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publication  
of Engineers  
Geoscientists  
Manitoba

# THE KEYSTONE PROFESSIONAL

WINTER 2015

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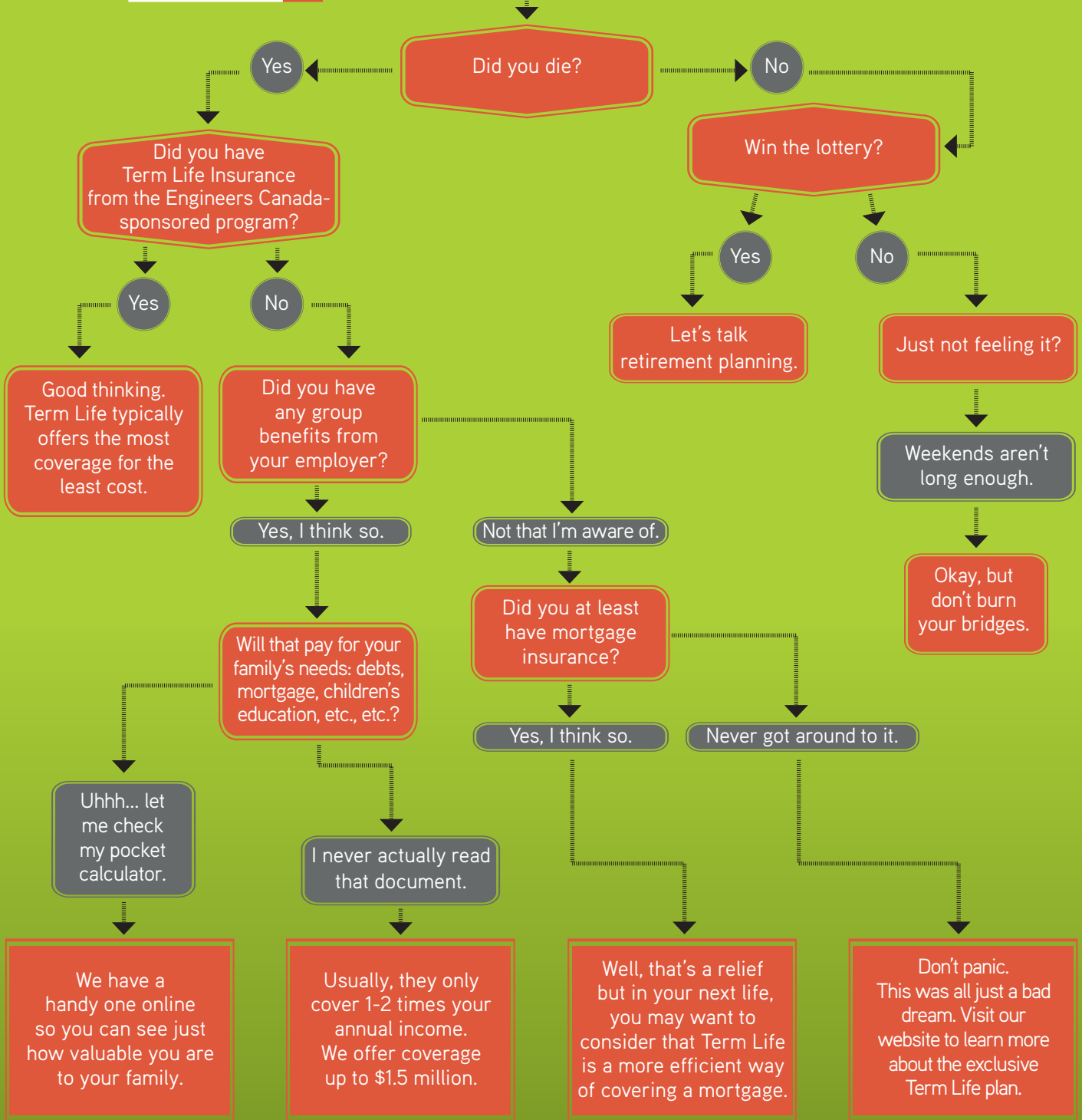
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# THE KEYSTONE PROFESSIONAL

The official publication of Engineers Geoscientists Manitoba



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## Setting **Goals** for the Year Ahead

The Association of which we are all members is undergoing a transformation. The trend to replace lengthy acronym-based titles with shorter word-based forms is consistent across all sectors of the economy and the world. This particular form of re-branding has been taking place across engineering and geoscience associations throughout Canada. Our former Canadian Council of Professional Engineers is now known simply as *Engineers Canada*; *Geoscientists Canada* replaces the Canadian Council of Professional Geoscientists.

The name change is just one way in which our Association seeks to achieve the goals we have set out for it.

We pay annually for membership in this Association. In return, the Association gives us value, in the form of a recognized high standard of practice of engineering and geoscience.

Displaying our professional credentials enables us to obtain employment and command a salary which we would otherwise not be able to achieve.

Our profession is one of the few in Canada which has the privilege to protect and promote the public interest by ensuring the professional excellence of its own members, which is commonly referred to as self-regulation.

Our Association self-regulates by means of six major categories of goals. One of these goals is that the public understands and values the contributions of our professions. Our Association, through the name change, is continuing to pursue this goal by being easily recognized and remaining vital and current. Just as our members, in professional practice, must continually update their knowledge and maintain their competence, our Association must also reflect this progress to society.

Engineers Geoscientists Manitoba uses a best-practice form of governance known as Policy Governance to ensure the staff and volunteers who run the Association do so in the most effective and efficient way possible. This robust framework ensures that your dues are used in the most effective way possible to deliver on the goals of the Association. As I take on the duties of President, I commit to ensuring that the governance process continues to be upheld on your behalf.

Ownership Linkage is one of the key components of Policy Governance. As a self-regulated body, empowered by government to protect the public, the owners of our Association are actually the public at large. This is in contrast to the members of our Association. The members of our Association are a small subset of its owners; most owners are not members.

Given our members are also owners, it is tempting for us to believe we know what our owners think. At over 6,000 professional members, we are less than 1% of the population of Manitoba, and a relatively homogeneous group given our education and training. We actually need to engage with key groups from within the public in order to understand their values and to govern well on their behalf. I am also committed to increasing the focus on Ownership Linkage during my term as President. I look forward to providing regular updates on this in future articles.

I am interested in hearing views from our members, whether similar to my own or not. Diversity of thought is at the heart of the creativity and innovation that has led to so many engineering breakthroughs. Please feel free to share a thought with me via email, at [lmcfar@mts.net](mailto:lmcfar@mts.net). ☎

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# TALKING POINTS: Topics That Connect the Profession with the Public

You're an engineer and someone asks you "What does the profession think about LGBT rights, the role of women in society, the future of First Nations people, the state of health care in our province, achieving sustainable economic growth?". How will you answer? These are the topics being discussed in coffee shops, offices, blogs, and homes around our city and province.

We are trying to be a profession that reflects society. We are an ancient, historic profession, but we must live out our professional practice in the present. How can we accomplish this important goal? Perhaps, we should begin by looking in the mirror. What do we see? What does the image look like?

### Are We Reflecting Society?

Are we reflecting society? Should we be? What is a true reflection? What are the current values in society that our profession needs to embrace? What are the topics that the public is talking about? Some are technical: infrastructure renewal, frozen pipes, clean drinking water, Lake Winnipeg and the environment. Other topics are not technical but equally important to the public. Social topics like health care, housing, homelessness, poverty, education, and economic growth. Read the newspapers. Listen to radio talk shows. Read blogs, commentaries, and news sites. These are the topics being discussed by people like you and me, citizens of Winnipeg, Manitoba, and Canada.

### Ownership Linkage

One of Council's direct responsibilities is to create the link between the ownership and the Association. The owners of the profession are the public of Manitoba. The public has the right to expect good

regulation from the Association. Knowing whom to link with and asking them to express their opinion is important for determining the topics that the profession should be considering as it attempts to reflect society. As 2016 approaches, I look forward to the many and diverse conversations that will take place this coming year. I hope you will respond by joining a task group, attending a lunch session, or joining the conversation online or at your local coffee shop on one of these relevant talking points.

### Happy Holiday

By the time you're reading this issue, the holiday season will be upon us. I hope that you have the opportunity to take some time off from your regular work duties and enjoy a break this month. From my family to yours, I wish you a happy holiday season and many blessings in 2016. Your feedback is important. If you have thoughts on any topic, please email me at [gkoropatnick@apegm.mb.ca](mailto:gkoropatnick@apegm.mb.ca). ☘

“As 2016 approaches, I look forward to the many and diverse conversations that will take place this coming year.”



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Dr. M.G. Britton,  
P.Eng. FEC

## Thinking about ethical design?

In September 2015, Volkswagen (VW) executives admitted that diesel powered vehicles, specifically their 2009 through 2015 models, had been fitted with software that was designed to evade emission controls. It will take years to sort through all the legal, commercial, and technical details. In the meantime, only the most naive among us are likely to accept that, as one VW executive stated, this was the result of the action of “a couple of rogue engineers.”

Undoubtedly engineers were responsible for the details of the design, but ‘the corporation’ established the design criteria.

In most countries engineering is considered to be a profession. This status provides both privilege and responsibility. Here in Canada, under provincial or territorial legislation, engineering has been granted the right to self regulation in exchange for, among other things, commitments to serve ‘the public good’ and to abide by a code of ethics. Typically these codes require that practitioners comply with the law.

As I read the various news reports relating to the VW situation, I recalled a 1966 experience that had a significant impact on my perspective on the engineering profession and corporate engineering (see *Engineering Philosophy 101, Keystone Professional, Fall 2007*).

I was relocated from our Winnipeg based office to our Ontario division office to “deal with a problem”. The President of the company told me there were two reasons for my transfer:

1. I was the only person in the company who had responsibilities beyond the company, and
2. He wanted me to go and ‘be an engineer’.

It took me a while to realize that he was acknowledging the fact that my professional responsibilities went beyond simple technical competence and was counting on me to exercise my responsibility to act ‘in the public interest’. It didn’t take long after arriving in Toronto to understand why I continued to report to the President, not to the Division Manager.

Many people have suggested that my situation was unique, and I suspect they are correct. I was employed to design and take responsibility for the erection of farm buildings. At the same time I was expected to place the ‘public interest’ ahead of ‘corporate interest’ if there was a conflict between the two. Put another way, I was expected to insist on compliance with all codes and regulations, even if this cut into the profit margin on a building. I think that exemplifies what it means to ‘be an engineer’.

I suspect the engineers at VW did not have the same freedom that I had. That bothers me.

The fundamental argument for the licensing of professionals of all types is to assure the public that those who claim to be professionals are held to account by their peers for both their technical competence and their ethical behaviour. It is a concept that imposes regulation of, and by, other qualified professionals. Basically there is an assumption of personal and collective responsibility.

But out there in the real world, corporations, crown corporations, and government departments can, and do, make decisions that will override the personal responsibility of engineers in their employ. It appears that happened in the VW case, which raises serious questions about the ability of our profession to carry through on the legally imposed requirement that engineers can, and will, ‘protect the public’. ⊕



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# Thoughts on Engineering Design

## ... and potential impacts of specialization

Dr. M.G. Britton, P.Eng. FEC

Specialization seems, at least in the circles I travel in, to have become a topic of increased discussion. It isn't a new phenomenon, but rather one that has grown steadily since the launch of Sputnik. Like the rest of the academic, scientific, and professional worlds, engineering simply followed the trend.

Engineers have always sought to use our talents to find solutions to problems, but the increasing attention to science forced us to provide science-based explanations as well as solutions. That in turn forced us to develop more specialized areas of practice. We still focus on technology, but it has rapidly become 'scientifically

justified' technology. You can, if you like, think of this as professional evolution.

It is probably unfair to lay the entire blame for engineering specialization at the feet of the surge in science activity that Sputnik inspired. In fact, specialization, in one form or another, has been with us throughout history, and a quick look at history can improve our understanding of current situations.

Dr. W.B. Carlson, Professor and Chair of the Department of Engineering and Society at the University of Virginia, has spent his career studying the integration of historic context, social structure, individual idiosyncrasies, and technological limitations, from ancient through modern times. I became aware



of Dr. Carlson through a DVD-based course entitled *Understanding the Inventions That Changed the World*. He caught my attention with the statement that "Engineers need to keep one foot firmly in technology, and the other in society." He justified this statement based on the story of Henry Ford and the Model T, a story that predates Sputnik by about half a century.

Ford began his involvement with cars in the late 1890s. He went through a learning period that

"Engineers need to keep one foot firmly in technology, and the other in society."

– Dr. W.B. Carlson



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included the realization of the need for interchangeable parts and a manufacturing process rather than individual vehicle assembly. By 1906 he had established his own independent automobile manufacturing company that was focused on providing a low-cost, but durable car to meet the needs of the mass market.

In 1907, the Model T was introduced to the North American public and it remained more or less unchanged until 1927. Given an unchanging product, the Ford Motor Company was free to focus its attention on volume production techniques and manufacturing efficiency. Even the smallest details were considered. An extreme example of the dedication to efficiency resulted in the decision that all Model Ts were painted black. Apparently black enamel dried faster than any other colour. Obviously this obsession with efficiency was very successful, from a technical point of view, because the Model T that sold for \$850 in 1907, and only \$263 in 1927. From a commercial perspective Ford quickly dominated this new market and became a very rich man.

But, while Ford focused entirely on production efficiency, the automobile market began to change. Economic conditions were on the upswing and that was accompanied by changing customer demands. By the mid 1920s other manufacturers began to introduce new and improved models with different features and different options. By reacting to the market as well as adopting modern production techniques, General Motors eventually became the dominant player in the automobile business.

From a technology perspective, the specialization on manufacturing efficiency at Ford Motor Company provided the base upon which the company's success was founded. At the peak of the Model T era, Ford 'owned' the automobile market. But, at least in part, Ford's success changed that market. Unfortunately, due to their unswerving focus on manufacturing efficiency, or, if you prefer, their specialization, the folks at Ford missed the market trends and lost their leadership position.

Shifting back to the current discussions about specialization, particularly within engineering, it is obvious that not all design is manufacturing based, so maybe an argument based on manufacturing history is not valid. On the other hand, all design happens within a social and economic environment and the Model T story suggests that relying in specialization alone can be a two-sided sword.

Today, approximately 100 years since control of the automobile industry

began to slip from Henry Ford's grip, we should probably reflect on Carlson's suggestion that "Engineers need to keep one foot firmly in technology, and the other in society." If he is correct, we need to ask if specialization in engineering might, at some point in the future, cause us to experience an equivalent to the Model T story. And if that is probable, we need to begin to consider how we can counter the specialization trend that seems to be a part of the evolving world of engineering design. ⊕

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# Students For Sustainability

Dr. K. Dick, P.Eng., Mr. L. Midence and Ms. N. Jacobson



In recent years, Dr. Kris Dick P.Eng., Biosystems Engineering professor at the University of Manitoba and director of the Alternative Village, has provided students with a unique opportunity to implement knowledge gained through the engineering program. This opportunity comes through the program Students for Sustainability (S4S), which encourages undergraduate students to challenge themselves professionally and culturally by developing, designing and building sustainable buildings in rural Honduras while at the same time impacting a community.

Luis Carlos Midence, a Honduran, was studying at the University of Manitoba.

He formed an initial connection with Dr. Kris Dick and graduate student Jami Carter. That connection culminated in the decision to make Honduras the place to start the program. Another practical consideration was time zone. Winnipeg and Honduras are in the same zone, thus making travel less stressful.

The S4S program currently consists of two stages, the first is mainly research and design, and the second is the implementation of the design. During the fall semester undergraduate students submit an application and are later interviewed. Due to limited space, each year only eight-12 students are able to participate. Once a group

is finalized, students research and design a component of the year's project. In previous years students have developed a rain water collection/filtration system, irrigation system, roofing system, an oven, and a latrine, to name a few. After prototyping, budgeting, and testing their designs the students travel to Honduras for a period of one-two weeks to build their designs in a community in Honduras while staying with a local family.

Over the past three years, the program has completed three projects in two villages in the department of Gracias, in the eastern part of Honduras.

PERIOD: **2012-13**  
PROJECT: **ADOBE HOUSE CONSTRUCTION**  
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To start the program an adobe house with an alternative roofing system was designed by graduate student Jami Carter. It was accompanied by four more sustainable components designed by other students: a stove, latrine, a pila (sink), and a rainwater

collection/filtration system. Design work was completed by the end of 2012.

Jami Carter began construction on January 10, 2013, five weeks before the arrival of the student group. The group spent two weeks in Honduras building

their designs in addition to helping to complete the construction of the adobe home. The family continues to live in the home and the S4S program continues with annual monitoring to ensure the systems function as required.



PERIOD: **2013-14**  
PROJECT: **RAINWATER COLLECTION/FILTRATION SYSTEM**  
LOCATION: **CONSONLACA ELEMENTARY SCHOOL**

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The 2013-14 project included the design and installation of a rainwater collection, filtration, and distribution system at an elementary school. Working at a school provided the additional opportunity of spending time in the classrooms where a nursing student taught students about germs, the benefits of clean water,

dental hygiene and basic first aid. The team spent seven days working at the school on the installation of the rainwater collection system which provided clean water lines to existing bathrooms and kitchen.

A grey water line was directed towards a small field located at the

back of the school, along with a drip irrigation system. As the project was smaller than the previous year, the program was able to manage a few extra small projects: steps and a concrete pad between kitchen and dining area, and a set of see-saws for the kids' entertainment.





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In 2014-2015, the main components of the project consisted of a water filtration/distribution system, an innovative roof design, and a kitchen with a rammed earth wall system. Master's student Garry Enns began construction approximately one month before the full team arrived.

For a week, 10 engineering students from different disciplines worked together to build the kitchen and dining area at the school. The team learned to mix and work with concrete, install eaves troughs, place screens, dig a temporary latrine, install PVC tubing, and construct a novel roof system. The kitchen's earth wall system was designed by Garry Enns and incorporated four inch PVC columns, barbed wire, and plastic bottles.

In other activities, two nursing students provided health classes for the students of Guanteque Elementary School.

## FUTURE GOALS

After three projects in Honduras, the program is looking to enhance its project capacity in the country with potential involvement from local industry and universities. The 2014-2015 project included a major contribution from a local hardware store, Larach & Cia. The company expressed great interest in supporting sustainable environmental building. With local support, the program will be looking to increase its productivity by developing multiple projects throughout the year, and potentially working full time in country.

For more information on the program and how one can support, please visit [www.thegrowingvillage.org](http://www.thegrowingvillage.org) or email [s4smanager@gmail.com](mailto:s4smanager@gmail.com).



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Ingenium Conference 2015, October 20 – 23, 2015 was the fourth annual Ingenium Conference. With the largest attendance ever, the conference was a big success. Thank you to all the staff, volunteers, and sponsors who made the event possible.

**TUESDAY, OCTOBER 20**

**New Member Luncheon and Certificate Presentation**

This luncheon, held twice a year to recognize new members and formally present them with their official license certificate, was held at the St. Boniface Golf Club.



New members in attendance pose for a group photo

**WEDNESDAY, OCTOBER 21**

**Recognition Wine and Cheese Reception**

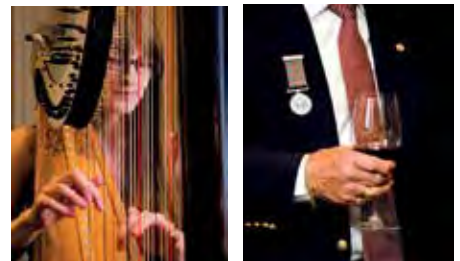
Held in the Ballroom of the Manitoba Club, this reception was held to honour Association Past Presidents, Life Members, and Honorary Life Members, and those members receiving their Fellowship from Engineers Canada.



William Muir, P.Eng., and James Townsend, P.Eng.



Brian Rodger, Cameron Friesen, MLA Morden/Winkler and President Lesley McFarlane, P.Eng.



## THURSDAY, OCTOBER 22

### Professional Development Seminars

The popularity of this well-attended event speaks to its value in supporting the professional development of Association members. Multiple track sessions on Diversity in the Profession, in the Workplace, in the Province, and in members' Personal Careers was offered at this informative event.

#### Sessions included:

##### Diversity in the Profession

- Good Guy or Bad Guy: Which One Are You?, by Grant Koropatnick, P.Eng. FEC
- Panel Discussion: Government Relations Strategic Priorities, featuring James Blatz, P.Eng. FEC, Michael Gregoire, P.Eng. FEC, and Allan Silk, P.Eng. FEC. Moderated by C. Scott Sarna.
- Showing Them How It's Done!: The *modus operandi* of the Experience Review Committee, by Jitendra Paliwal, P.Eng.
- Association Chapters: Uniting Diversity, by Steven Wu, P.Eng., and Wing-Keat Wong, P.Eng.

##### Diversity in the Workplace

- We've Come A Long Way Baby! – But Are We There Yet? by Chitra Paliwal
- Unconscious Bias in the Workplace by Indra Kalinovich, EIT (ON)
- Ethics and The Only Thing That Is Constant by Michael Gregoire, P.Eng. FEC
- Panel Discussion: Diversity in the Workplace featuring Dwain Barron – Manitoba Hydro, Lindsay de Vetten – Lafarge Canada Inc., Robyn Koropatnick, P.Eng. – Teshmont Consultants. Moderated by Michael MacKay, EIT.

##### Diversity in the Province

- 30 by 30 in Manitoba, by Indra Kalinovich, EIT (ON) Lindsay Melvin, P.Eng. FEC, and Michelle Wadelius, P.Eng



All five Association female Presidents: Marcia Friesen, P.Eng., FEC, Cathy Stewart, P.Eng., FEC, Current President Lesley McFarlane, P.Eng., Robyn Koropatnick, P.Eng., FEC and Dawn Nedohin-Macek, P.Eng., FEC.



President Howard Procyshyn, P.Eng., FEC ends his term as President by handing over the Scott Gavel and presents incoming President Lesley McFarlane, P.Eng. with her certificate of Presidency.

- Looking Back, Moving Forward by Ron Britton, P.Eng. FEC, and Richard Jones, P.Eng.
- Diverse Engineering Students Today for Diversity in our Future Engineering Profession by Jonathan Beddoes, P.Eng.
- Encouraging Indigenous Engineers by Randy Herrmann, P.Eng. FEC

##### Diversity in your Personal Career

- Creating a Winning Personal Image, by Ann Christoffersen
- Understanding Personalities: Myers Briggs Type Indicator, by Lisa Moretto
- Diversity Applied to Teamwork, by Rolando Jeria, P.Eng.
- Putting the P in P.Eng.: What They Didn't Teach You at University, by Lisa Moretto

## FRIDAY, OCTOBER 23

### Annual General Business Meeting

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. President Howard Procyshyn, P.Eng. FEC, ended his term and passed the gavel to incoming President Lesley McFarlane, P.Eng.

Once again, registered members of the Association who could not make it to the Business Meeting at the Fort Garry Hotel were able to participate by webinar. Webinar participants were able to get sound and video of the business meeting, vote on motions, and were able to raise questions that would have been asked on their behalf in the room.

**Awards Gala Dinner and Dance**

Fine cuisine and highly enjoyable entertainment set the stage for a first-class evening honouring member achievements and corporate contributions to the profession. Almost 300 guests joined representatives from government and industry for dinner followed by an evening of great entertainment and dancing with the Ron Paley Big Band. Congratulations to all 2015 nominees and award winners.

**Award Winners:**

- **Member-In-Training Award:** Nikhil Handa, EIT
- **Early Achievement Award:** Kristin Petaski, P.Eng.
- **Champion of Engineering Education Award:** Randy Herrmann, P.Eng. FEC
- **Outstanding Service Award:** Dr. Hilmi Turanli, P.Eng. FEC
- **Leadership Award:** Kelvin Shepherd, P.Eng.
- **Technical Excellence Award:** Jon Kell, P.Eng.
- **Honorary Life Membership:** Dr. Digvir Jayas, P.Eng. FEC ⊕



MC Anders Boulanger at the Awards Gala Dinner and Dance



Past Presidents Dr. Digvir Jayas, P.Eng., FEC and Garland Laliberte, P.Eng., FEC mingling before the Awards Gala Dinner and Dance



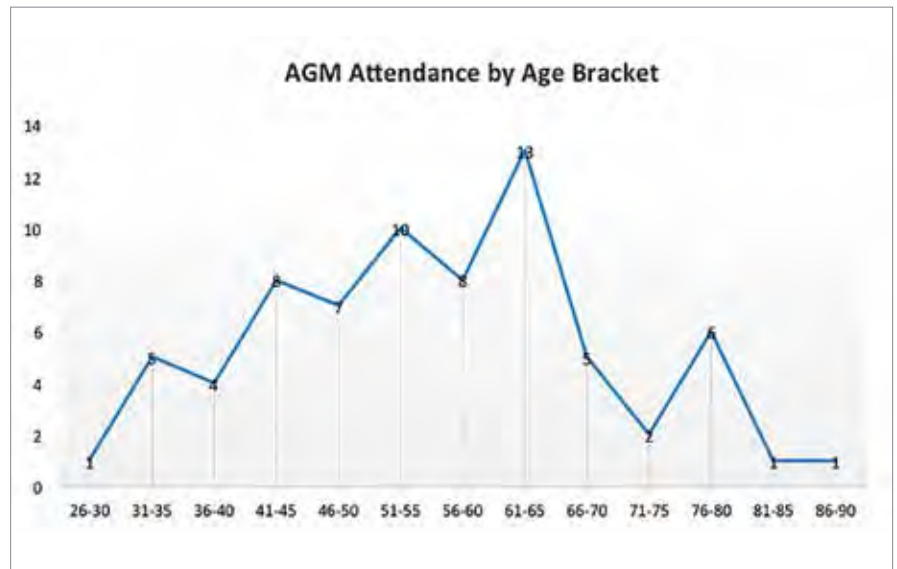
# AGM Member Profile

The annual general meeting of the Association took place at the Fort Garry Hotel, Friday, October 23, 2015. Here is a profile of those in attendance.

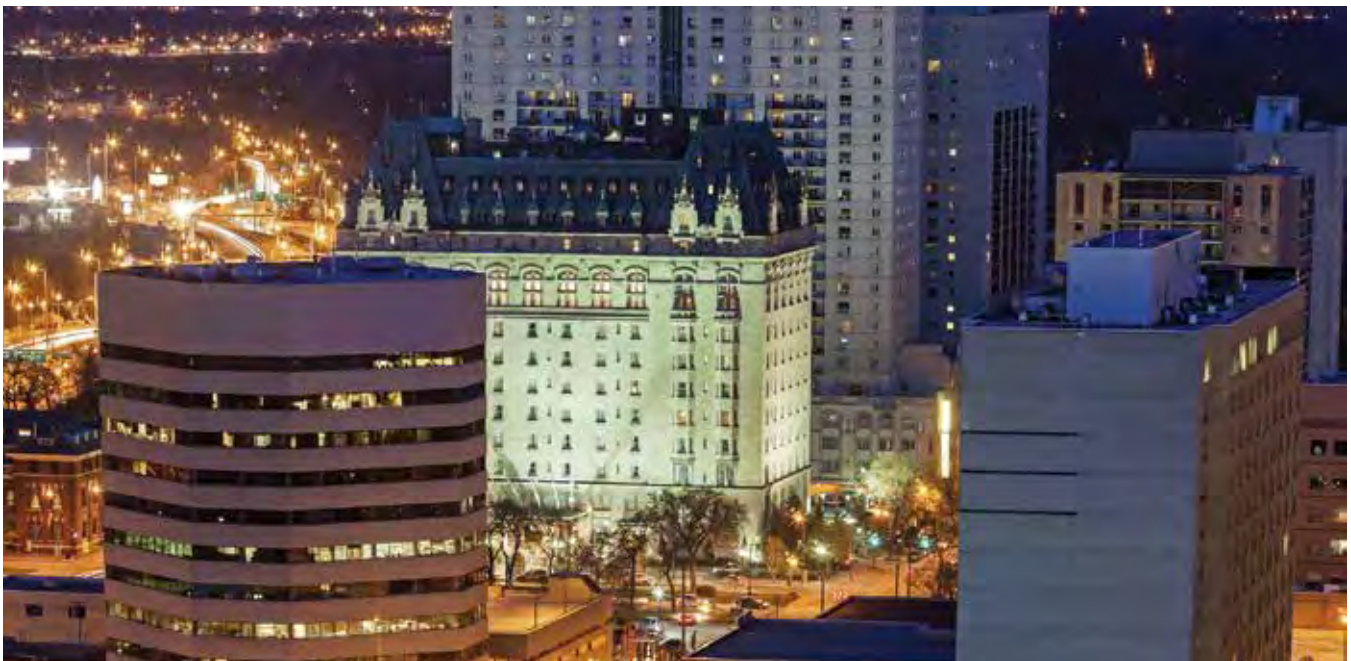
- 71 professional members signed-in.
- Average age: 56
- Youngest: 29
- Oldest: 86
- Men: 59 83%
- Women: 12 17%
- Engineers: 66 92%
- Geoscientists: 5 8%
- Practicing members: 58 81%
- Retired members: 13 19%
- Past Presidents: 16 22%
- Councillors: 12 17%
- Staff: 3 4%

**Distribution by Age Bracket:**

<b>1</b>	<b>5</b>	<b>4</b>	<b>8</b>	<b>7</b>	<b>10</b>	<b>8</b>	<b>13</b>	<b>5</b>	<b>2</b>	<b>6</b>	<b>1</b>	<b>1</b>
26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90



Some questions asked following the AGM every year are: Is this representative of the overall membership? Does the AGM format serve the needs of the membership? How can participation be increased? Is there a format which will increase the attendance across all age brackets? Send in your comments and suggestions to [info@apegm.mb.ca](mailto:info@apegm.mb.ca).



## INTRODUCING THE ASSOCIATION'S NEW PRESIDENT

# Lesley McFarlane, P.Eng.

By C. Hanlon

After growing up in Eastern Canada, graduating with a B.Sc. (Math & Physics) from Mount Allison and a B.Sc. (Electrical Engineering) from the University of New Brunswick, Lesley McFarlane lived all across the country as a member of the Canadian Armed Forces before choosing Winnipeg as her home. Since then, the passionate Manitoban has made her adopted province proud, winning the 2009 *Canadian Women in Communications Excellence in Leadership Award* for founding a highly successful mentoring group at MTS, where she is currently the Director of Wireline Access.



### What initially drew you to a career in engineering?

In high school, I loved science and math, but it was not clear what tangible career I could pursue with a theoretical degree. A friend's father, who was a professional engineer and professor of engineering, at Mount Allison, met with me to explain that a career in engineering would combine the theory with practical applications. The breadth of career options was appealing. I felt relieved knowing that engineering was a good fit for me.

### You spent the first 14 years of your career as a telecommunications officer with the Canadian Armed Forces. How did that experience influence the professional you are today?

Like all officers in the Forces, I was given the responsibility of leading a team of technical professionals in situations where many people's lives are at stake. I had to grow up quickly, and I loved having that responsibility entrusted in me. We received formal leadership training, which I use today in helping my team understand our business needs

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“Being in the military also reinforced the values of honour, duty, and giving back to one's community that my parents had instilled in me.”

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when selecting a solution. Being in the military also reinforced the values of honour, duty, and giving back to one's community that my parents had instilled in me.

### As an engineer, what prompted you to earn a Project Management Professional (PMP) designation and a Master's in Business Administration (MBA)?

As a technical leader, it was a pretty easy leap to decide to get my PMP designation in 2001. A friend, who is also an engineer, explained the benefits of joining PMI in further developing my career. I took a look at the work I was doing at Valcom at the time and realized that a component of it was project management, but, without knowing

the best practices, I was just muddling through. So I joined a study group and took the exam, which also helped me get my first job at MTS.

After about 15 years in the workforce, I was also interested in returning to university to broaden myself academically. As a technical leader, although I knew an MBA was a better fit for me than an M.Sc., I did not anticipate how well it would round out my prior education. In engineering, my electives had not gone much beyond economics, but in the MBA Program at the University of Manitoba I studied a wider variety of subjects and found myself fascinated by arts and marketing. The MBA enabled me to understand and 'speak' business while becoming a much more effective technical leader.

**Please describe the work in which you have been involved at MTS.**

I started as a Project Manager in Marketing in 2001. At the orientation I was one of the only people who wasn't from Manitoba! Shortly afterward I got married and we realized how much we loved our jobs and the quality of life in this province, so we knew we were here to stay.

MTS has been like a family while providing a huge range of opportunities. After a year and a half I became leader of the Marketing Project Office and our daughter was born 18 months later. I knew that after my maternity leave I wanted to return to Network Services and I feel very lucky to have been offered a leadership position in that area. Eventually, I became Director of the Network Services Project Management Office. Since May 2014, I have been the Director of Wireline Access, with a team of around 200 people responsible for the building, design, implementation and maintenance of tens of thousands of kilometres of fibre optic and copper cable across the province.

**What has been your involvement with Engineers Geoscientists Manitoba and other professional organizations and initiatives, including the mentorship group you started at MTS?**

The mentorship group has grown to over 100 members who meet about once a month for presentations or discussions on various topics, such as personal productivity, work-life balance, etc. Once a year, we also participate in a project with a community organization such as Habitat for Humanity. It's all about networking and discovering different career opportunities.

I have been active with Engineers Geoscientists Manitoba since joining the Women's Action Committee (now known as Committee for Increasing the

**“As a self-regulating profession, our ongoing challenge is to meet the needs of the public, keep them safe and ensure our members provide the quality of service the public expects.”**

Participation of Women in Engineering) in 1999. I served until 2004, helping to organize events. At the same time, I was active in the IEEE Women in Engineering Group and eventually became Chair of the Winnipeg IEEE Section. My term on the Association's Council started in October 2013.

**What challenges do you see the Association facing in the near future?**

As a self-regulating profession, our ongoing challenge is to meet the needs of the public, keep them safe and ensure our members provide the quality of service the public expects. In this way, we are different from other associations because we exist not just for the members, but also for the public. We also need to continue some of the great work that was started in the past couple of years, connecting more closely with government, to evolve the legislation that governs what we do,

keeping us relevant and, ultimately, enhancing our profession.

**As President, what are some of your goals for the coming year?**

I have two goals. The first is to perform my duties with integrity, openness, and dedication.

The second goal is to pick up from where my predecessors have started and take an active role in driving Ownership Linkage. Council brainstormed a number of avenues for Ownership Linkage and some of the activity was deferred due to the focus on our Act changes, which occupied a lot of energy in 2015. It is now time to return to focus on connecting with our moral owners, the people of Manitoba, and ensure that, as the profession's provincial regulator, we are reaching out, listening and taking action on the items of greatest concern to the broad range of industries and diverse groups in our province. ☺



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MEMBER-IN-TRAINING AWARD

# Nikhil Handa, EIT

**Nikhil Handa** graduated from the University of Utah (USA) in May of 2009 with a B.Sc. in Electrical Engineering. He became an Engineer-in-Training (EIT) in 2011.

After graduation, Nikhil worked with Reliable Controls in Utah for a year as an electrical engineer before moving to Thompson where he worked as a substitute teacher for 10 months in both elementary and high schools. Nikhil started working for Vale as an Engineer-in-Training in September of 2011 after completion of his academic assessment by the Association. Nikhil has been responsible for a wide variety of projects since joining Vale, ranging from PLC control systems to mine power distribution and engineering standards. Nikhil was responsible for the upgrade of a PLC control system at the Birchtree Mine. Despite poor documentation, Nikhil was able to design, program and commission the upgrade. Nikhil has also been responsible for the design of six power centre installations over the past two years and is responsible for electrical one line drawings for the T-3 mine. Additionally, Nikhil has developed standards which identify electrical equipment used within each area of Vale's Manitoba operations.



Past President Howard Procyshyn, P.Eng., FEC, President Lesley McFarlane, P.Eng., Nikhil Handa, EIT, and Awards Committee Chair Alan Aftanas P.Eng.

Nikhil is currently a member of the Association's Indigenous People's Professional Initiative Committee. In this role he assists in distributing committee promotional and educational materials within Thompson. He also actively meets with the committee via teleconference to discuss ways to promote the engineering profession in the community. Nikhil is also a member of the Associations Thompson Chapter Executive and Multi-culture Centre.

Nikhil is a very active volunteer. He volunteers with the Hindu Prarthana Samaj of Thompson, at the Multiculture Centre, and as a judge for Regional Science Fairs. He has also assisted the Thompson Zoological Society in their vision, design, planning, scheduling, and

construction phase for the new Boreal Discovery Centre. In addition to this, he has reinitiated, organized, and promoted the Spaghetti Bridge Competition in all elementary schools in Thompson from 2012 to present. He has also recruited other MITs to volunteer at the event.

Nikhil is looking forward to becoming a professional engineer this year and continue to grow in his field of work. He hopes to work as a design engineer or project manager one day and continue promoting science and engineering professions.

Engineers Geoscientists Manitoba is pleased to recognize Nikhil Handa as the winner of the Member- in Training award for 2015. ☺

## Nominate Your Colleagues for 2016 Engineers Geoscientists Manitoba Awards

**Nominations for deserving Professional Engineers and Geoscientists are open now for Engineers Geoscientists Manitoba Awards for the year 2016.**

For details visit website: <http://apegm.mb.ca/Awards.html>

Please take time to complete a nomination form and forward to the Awards Committee before February 1, 2016. Your initiative and recommendations are essential to recognize and honor deserving professionals from our membership at the next Awards Gala ceremony.



## EARLY ACHIEVEMENT AWARD

# Kristin Petaski, P.Eng.

**Kristin Petaski** is a Principal at Workplace Engineering Solutions, a company she co-founded four years ago. The company focuses on technical solutions to safety, including machine safeguarding assessments, guarding design and installation on machinery, and equipment lockout. Recent projects she has worked on include safeguarding a new production line at the Royal Canadian Mint, equipment review and risk assessment at Magellan Aerospace, and assembly line re-design for Kitchen Craft. Kristen's responsibilities cover all aspects of running the business with a focus on marketing, research and project scheduling in addition to technical solutions development. She has honed her skills to include those normally outside her specialty to improve her business daily.

Kristin obtained her B.Sc. in Manufacturing Engineering in 2006 and began working full time at Kitchen Craft. She focused on process improvements, using lean manufacturing techniques to improve efficiencies, quality, and safety. Kristin quickly learned the value of going down to the shop floor and engaging with operations. Kristin moved to Calgary in 2008 and worked as an environmental consulting engineer at EHS Partnerships. There she worked on a variety of health and safety projects including air quality testing, mould inspections, and health and safety policies and procedures.

In 2009 Kristin returned to Kitchen Craft as the Engineering Services Supervisor where she purchased and installed new equipment and supervised a small technical department. In 2011 she co-founded Workplace Engineering Solutions. Kristin has since helped to grow the company from a start-up business into an established and well-respected consulting firm providing



Past President Howard Procyshyn, P.Eng., FEC, President Lesley McFarlane, P.Eng., Kristen Petaski, P.Eng., and Awards Committee Chair Alan Aftanas P.Eng.

machine safety solutions for Manitobans. The risk she took to start this company, one that helps ensure workers go home safely every day, is one that Kristin counts as her proudest professional accomplishment. Prior to starting Workplace Engineering Solutions there were no engineering firms in the province focusing on machine safety.

Kristin is currently the Vice President of the Incident Prevention Association of Manitoba (IPAM), and will assume the role of President this year. IPAM is a group of safety professionals working to improve incident prevention methods, training, and education. Kristin has also been named an associate member of the CSA Z432 committee. The Canadian Standards Association (CSA) takes on associate members as technical representatives to help develop their standards. It is an accomplishment to be known as a machine safety expert and to be invited this early in her career to help develop these standards.

She has been nominated as a finalist for both the 2015 YWCA Women of Distinction Awards and the 2015 Manitoba Woman Entrepreneur of the Year Awards. Kristin conducts several volunteer presentations a year related

to machine safeguarding to the local safety community. School division safety coordinators are among the attendees for these presentations. Kristin promotes engineering as a career choice to students and has assisted in mentoring Engineers-in-Training within the workplace. She has also volunteered with the Winnipeg Humane Society, judging science fairs and coaching girls' volleyball. In the future, Kristin would like to expand her role for promoting the involvement of women in engineering.

Kristin Petaski has a reputation as a machine safety expert in Manitoba and she plans to work to grow her company's reputation across the prairies. Kristin represents the profession of engineering in all her volunteer work with safety organizations. She strives to show the importance of a technical perspective in the safety field. Kristin plans to continue to educate the industry on the importance of machine safety and the benefits of having machines properly assessed by professional engineers.

Engineers Geoscientists Manitoba is pleased to recognize Kristin Petaski with the Early Achievement award for 2015. ☺

## CHAMPION OF ENGINEERING EDUCATION AWARD

# Randy Herrmann, P.Eng.

**Randy Herrmann, P.Eng.**, graduated from the University of Manitoba with a degree in Geological Engineering in 1988. After graduation, Randy worked for seven years with a consulting engineering firm in Peterborough, Ontario. Committed to raising the profile of professional engineering among Indigenous people, Randy was hired as the Director of the Faculty of Engineering's Access Program (ENGAP) in 1998.

For the past 30 years ENGAP has provided a pathway for Indigenous peoples to access engineering education. But unlike many programs of this type, it is not focused solely on "access." The real achievement is to ensure that those admitted are given the tools and support to successfully complete the program. Engineering is generally considered to be one of the most demanding programs at any university. Therefore, ensuring that Indigenous peoples have access to those tools and support are all the more critical.

Almost 20 years ago, ENGAP, although relatively successful, was still a small program with a very limited number of graduates. Randy brought a number of particular skills to the position of Director: he was Metis, so he shared the culture of the program; he was a professional engineer, so he shared the culture of the profession; he was a University of Manitoba graduate so he shared the culture of the Faculty; and he was relatively young, so he could identify with his students.

Put very simply, Randy and his staff have taken the ENGAP program and



Past President Howard Procyshyn, P.Eng., FEC, President Lesley McFarlane, P.Eng., Randy Herrmann, P.Eng., and Awards Committee Chair Alan Aftanas P.Eng.

made it the most successful access program for Indigenous peoples who want to pursue an engineering career. The level of commitment that Randy brings to his job is astounding. This year the program celebrates its 30th anniversary and over 100 graduates.

Randy actively pursues many projects to advance the educational opportunities for Indigenous students, including raising funds to purchase ten-thousand activity books on engineering that have been distributed to communities throughout Manitoba, chairing the Indigenous Professionals Initiative Committee and leading the organizational committee for the 2008 Dreamcatching Conference in Winnipeg. Randy is particularly proud of his involvement with Science in a Crate – a program which takes boxes of teaching materials to Indigenous communities. The program helps

teachers show that science is an integral part of Indigenous life. Most recently Randy was instrumental in the creation of "The Birch Bark Canoe – Navigating a New World", a 21st-century curriculum connection and video resource for Manitoba teachers of Grades 5-9. This documentary and teachers' curriculum guide celebrates First Nations ingenuity and technology as demonstrated by the design and achievement of the birch bark canoe.

For his passionate dedication to helping Indigenous students achieve their dreams of a higher education, and his tireless promotion of the engineering profession, the Faculty of Engineering at the University of Manitoba, together with the Association, are pleased to award the 2015 Champion of Engineering Education Award to Mr. Randy Herrmann, P.Eng. ☺

## OUTSTANDING SERVICE AWARD

# Dr. Hilmi Turanli, P.Eng., FEC

**Dr. Hilmi M. Turanli** received his B.Sc. and M.Sc. degrees in Electrical Engineering from the Middle East Technical University, Ankara, Turkey in 1976 and 1980, respectively. He was granted his Ph.D. degree from the University of Manitoba in 1984, while completing a special research project on the application of forced commutation for HVDC power transmission for Manitoba Hydro. Later, he taught at the University of New Orleans and consulted for Louisiana Power and Light Company.

With Manitoba Hydro since 1986, Dr. Turanli is currently the Senior Interconnections Planning Engineer in the System Planning Department. His research interests include the digital simulation of power-electronics circuits and HVDC transmission. Throughout his career, Dr. Turanli has presented and co-authored numerous conference papers and refereed journal publications, primarily on electrical transmission subjects.

Dr. Turanli was invaluable in organizing international conferences such as the Canadian Conference on Electrical Computer Engineering (CCECE 2002), CIGRÉ Canada Conference on Power Systems (2008) and the Electrical Power and Energy Conference (EPEC 2011), which were all held in Winnipeg.

Dr. Turanli is a Senior Member of IEEE and has been actively involved with the committee since joining in 1981 by volunteering on and chairing numerous committees. He is currently the Associate Editor of the *Canadian Journal of Electrical and Computer Engineering* and was designated as a Fellow of the Engineering Institute of Canada and Fellow of Engineers Canada in 2001 and 2010, respectively.



Past President Howard Procyshyn, P.Eng., FEC, President Lesley McFarlane, P.Eng., Dr. Hilmi Turanli, P.Eng., FEC and Awards Committee Chair Alan Aftanas P.Eng.

**“Engineers Geoscientists Manitoba is pleased to recognize Hilmi Turanli’s continuing meritorious professional service by presenting him the 2015 Outstanding Service Award.”**

Dr. Turanli has been serving as an adjunct professor in the Department of Electrical & Computer Engineering at the University of Manitoba since 1999, advising undergraduate and graduate students on their research projects and final thesis examinations. For the past five years, he has also been a member of the Electrical Engineering Technology Advisory Board at Red River College, providing industry input to the College’s Electrical/Electronics Engineering Department.

Dr. Turanli has served on numerous Association committees, including 19 years

on the Professional Development (PD) Committee, eight years on the Nominating Committee, eight years on the Academic Review Committee, three years as a Committee Chair, three years on the Awards Committee (still active), as well as other contributions such as organizing various Association PD Conferences and Engineering/ Geoscience Management Seminars.

Engineers Geoscientists Manitoba is pleased to recognize Hilmi Turanli’s continuing meritorious professional service by presenting him the 2015 Outstanding Service Award. ☺

LEADERSHIP AWARD

# Kelvin Shepherd, P.Eng.

**Kelvin Shepherd** graduated with a B.Sc. (Electrical Engineering) from the University of Saskatchewan in 1981. He is presently a registered professional engineer in Manitoba. After graduation he spent twenty years with Saskatchewan Telecommunications (SaskTel) in a variety of technical and management positions. He has worked on a number of international telecommunication projects through SaskTel International. He was Chairman of the Board for LCL Cable Communications Ltd (Leicester, England) prior to its sale by SaskTel in 1995. Mr. Shepherd was also Chairman of the TR Labs (1996 to 2000), a telecommunications research and development organization based in Western Canada. He was Senior Vice-President and Chief Technology Officer for SaskTel before moving to MTS in the year 2000.

Mr. Shepherd joined MTS as Vice-President Network Services and Chief Technology Officer, and has been President of the company since 2006. In this role he provides overall direction, strategy, and leadership for the company and is responsible for sales, service, and operational support to customers in Manitoba. Mr Shepherd has been instrumental in driving innovation and excellence by unleashing the potential of the internet for full service communication facilities. The service is provided to many of the rural Manitoba communities by using the latest fibre to the home technology. Under his leadership MTS was first to launch Long Term Evolution (LTE) wireless technology and offer high speed wireless internet access in Winnipeg and Brandon in 2013.



Past President Howard Procyshyn, P.Eng., FEC, President Lesley McFarlane, P.Eng., Kelvin Shepherd, P.Eng., and Awards Committee Chair Alan Aftanas P.Eng.

Kelvin led the purchase of local IT infrastructure firm EPIC in 2013. This allowed the two companies to leverage each other's strengths to provide IT and IP communications solutions for their customers. The new \$53 million EPIC Data Centre, opening in mid-2015, will provide data centre solutions and cloud services for businesses across North America and create positive economic impacts for Manitoba.

Kelvin has an exceptional combination of strategic thinking and technical depth. His ability to distill complex technical situations into business impacts for real world application ensures that MTS constantly makes good business decisions to serve its customers. His leadership impact across the company is remarkable. He is humble and confident in his direction and focuses on team work across the multiple areas of the company. He is extremely open and personable and finds time to sit with the new employees

through the Graduate Admission Program and mentor participants in the "Emerging Leaders Program". He has the unanimous admiration and respect of over 2700 MTS employees.

Kelvin is active in the community at large through his volunteer services. He has served on the Board of Trustees of Victoria General Hospital for 10 years including Chairman of the Board. He has been serving the United Way of Winnipeg campaign cabinet for last five years and is Chair for the 2015 campaign celebrating its 50th Anniversary in Manitoba. He is also the current Chair of the Mbiz Awards Jury Committee of the Manitoba Chamber of Commerce.

In recognition of the outstanding technical leadership and service to the community at large Engineers Geoscientists Manitoba is pleased to present the Leadership Award to Kelvin A. Shepherd, P.Eng. ☺

## TECHNICAL EXCELLENCE AWARD

# Jon Kell, P.Eng.

**Jon Kell** graduated from the University of Manitoba with a B.Sc. in Mechanical Engineering in 1998 and a M.Sc. in Civil Engineering in 2001. Since that time, he has been busy perfecting his technical skills in structural engineering, particularly in relation to transmission line system infrastructure. Jon has pioneered a number of new philosophies on designing and maintaining transmission systems and has provided innovative engineering solutions for the Transmission Business Unit of Manitoba Hydro.

Jon is the head of the Civil Design Section at Manitoba Hydro and is responsible for engineering design and detailing services for transmission lines, stations, and communications. He has 19 years of progressive experience in key roles driving innovation, economic sustainability, system reliability, public safety, and staff career growth. He currently administers a section that includes 27 highly qualified technical staff and engineers.

Under Jon's leadership, the Civil Design Section has developed an innovative reliability based design philosophy on transmission system design and maintenance versus traditional approaches. The process allows for sound engineering decisions that balance the cost with reliability. Coupled with sophisticated numerical analysis techniques including the use of finite element analysis for structural design, the process has allowed for significant cost savings for Manitoba Hydro.

As a technical expert, Jon regularly provides advice and guidance to



Past President Howard Procyshyn, P.Eng., FEC, President Lesley McFarlane, P.Eng., Jon Kell, P.Eng., and Awards Committee Chair Alan Aftanas P.Eng.

Manitoba Hydro's management and executive. He is also recognized as an expert with his counterparts in neighbouring utilities where he provides advice on major transmission system issues as well as best practices. He is involved in technical committees including the Canadian Standards Association (CSA W47.1) and with international research programs through the Centre for Energy Advancement through Technical Innovation.

Jon fully supports and develops his staff by encouraging them to join technical committees and to prepare and present technical presentations. He also encourages them to do peer reviews so that staff can learn from others while also learning by teaching others. In addition he is a Councillor in Manitoba Hydro's Professional Engineering Association

and has successfully campaigned for non-traditional methods of Providing Professional Development opportunities, even during periods of intense fiscal management at his place of work.

Jon is also the Chairman of the Board for the Winnipeg Industrial Skills Training Centre. This is a non-profit corporation that provides relevant training in the metal trade with the objective of providing unemployed individuals the opportunity to obtain the trade skills required to successfully enter industrial welding and metal fabrication workplaces.

In recognition of his outstanding leadership and scientific knowledge applied to benefit Manitobans and the nation, Engineers Geoscientists Manitoba is pleased to present the Technical Excellence Award to Mr. Jon Kell, P.Eng. ☉

## HONORARY LIFE MEMBERSHIP AWARD

# Dr. Digvir Jayas, P.Eng.

**Dr. Digvir Jayas** is a Distinguished Professor of the University of Manitoba and former Tier-I Canada Research Chair in Stored-Grain Ecosystems. Currently he is serving as Vice-President (Research and International) at the University of Manitoba. He was educated at the G.B. Pant University of Agriculture and Technology in Pantnagar, India, the University of Manitoba, and the University of Saskatchewan.

In the last 30 years, Dr. Jayas has done an immense amount of innovative research on stored-grain ecosystems. He has integrated mathematical modeling, engineering, and stored-product entomology and ecology to produce major advances in our understanding of the problems associated with effective storage of cereal grains, oilseeds, and pulses (collectively referred to as grains). His research has focused on solving issues related to drying, handling, and storing of grains and digital image processing for grading and processing operations in the Agri-Food industry. He has co-authored 361 scientific papers in high-quality refereed journals, 45 chapters in books and an additional 422 articles in conference proceedings or full-length conference papers.

Dr. Jayas established the state-of-the-art "Canadian Wheat Board Centre for Grain Storage Research" (CWBCGSR) facility at the University of Manitoba, and his research has attracted over \$27 million in funding. He has collaborated with researchers in several countries and has had significant impact on development of efficient grain storage, handling, and drying systems in Canada, China, India, Ukraine, and USA.



Past President Howard Procyshyn, P.Eng., FEC, President Lesley McFarlane, P.Eng., Dr. Digvir Jayas, P.Eng., FEC, and Awards Committee Chair Alan Aftanas P.Eng.

**“Dr. Jayas established the state-of-the-art Canadian Wheat Board Centre for Grain Storage Research (CWBCGSR) facility at the University of Manitoba, and his research has attracted over \$27 million in funding.”**

Dr. Jayas has been inducted as a Fellow by twelve Canadian and international technical and professional organizations, including Engineers Canada, the Engineering Institute of Canada, the Canadian Academy of Engineering, and Royal Society of Canada. He has received several national and international awards in recognition of his research and professional contributions including the NSERC Brockhouse Canada Prize, Engineers Canada Professional Service Award, the Association's Outstanding Service Award and Merit Award.

Dr. Jayas has served the Association on several committees including Public Interest Review Committee, Academic Review Committee, Experience Review Committee, Nominating Committee, and Publications Committee as member, vice-chair, or chair for many years. He served as Association President in 2005-2006. Currently, he is the President of Engineers Canada.

Engineers Geoscientists Manitoba is extremely grateful to Dr. Jayas for his dedicated service in so many areas, and in appreciation is pleased to confer Honorary Life Membership on Dr. Digvir Jayas, P.Eng., FEC. ☺

# GREAT THINGS HAPPENED IN 2015



By G. Koropatnick, P.Eng., FEC

As the year is coming to an end, I'd like to celebrate some of the good things which took place in 2015 by sharing the following list of significant accomplishments with you:

- Government relations was a fast and productive effort. With the hiring of Scott Sarna, Bill 21 and a renewed relationship with government has resulted.
- Approval of the new logo and re-branding of Engineers Geoscientists Manitoba.
- Hundreds of members have requested the new lapel pin.
- Successful member engagement took place at the Ingenium Conference in October and at three member meetings last winter and numerous professional development sessions and chapter events.
- The hosting of the Manitoba community of women in engineering, sciences, technology and trades at the MCWESTT conference was met with over-flowing attendance.
- In addition to the Filipino Members Chapter, member volunteerism expanded with the addition of the Chinese Members Chapter and the new interest for starting the Indian Members Chapter.
- The new Fundamentals of Engineering (FE) exam policy has created another pathway to licensure for international applicants; also providing additional support for the initiatives of the Manitoba Fairness Commissioner.
- The Continuing Competency Committee has achieved 95% member compliance with the ProDev program and have a sound plan for following-up on the remainder.

*"I look forward to working with you in 2016. Thank you for the privilege of serving this historic, honorable profession as your CEO and registrar."*

- New task groups were formed to review the environment and sustainability guideline, revise the "deferred dues" category, and to research the topic of engineering education. The task group model has increased participation by first-time volunteers.
- The Association office successfully transitioned through two retirements, one maternity leave, and the hiring of four new employees in order to provide the best services to its members.
- Another balanced budget and good financial audit. The future of

the Association is secured through sound financial management and operational stability.

#### **A Big "Thank You"**

Finally, a big "thank you" to the staff for their dedicated service and to the members who volunteered their time on a committee or task group this year. I look forward to working with you in 2016. Thank you for the privilege of serving this historic, honorable profession as your CEO and Registrar. Your feedback is important. If you have any thoughts on anything, please email me at [gkoropatnick@apegm.mb.ca](mailto:gkoropatnick@apegm.mb.ca). ☺

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# Geoscience in Service of Society

Dr. G.S. Lodha, P.Geo., FGC

Over the decades, the geosciences have always made significant contributions to society at large. Back in 1957, when I was an undergraduate, the first space satellite was launched, a harbinger of impressive contributions by the space programs to come. In appreciation of such contributions, that year was designated the International Geophysical Year by a grateful society.

Things were simple in those days. Computers and Google databases were unheard of. We learned geoscience by studying rocks and preparing maps by manually plotting details on geographic, topographic or air-photo maps. The subsurface was studied by drilling and core studies and measuring the physical, chemical, hydrogeological and associated properties of rocks in the laboratory.

Advances in aerial, ground and borehole surveying, data storage, computing, and communication technologies have made the process of geoscience data acquisition, processing, mapping, modelling, integration and interpretation more efficient, faster and with many options for a variety of presentations. This is facilitating the sharing and integration of geoscience information with engineers, decision makers, politicians and society at large. The role of geoscience in producing geological and geophysical maps for exploration and developing economic resources like hydrocarbons, minerals and groundwater is well known. About 80% of geoscience professionals in Canada are engaged in these resource exploitation activities.

However, the contributions of the geosciences to understanding, evaluating and protecting the environment; assessing geohazards such as earthquakes, volcanoes and landslides; waste disposal technology for nuclear as well as other industrial wastes; and protecting the health of our soil are hardly known. Sustaining such geoscience expertise is essential to developing solutions to critical economic, environmental, health and safety challenges faced by our present day society.

The recently compiled document, *“Geoscience for America’s Critical Needs- Invitation to a National Policy*

**“Over the decades, the geosciences have always made significant contributions to society at large.”**



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**“Through the decades, geoscience has continued to serve society. In the earlier days it concerned itself almost entirely with scientific matters, but has evolved over the years to include a regulatory dimension at the provincial level, coordinated by Geoscientists Canada at the national level.”**

*Dialogue” by American Geoscience Institute (AGI-2016) available at <http://www.apegm.mb.ca/News.html#65> – connects the earth, science and people to provide a good overview of the contribution of geoscience to present day needs of society.*

Since the geosciences are a part of securities disclosures and resource development, and of the evaluation of environmental geoscience and geohazards, a strong regulatory framework is essential for safeguarding scientific, professional and ethical standards. That is why in Canada we have a long-standing tradition of legislated self-governance of the geoscience profession. For example, Canada’s NI 43-101 for mining, is now a globally recognized reporting standard. It is well known that leadership to our network of strong and active professional associations is provided by Geoscientists Canada. Geoscientists Canada is also a part of the organizing group for sessions on *Global Geoscience Professionalism and Geoethics*, as part of the *Geology for Society* theme for the 35th International Geological Congress (IGC). IGC is geoscience’s longest standing and foremost gathering for all scientific and technical topics in geoscience. It will now also cover all issues relating to professionalism in geoscience disciplines since the former International Professional Geology Conference (IPGC) has now become a part of IGC. Engineers Geoscientists Manitoba members might be interested to know that Oliver Bonham of Geoscientists Canada, in association with Ruth Allington (UK) and Andy Clay (South Africa), are session chairs and are inviting papers on this theme. Refer to the link: <http://www.35igc.org/Themes/13/Global-Geoscience-Professionalism-and-Geoethics>.

Deadline for Submission of Abstracts is January 31, 2016. The 35th IGC is scheduled to be held in Cape Town, South Africa during August 27 - September 4, 2016.

Through the decades, geoscience has continued to serve society. In the earlier days it concerned itself almost entirely with scientific matters, but has evolved over the years to include a regulatory dimension at the provincial level,

coordinated by Geoscientists Canada at the national level. Geoscientists in addition should make efforts to inform the general public of the useful contributions they are making through an active outreach program.⊕



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# DIMENSIONS

ENGAGE EMPOWER RECOGNIZE

A. Watts, P.Eng.

The second, biennial MCWESTT Conference was held in Winnipeg on May 8, 2015. MCWESTT 2015 "DIMENSIONS: Engage. Empower. Recognize." was a resounding success with over 300 people participating in the conference. The one-day conference offered participants a high quality program with opportunities to learn, share experiences, network, and recharge.

So what exactly is MCWESTT? MCWESTT or the Manitoba Community for Women in Engineering, Science, Trades and Technology is a group of women involved in engineering, science, trades and technology who saw a need in our community for professional development, support, and celebration. MCWESTT is not an independent professional organization, but a group of women that specifically came together to plan this one-day conference. Inspired by the success of a similar national conference, CCWESTT (Canadian Coalition of Women in Engineering, Science, Trades

and Technology), this diverse group formed the MCWESTT Conference in 2013. After a successful conference in 2013, the community decided to hold the conference every two years and MCWESTT 2015 was born!

The conference program consisted of three keynote speakers, a panel discussion and fifteen breakout sessions. The program was carefully selected to provide numerous opportunities to expand existing skill sets with topics ranging from negotiation skills to mentoring. The conference featured many multi-DIMENSIONAL speakers including three talented keynote speakers: Betty-Ann Heggie, Professional speaker and blogger, former VP of Potash Corporation of Saskatchewan; Dr. Michelle Alfa, Professor and Principal Investigator at St. Boniface Research Centre; and Jennifer Jones, Canadian Curling Olympic Gold Medalist.

The 300 participants, including over 30 volunteers, and 26 presenters, were primarily from Manitoba with a few

attendees and presenters from other provinces. The 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 many DIMENSIONS of these unique careers. Lively discussions Engaged participants in the various inspiring and Empowering presentations and workshops. The event also provided the opportunity to Recognize the importance of the contributions of women to these professions.

Manitoba comedian Aisha Alfa was the conference's Master of Ceremonies, keeping the attendees laughing and celebrating the common strengths that unite this special community. The conference was held in the beautiful facilities at The Fort Garry Hotel, Spa and Conference Centre. In addition to the superb program, participants were treated to a delicious hot breakfast and lunch, and some sweet treats to accompany their coffee breaks. The morning coffee break was sponsored by the University of Manitoba - Faculty of Engineering and the delicious chocolate fountain afternoon coffee break was sponsored by the Winnipeg Construction Association.

Engineers Geoscientists Manitoba partnered with the conference planning committee for financial, technical, and logistical support. Without Engineers Geoscientists Manitoba and the other generous MCWESTT 2015 sponsors, this conference would not have been possible. A full list of sponsors is available on the conference website at [www.mcwestt.com](http://www.mcwestt.com).

It is also important to mention the role that the University of Manitoba - Faculty of Engineering, Faculty of Agricultural and Food Sciences, Faculty of Graduate Studies and the NSERC Women in Science and Engineering (WISE) Prairies Chair has in encouraging the student attendance



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at the conference. Because of their financial support, over 80 students received free enrolment for the conference, an opportunity many of them could not otherwise afford.

Similarly, the support provided by over 30 volunteers to plan, organize and ensure a smooth operation of MCWESTT, was generous, creative, and inspiring. These volunteers were vital to the conference's success. Without them the conference would not be possible.

Feedback received and the energy maintained throughout the conference indicates that not only was the conference a success, but that the attendees left MCWESTT 2015 inspired and rejuvenated.

It's soon time to start planning the 3rd biennial MCWESTT Conference...MCWESTT 2017! If you are interested in joining the MCWESTT 2017 Conference Committee, follow us on Twitter, Facebook, LinkedIn or via our e-newsletter on our website ([www.mcwesst.com](http://www.mcwesst.com)) to stay tuned for the planning committee kick-off in early 2016.

#### Thanks to our MCWESTT 2015 Conference Committee

- **Andrea Watts** P.Eng., Transport Canada, (Conference Chair)
- **Chantelle Cabral**, Engineers Geoscientists Manitoba
- **Christine Q. Wu**, Ph.D. P.Eng., NSERC Industrial Research Chair, University of Manitoba, Faculty of Engineering
- **Shabnam Shahfar**, M.Sc., Business Analyst and Software Consultant
- **Maryam Moshiri**, M.Sc., EIT, Ph.D. Candidate, University of Manitoba
- **Ellowyn Nadeau**, P.Eng., SCMP, Stuart Olson
- **Jaye McEwen**, P.Eng., New Flyer
- **Ali Campbell**, EIT
- **Aura Diaz**, GIT, M.Sc. Candidate, Centre for Earth Observation Science, University of Manitoba
- **Amber Anderson Skrabek**, University of Manitoba, Faculty of Engineering
- **Sarah Klassen**, EIT, M.Sc. Candidate, University of Manitoba, Transport Information Group
- **Dafne Orbach**, NicheMktg
- **Shari Bielert**, M.Ed., B.E.S., C.E.T., Civil Engineering Technology, Red River College
- **Lena Yusim**, NSERC-CWSE Prairies/WISE Kid-Netic Energy, University of Manitoba
- **Qiuyan Yuan**, Ph.D., P.Eng., University of Manitoba, Faculty of Engineering
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## Presence: The ‘You’ Who Enters the Room

The Committee for Increasing the Participation of Women in Engineering (CIPWIE) along with The Women in Consulting Engineering (TWICE) held a half day workshop titled “Presence: The ‘You’ Who Enters the Room” on September 14, 2015.

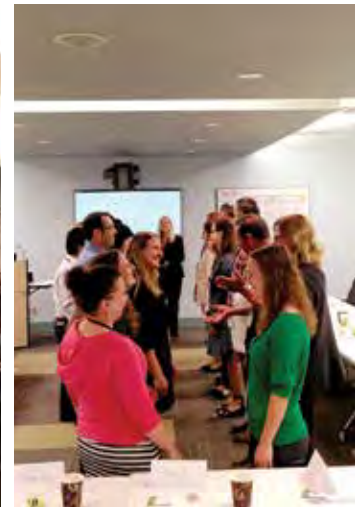
The workshop was engaging and focused on sharing experiences on 3 elements: actions, style, health/attitude. The group discovered that ‘Presence’ is not only about how to give a presentation. Instead it is how we behave and interact in different settings. Presence affects

our decisions and impacts our style and image. Like what should I wear to work? What’s appropriate for the environment I’m in today? Will I be in the office, the field, a board meeting, etc.? Who am I interacting with today and after work hours? Our inner us says volumes about our presence. It’s affected by our emotions and daily activities (both personally and professionally).

Did you know that your presence is 55 percent body language, 38 percent voice tone and only 7 percent words? Relationships all start with a simple handshake and greeting. Every day,

you are not only representing yourself, you are also representing your employer and their culture. It’s important to be aware of your own body language and to be aware of those around you as well. We create an impression in our interactions with those we meet every day, whether the encounter is over a coffee break or a public place. How often do you smile? When speaking, how often do you pause or say “um”? Most importantly, are you actively listening? We tend to forget that a conversation consists of sharing and listening. ⊕

To reach one’s ideal Presence, the group learned the 8 Key Strategies to Success in Developing Ideal P-R-E-S-E-N-C-E®, which starts with our WHY / Intention:



## University of Manitoba Faculty of Engineering to be more inclusive and accessible

More seats and a novel scholarship are paving the way to a more inclusive, accessible Faculty of Engineering at the University of Manitoba. When we hear so much about university budget cuts, it is encouraging to see that faculty and students are enjoying some welcome new financial support.

According to a recent announcement, \$500,000 in new provincial funding will expand the

336-seat engineering program by 18 seats and create a new hybrid pathway between the University and other Manitoba post-secondary institutions. Once in place, the program will allow between 10 and 15 students, primarily from Red River College, to transition to the University’s degree program, on an annual basis.

Also recently announced, a significant gift from engineering alumnus Jeff Kushner and his partner Dr. Randall McGinnis have established a new

scholarship at the University. The first of its kind at the university, this scholarship is intended to recognize and encourage LGBT undergraduate students in the faculty. The scholarship is offered to an undergraduate Engineering student who has self-declared as lesbian, gay, bisexual, or transgender.

Initiatives such as these are designed to allow the school, and ultimately the profession, to attract the best talent from all parts of society. ⊕



## Engineers Canada 2015 Scholarship Recipients

### Manulife Scholarships category:

- Hélène Dutrisac, P.Eng. (PEO)
- Matthew d'Entremont, P.Eng. (Engineers Nova Scotia)
- Évelyne Monfet, ing. (OIQ)

### TD Insurance Meloche Monnex category:

- Katherina V. Tarnai-Lokhorst, P.Eng. (APEGBC)
- Robert D. Sevalrud, P.Eng. (APEGA)
- Stephanie Whitney, P.Eng. (PEO)

A scholarship reception and dinner was held on Tuesday September 29, 2015 at the Ottawa Westin Hotel.

Engineers Geoscientists Manitoba would like to congratulate all of the 2015 Scholarship winners. ☺

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### TD Insurance Meloche Monnex Scholarships (3)

**\$7,500**

**Non-engineering:** To enhance performance in the engineering profession. Applicants must be accepted or registered full-time in a faculty other than engineering, beginning no later than September 2016.

**DEADLINE: March 1, 2016**

Application form and complete list of criteria at:  
[www.engineerscanada.ca/scholarship-program](http://www.engineerscanada.ca/scholarship-program)

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Our concern for the environment



## 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.***

## Busy Professionals Need Professionals

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# That's Not the Way I Would Have Done It

Parenting with your partner is a fascinating experience. Being responsible for a healthy growth environment for a child is inherently challenging. Doing so in a co-management scenario adds to the complexities of parenthood.

I don't use the management metaphor lightly, here; I'm a firm believer that there are many parallels between the world of parenting and the world of management. These parallels hold steady whether the conversation is about traditional management in a hierarchical-style organization, or management by a board of directors. As a parent in a two-parent family, this creates an interesting management scenario.

Like management, many of us engineers and geoscientists enter the profession of parenting without a standardized educational background. Most of our parenting methods come from the instincts we inherit from childhood experiences. This may be supplemented by the casual reading of popular books or articles.

My partner and I were raised in contrasting environments. Because of these different backgrounds, there is a potential for fractured parenting. In addition, although traditional parenting meant that each gender played a specific role, many of today's families (like ours) are structured such that both parents take equal responsibility for all areas. For example, where the father may have played a primarily disciplinarian role, this is no longer the expectation or reality. It is therefore not uncommon to have two different people trying to parent the same family in two very different ways.

In the first years of parenting, I often found myself observing how my partner was handling a certain parenting scenario and thinking to myself, "That's not the way I would do it". I know that

my partner has had the same thoughts; we would often tell each other that 'I don't think 'you' were making the 'right' decisions. Sometimes, this created conflict and lengthy discussions.

I've since come to an important realization. Although the method chosen by my partner to approach a parenting moment is not the way I would have done it, that doesn't mean the method is flawed. Looking at it another way, an outcome that is different from what I expected may still be a good outcome.

As professionals, engineers and geoscientists expend a lot of energy on becoming experts in our field. I have no doubt that all of Engineers Geoscientists Manitoba's members have the capability to become an expert in other areas, too. Perhaps, for some of us, that has included effort to become very good at the art of management.

However, as professionals, we should also be fully aware of the fact that any problem has varied solutions. The solution that's chosen by another manager, qualified in their work, deserves respect. Giving that respect between two people in a partnership can be challenging. Giving that respect in a co-management scenario that involves more than two managers can

understandably be cause incrementally more anxiety.

Engineers Geoscientists Manitoba is the child of many, many parents. There are approximately 6,000 professional members who delegate their parental duties to approximately 10 elected councillors. In addition, the public of Manitoba delegates their parental duties to three or four additional councillors. This board then relies on our CEO to assist in providing Engineers Geoscientists Manitoba the right environment for healthy growth.

There is no doubt that Engineers Geoscientists Manitoba has grown significantly in the last year. For many members, this may be perceived simply as change. However, the changes we've seen recently have all been purposeful, well-considered, and deserving of respect. For those members who have had the wherewithal to inform themselves, vote for councillors, and respect the outcomes of our organization's growth, I applaud you for your abilities to be a great parenting partner.

As always, I appreciate comments and discussion about standards issues. If you'd like to talk about the above topic or any other area of concern, please do not hesitate to contact me at: [mgregoire@apegm.mb.ca](mailto:mgregoire@apegm.mb.ca). ☺



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A special wall sculpture, (above) inspired by the design of the birch bark canoe, was unveiled with the names of all ENGAP graduates so far.

To find out more about this and other alumni events, contact:  
[amber.skrabek@umanitoba.ca](mailto:amber.skrabek@umanitoba.ca) or call 204-474-9034



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