engaging the skills and talents of both women and men alike. Each year the Foundation grants scholarships to outstanding women in engineering at the undergraduate and graduate levels of study, who are enrolled full-time in an accredited engineering program at a Canadian university. There are numerous scholarships awarded each year with scholarships awarded per listed region based on university location: British Columbia, Prairies, Ontario, Quebec and Atlantic.

For more information please visit [www.cemf.ca](http://www.cemf.ca).

This year's winner of the CEMF Engineering Ambassador Scholarship for the Prairies is **Amanda Pushka** from the University of Manitoba, Civil Engineering. Amanda has distinguished herself as a tireless community volunteer, having served on a short term mission trip to Guatemala, regularly preparing and serving food at a local inner-city mission and mentoring young athletes.

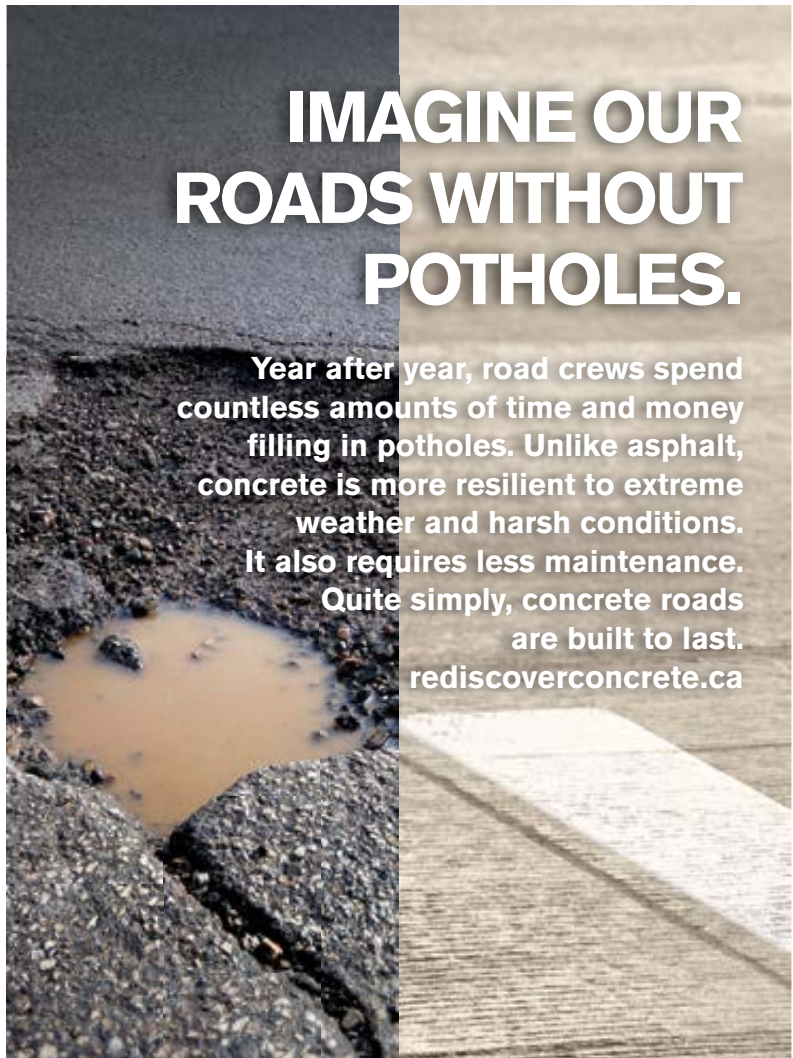
Congratulations Amanda!



Left to right:  
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FEC, Engineers Canada  
President-Elect  
Marcia Friesen, PhD,  
P.Eng., FEC, APEGM  
President  
Amanda Pushka, CEMF  
Winner (Prairie Region)  
Grant Koropatnick, P.Eng.,  
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## Second MCWESTT Conference in 2015



We are excited to announce the upcoming second biennial MCWESTT Conference, **MCWESTT 2015**, which will be held at the beautiful Fort Garry Hotel in downtown Winnipeg on **May 8, 2015**. Our conference theme is **DIMENSIONS: Engage, Empower, Recognize**, and will once again be a dynamic, one-day, local event.

MCWESTT or the Manitoba Community for Women in Engineering, Science, Trades and Technology is a group of women from Engineering, Science, Trades and Technology who recognize the need in our community for professional development, support, and celebration. The first ever MCWESTT conference in 2013 was a resounding success! The conference program consisted of three keynote speakers, a panel discussion and twelve breakout sessions. The 230 participants

reflected a diverse background of professions from a variety of industry, academic, and public sector workplaces. The conference theme focused the event on the momentum that women have gained in these professions and the unique contributions that women make. Lively discussions full of encouragement for fellow professionals could be heard during breaks throughout the day. The program was selected to provide numerous opportunities to enhance existing skill sets with topics ranging from negotiation skills, to hiring practices.

Now we are preparing for the second MCWESTT conference in 2015, and once again, we are bringing together the Manitoba Community to Engage, Empower and Recognize women in engineering, science, trades and technology!

The MCWESTT 2015 conference program will consist of three keynote speakers, a panel discussion and three sets of breakout sessions with breakfast, lunch and snacks provided. Our master of ceremonies, comedienne Aisha Alfa, is back by popular demand from MCWESTT 2013. Also back by popular demand, but as a keynote speaker, is Dr. Lukas Neville, who sharpened our negotiation skills at MCWESTT 2013. Joining our Keynote line-up for MCWESTT 2015 is Betty-Ann Heggie, former Senior VP of the Potash Corporation of Saskatchewan Inc. In addition to these great keynote speakers, we have added three additional choices of breakout sessions for MCWESTT 2015, for a total of 15 different breakout sessions to choose from!

Who should attend MCWESTT 2015? All genders are welcome to attend MCWESTT 2015. The conference will provide an opportunity to explore topics relevant to Engineering, Science, Trades and Technology professionals and provide multiple opportunities for networking with other professionals.

The Association of Professional Engineers and Geoscientists of Manitoba (APEGM) and the Natural Sciences and Engineering Research Council of Canada (NSERC) Women in Science and Engineering Prairie Chair are once again partnering with the conference planning committee. Without these partners, this conference would not be possible.

Registration will be available in fall 2014 and sponsorship info will be available late summer 2014. For registration or sponsor information, please visit our website: [www.MCWESTT.com](http://www.MCWESTT.com).

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## Past Presidents Lunch

Three Past-Presidents of the Canadian Council of Professional Engineers (forerunner of Engineers Canada) met over lunch at the Manitoba Club in Winnipeg on July 24, 2014, to celebrate the election of Dr. Digvir S. Jayas to the position of President-Elect of Engineers Canada for 2014-15 to be followed by a year as President in 2015-16. Standing, from left to right, are: Dr. Garland Laliberte (1994-95), Dr. Jayas and Mr. Russ Hood (1973-74). Seated is Mr. W. Les Wardrop (1961-62). During the course of the lunch, Mr. Hood was heard to remark, and all agreed, that Engineers Canada makes an important contribution in cementing the profession of engineering together across Canada for the benefit of all Canadians. The group joined together in congratulating Dr. Jayas on his election and wished him well in his year as President. Mr. Wardrop is now 98 years old and Manitoba is believed to be the only province in Canada in which all of whose Presidents are still living.



L-R: Dr. Garland Laliberte (1994-95), Dr. Jayas and Mr. Russ Hood (1973-74). Seated: Mr. W. Les Wardrop (1961-62)



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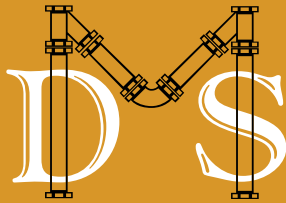
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# Changing Disciplines

A question that I receive occasionally from members is with respect to changing their area of practice. When I receive those questions, I tend to be biased towards thinking that the member will likely make their transition in an ethical manner. From my experience, the members who have made an ill-fated move to another discipline are the ones who failed to ask the right questions before doing so.

APEGM has never registered members by discipline. This is a consistent practice across Canada, and not just within the regulatory world of Professional Engineering and Geoscience. Lawyers are called to the bar without a requirement that they specify the area in which they will practice.

Fundamental to this regulatory philosophy is a reliance on members to adhere to the Code of Ethics. Particularly, Canon 2.1 requires that "...every practitioner shall possess the training, ability and experience necessary to fulfill the requirements of any engineering or geoscientific work undertaken". Clearly, this applies to the situation where, for example, a graduate from the department of Civil Engineering chooses to start practicing in the design of mechanical equipment.

There are members who have made such a dramatic move successfully. One particular case that came through the investigations and discipline process before I joined APEGM centered on a complaint that a member was practicing in an area where they weren't qualified to do so. The member was certain of their competency and agreed to have their knowledge tested in front of peers that were deemed to be proficient in the area in question. The member was able to prove that they had knowledge of the new area in which they had started practice.

However, we have had dramatic cases where a member has started practicing in a new area and did so unethically. In one case, the member's original area of practice was in the realm of structural engineering, but he started to seal HVAC drawings. One of the projects for which he assumed responsibility for the mechanical design had such

significant errors that a complaint was made against the member.

There is no simple formula for determining the actions that a member must undertake before practicing in a new area of discipline. However, all members should refer back to the steps required to initially become a registered member of APEGM when planning their move. Membership with APEGM essentially requires three elements; academic qualification, experience, and references. The first two are important when evolving one's practice into a new area.

In order to become qualified to do something, one must be certain that they understand the basics of the topics pertinent to that area. Academic studies through a formal program are the ideal way of achieving this. Although this is not the only option, it should be evident that a one or two day refresher seminar is not a viable means of acquiring the basic knowledge.

An engineer or geoscientist must also spend some time having their work reviewed by a professional member. For established areas of practice, the member



reviewing must already be qualified in that area of practice. What's important to recognize is that, particularly when we are learning something new, a second set of eyes helps us to understand the nuances of an area of practice, which cannot be gained through studies of hypothetical situations.

At the crux of it all, though, is the importance of self-reflection. An engineer or geoscientist needs to be asking themselves whether or not they have gained the competency in an area of practice prior to taking responsibility for work in that area. The best way of finding an answer to that question is by seeking the input of peers and professional members with established reputations.

As always, if you would like to discuss this topic further or if you have any question regarding professional standards, do not hesitate to contact me at [mgregoire@apegm.mb.ca](mailto:mgregoire@apegm.mb.ca). ☎

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