

# PEG

SPRING 2018



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Council Election



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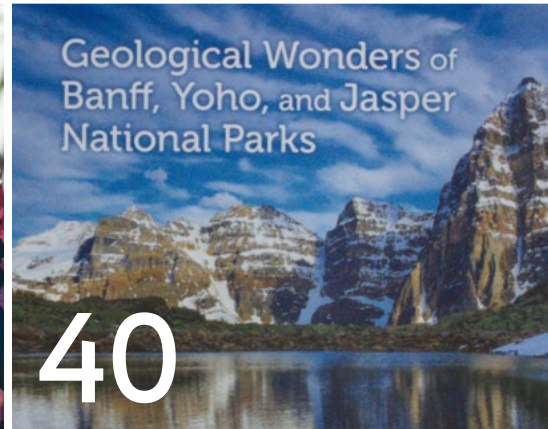




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# PEG

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*The PEG's* content relates primarily to APEGA, our statutory obligations, our services to Members and Permit Holders, and the professional development of Members. The magazine also celebrates Member and Permit Holder accomplishments in Professional Engineering, Professional Geoscience, and other areas.

*The PEG* is not a technical, peer-reviewed publication. Although we publish items about accomplishments in research, we **do not** publish actual academic or scientific papers and presentations, even in summary form.

*The PEG* does not accept advertising.

Opinions published in *The PEG* do not necessarily reflect the opinions or policy of APEGA or its Council.

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## Member Inductions Remind us of What our Professions are All About

BY **JANE TINK**, P.ENG., FEC, FGC (HON.)

APEGA President

Since last April, when I began serving you and the public as APEGA President, I have had the privilege of being involved in APEGA Professional Member Induction Ceremonies held in Calgary, Edmonton, Lethbridge, Medicine Hat, Cold Lake, and Lloydminster. For those of you who haven't had the opportunity to attend one of these ceremonies, let me set the scene. Each new inductee, after receiving a pin and a copy of our oath, stands. The oath is then recited aloud as a group.

I have included the oath with this column. It is a great reminder of what it means to be a professional member of APEGA, and I encourage you to read it.

### HOW TO KEEP CURRENT AND COMPETENT

APEGA is the largest association of self-regulated professionals in Western Canada, which speaks

to how much our work affects the public. We each have a professional obligation to participate in the association to ensure that we maintain our competencies. We do this through additional training, including being aware and knowledgeable of APEGA's professional practice standards, guidelines, and bulletins, and maintaining and submitting our continuing professional development (CPD) hours. If you are confused about what qualifies as CPD or how fill out the forms and maintain your records, please refer the fall 2017 edition of *The PEG*, [How's Your CPD Doing?](#), or attend an APEGA seminar on the subject.

For permit holders, this obligation includes ensuring that your Responsible Members update their training as required and that your organization develops, follows, and maintains a Professional

*I, (Name), by virtue of my training and experience, hereby undertake the responsibilities of a Professional (Engineer or Geoscientist) or Professional Licensee (Engineer or Geoscientist).*

*I will have proper regard for the safety and welfare of all persons and the physical environment affected by my work. I will restrict myself to that which I have adequate knowledge.*

*My reputation shall be based on merit. I shall represent myself without exaggeration. In competition, I will enter fairly and ethically.*

*To those Members-in-Training under my supervision, I am obligated to demonstrate understanding, professionalism, and technical expertise.*

*To the public, I am charged with extending the understanding of the professions.*

*Through all my actions, I will serve society and enhance my knowledge and the dignity and status of my profession.*



‘ **APEGA is the largest association of self-regulated professionals in Western Canada, which speaks to how much our work affects the public. We each have a professional obligation to participate in the association to ensure that we maintain our competencies.** ’

Practice Management Plan (PPMP) relevant to your organization's professional practice.

#### **ELECTION AND CONFERENCE SEASON**

Participating in the association also means participating in its activities, such as the annual election. [This is your chance to vote for our new Councillors, a Vice-President, and a President-Elect.](#)

The election is already underway—it started on Friday, February 16, and it continues until Monday, March 19, at 12 noon. Take the time to review candidate statements and exercise your right to vote.

The election occurs in advance of the [APEGA Annual General Meeting](#), to be held this year in Edmonton on Friday, April 20. This is your opportunity to discuss issues important to the professions, to vote on matters brought forward by Council, and to propose motions for Council to consider. The agenda package will be posted online at least two weeks before the AGM.

If you can, I also encourage to attend the [professional development portion of our annual conference](#), held all day on April 19 and on the morning of April 20. We're offering more than 20 sessions, so this a great way to keep abreast of changes to our professions and to the technology we use in our practices.

Have you ever attended the Summit Awards? Capping off the first day of the conference on the evening of Thursday, April 19, the awards are your chance to learn about and celebrate the incredible accomplishments



and projects of some of our particularly inspiring members.

All conference and AGM events are being held at the Shaw Conference Centre in downtown Edmonton.

## ASET REPORT MISSES THE MARK

During my President's Visits around the province, I meet with local branch executives, permit holders, and members. This is an excellent chance to hear what concerns exist at the local level and how APEGA may be able to assist. It is also a wonderful opportunity to discuss the changes and challenges affecting our professions at the local, provincial, and national levels.

Recently, the Association of Science and Engineering Technology Professionals of Alberta (ASET) released a report entitled *Evidence Over Rhetoric: The Case for Amending the EGPA to Benefit all Albertans, January 2018*. I encourage all of you

to read the report and watch the video posted on the APEGA website to better understand APEGA's concerns regarding the complex issue of regulating technologists.

The report claims to build the case for ASET to self-regulate technologists without APEGA's involvement. It adds little of substance to the discussion, however, and it fails to clearly define what ASET self-regulation or technologist scopes of practice would look like.

The bulk of what the report calls evidence comes from questions ASET asked of employers and municipalities. Some APEGA members and permit holders, however, have suggested that ASET didn't present things clearly before setting up meetings. Certainly, ASET's assumption that declining a meeting was the same as agreeing with ASET's proposal is, at best, a stretch.

APEGA is preparing a formal response to the report, and we'll post it soon for your review. Watch for the e-PEG in your inbox for a link. This is an important issue and it is one that APEGA—as the regulator of engineering and geoscience in Alberta—takes very seriously.

I encourage you to submit your comments and questions through my APEGA address, below.



### LINKS

[How's Your CPD Doing?](#)

[Professional Practice Management Plan](#)

[Be a Voter—Now](#)

[APEGA Annual Conference](#)

[ASET Report](#)

[Scope of Practice Video](#)

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### Questions or comments?

[president@apega.ca](mailto:president@apega.ca)

# There's a Lot in APEGA for You— But the Public Comes First

BY **JAY NAGENDRAN**, P.ENG., QEP, BCEE, FEC  
*APEGA Registrar & Chief Executive Officer*

As a self-regulating organization, our relationship with members is critical to our success. This should not be a major revelation to any of you. We need you as professionals, as volunteers, as voters, as councillors, as branch executive members. We consult with you to incorporate your experience and expertise in our work. We count on you to make crucial regulatory decisions involving your peers. We book you as speakers and presenters for APEGA events. We recruit you to share your love of science and math with young people.

Still, you have every right to ask APEGA a fundamental question: what's in it for me? I encourage you to ask it, in fact. But please don't expect a single, simple answer, because your relationship with APEGA is multi-faceted and situational. It depends on your willingness and ability to give back to your professions, the stage you've reached in your career, the types of tools and support you need, and a myriad of other factors.

APEGA strives to be a compassionate regulator. As I addressed at length in my winter message, we have many benefits and programs available to help you develop your career, find a new position, learn new skills, and otherwise add value to your professional and personal life.

But more important than any benefit is a different type of service, and we're all responsible for its delivery. It is service to the safety and wellbeing of the public. To perform this duty properly, you and APEGA must be partners in professionalism. The public interest is our common cause, and it is no trifling matter. If your peers, through the functions APEGA is statutorily required to deploy, find that you're lacking in your part of this relationship, APEGA acts. In a nutshell, that's what self-regulation is.

For most of you, that type of interaction will be rare and minimal at most. You will perform your work ethically and competently. You will stay current and dedicate yourself to career-long learning, thereby meeting our continuing professional development (CPD) requirements. You will conscientiously maintain and improve your reputation and good standing. APEGA, meanwhile, will work hard in the background to maintain and improve the value of those letters that appear after your name: your professional designation. That's a big part of what's in it for you.

We expect a lot from you. And you should expect a lot from us. That's why we're always improving the services and processes that give value to your licence. You won't always notice the actions we take, but you and the public are benefiting from them.

As the year gains momentum and the APEGA Annual Conference and AGM approach, let's look at a small sampling of our improvements and those not-always-visible benefits. I'm also going to use this platform to encourage you to play an active role in self-regulation. Do you think we should be doing a better job? Are voices and perspectives not being heard? Are opportunities being missed? This is the perfect time of year to become a more engaged member. Exercise your right to vote. Attend the AGM. Make use of the professional development opportunities we provide during the conference. Apply for a volunteer opportunity.

## THE APPLICANT EXPERIENCE

Attaining the ethical, experiential, and academic level expected and required of APEGA professionals should not be easy. Serving the public interest demands





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**You will perform your work ethically and competently... APEGA, meanwhile, will work hard in the background to maintain and improve the value of those letters that appear after your name: your professional designation. That's a big part of what's in it for you.**

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nothing less. The processes themselves, however, should never be an impediment to those seeking membership.

We keep getting better in this area. We've standardized and improved academics credentialing for international applicants through World Education Services. We've improved many of our forms. We're in the middle of improving the processes used by the ultimate decider of an application's fate, the APEGA Board of Examiners. We've made registration information on our website easy to find and comprehend.

We're also very close to launching our [competency-based assessment \(CBA\) system](#). CBA is a step change in improving the fairness and defensibility of experience examinations, by making the reporting done by potential members more consistent, complete, and comparable. Applicants will take an active role

in clearly defining and assessing their competencies, using 22 competencies grouped in six categories.

The CBA approach is well tested and proven by Engineers and Geoscientists British Columbia, and it's widely recognized as a best practice for examining experience. Our version is in the advanced testing stage, so stay tuned.

**What's in it for you?** Every applicant's experience reflects on the APEGA professions. Clarity and efficiency mean less frustration about APEGA, a better APEGA brand, and improved value for your designation.

## TOWARDS BETTER PRACTICE

Many improvements are underway to improve the likelihood that the practices of individuals and permit holders meet or exceed the public's expectations and needs. Watch for more practice reviews, more

practice standards, guidelines, and bulletins, and more rigour in ensuring members meet our mandatory CPD requirements.

**What's in it for you?** More confidence that your peers are practising in the professional manner you expect of yourself and others.

On the subject of professional practice, please allow me a minor digression. I have been able to speak directly to members on several opportunities, which I enjoy immensely. One matter that caught my attention was the point made that some professionals are being taken advantage of, just as they try to get their feet back under themselves during the economy's gradual recovery.

Anecdotally, I have heard that some of our professionals are being employed full time without pay! I am hopeful that this happens rarely, yet even so, we should remind ourselves of two things: it is unethical to take advantage of vulnerable members by having them work for free, and there could well be liability issues in doing so. Short-term work experience at reduced pay and job shadowing, of course, are legitimate tools for employers and members, and I'm not suggesting we get rid of them. But know the difference—don't rationalize your way into an unethical employment practice.

## LEGISLATIVE REVIEW

Our [legislative review](#) has been thorough, consultative, and engaging. I am confident that

the Government of Alberta recognizes the work we put into this process, and the research- and evidence-based approach we've taken. Rewriting the [Engineering and Geoscience Professions Act and General Regulation](#) is now in the government's hands—what we did is reimagine the legislation and put forth recommendations based on regulatory best practices. Now, we'll be revisiting our bylaws, so we can propose changes to members and align our bylaws with the changes we foresee in the Act.

**What's in it for you?** Modernized content and approaches, expressed with more clarity, will give you more confidence in your professional practice.

## A LOT OF LISTENING

We're in the early stages of improving the member experience in every possible area. We want your interactions with APEGA to work for you and not create frustration and misunderstanding. For the member experience project and many others, we're listening to members. You'll see surveys in our electronic newsletters regularly, on everything from how you receive news from APEGA to how you'd like us to celebrate APEGA's centennial—it takes place in 2020, which is less than two years from now!

**What's in it for you?** A chance to be heard and help create an even better APEGA for the next 100 years of service to the public interest.

I'll end this with one more reminder. Please review our candidate materials and vote. Your association is counting on your participation.

### LINKS

[APEGA Conference and AGM](#)

[Vote Now](#)

[Volunteer Opportunities](#)

[Continuing Professional Development](#)

[Permit to Practice Seminars](#)

### Questions or comments?

[Registrar\\_CEO@apega.ca](mailto:Registrar_CEO@apega.ca)



## NOTICE OF ANNUAL GENERAL MEETING

In accordance with APEGA Bylaw 16(20) of the *Engineering and Geoscience Professions Act*, official notice of the 2018 APEGA Annual General Meeting is hereby given.

**Friday, April 20, 2018 | 2 p.m.**  
**Shaw Conference Centre | Edmonton, Alberta**

Luncheon 11:30 a.m. – 1:40 p.m.

Attendance Qualifies for CPD Credit

Further details on the APEGA Annual General Meeting and Conference 2018 appear on pages 26 and 27.



**APEGA Council Election**

## Have your say in how APEGA is governed. Cast your vote in the Council election.

The 2018 APEGA election runs from Friday, February 16, 2018, at 9 a.m. to Monday, March 19, 2018, at 12 noon

APEGA's secure elections provider emailed you voting instructions and a unique, personal link to your PIN. Your primary email address was used for this message, as it appears in the Member Self-Service Centre.

If your primary email address is out of date, please update it now. See story on page 10 for further information.

**Your vote, your Council. Take part in this important part of self-regulation.**





# Cast Your Votes Now

APEGA Election 2018 is Underway—PIN Links Sent to Primary Email Addresses



If you haven't voted yet in APEGA Election 2018, now is the time to do so. Please learn about the candidates on the ballot and their platforms, then exercise your franchise. This is your chance to help elect a strong Council to provide good governance, oversight, and strategic planning for APEGA.

Three candidates are running for President-Elect/Vice-President and 11 are seeking seats as councillors. The election page on our website includes biographic and platform information from candidates, in video and written form, to help you make your voting decisions.

Members have already chosen the new president for 2018-2019. Nima Dorjee, P.Eng., won the President-Elect race last year, so he moves up to president automatically.

Polling began on Friday, February 16. You have until **Monday, March 19, at 12 noon**, to vote.

## EXECUTIVE CANDIDATES

*Of the three candidates, the one with the most votes becomes President-Elect and the runner-up becomes Vice-President. Each term is for one year, but the President-Elect automatically becomes President in 2019, serving a one-year term in that position, followed by a third year on the executive, as Past-President. Members may vote for one Council Executive candidate.*

- George Eynon\*, P.Geo.
- Tim Joseph\*, P.Eng.
- Shawn Morrison\*, P.Eng.

\*endorsed by the Nominating Committee

## LINKS

[Research Candidates](#)

[Vote Now](#)

[Update Your Primary Email Address](#)

[Retrieve Your PIN](#)

## COUNCIL CANDIDATES

*Members may cast votes for up to four Council candidates.*

- Craig Clifton\*, P.Eng.
- Jennifer Enns\*, P.Eng.
- Tim Hohm\*, P.Eng.
- Walter Kozak\*, P.Eng.
- Keith McCandlish\*, P.Geol.
- Jim McCuaig\*, P.Eng.
- Zobayur Rahman, P.Eng.
- Bob Rundle\*, P.Eng.
- Muhammad Tayyab, P.Eng.
- Jason Vanderzwaag\*, P.Eng.
- Claudia Villeneuve\*, P.Eng.

## ELECTRONIC VOTING

APEGA is using an experienced and secure third party to run the election, ScytL Canada Inc. A unique link to your PIN was emailed to you, by APEGA, as voting began, using the primary email address in our database. **If you did not receive this email, visit the APEGA website now to request a new one, using the Retrieve Your PIN button on the election page.**

**If you have an inactive or cancelled email address selected in our database as primary, you will not have received your link.** Go to the APEGA Member Self-Service Centre and update your information. After that step is completed, you will need to use the Retrieve Your PIN function before you can vote—but **it will take up to three business days before Retrieve Your PIN works for you.**

ScytL Canada is part of a worldwide, industry-leading group that has managed more than 1,700 election technology implementations and 100,000 elections in more than 40 countries.

## MORE INFO

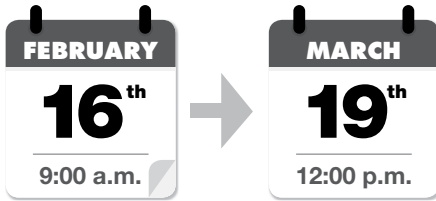
[elections@apega.ca](mailto:elections@apega.ca)

24-hour toll free: 800-661-7020

# APEGA Election Process



## 2018 ELECTION



Vote Online



## VOTER ELIGIBILITY CRITERIA



**In Good Standing**

- No outstanding financial obligations to APEGA
- +
- No current APEGA-imposed sanctions or suspensions
- +
- No outstanding CPD hours

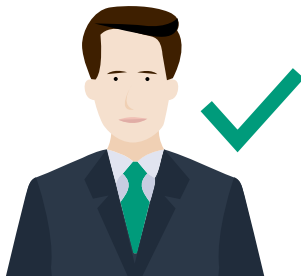


**Membership**

- P.Eng., P.Geo., P.Geol., P.Geoph.
- OR
- Professional Licensee
- OR
- Life Member
- OR
- Honorary Life Member

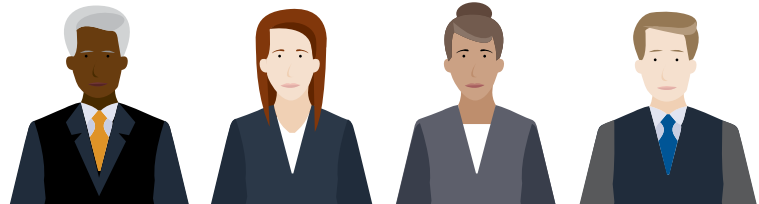
## ANNUAL ELECTION

Each year we elect:



**President-Elect**

- 1<sup>st</sup> year as President-Elect
- 2<sup>nd</sup> year as President
- 3<sup>rd</sup> year as Past-President



**1/3 of Councillors\***

- Term is 3 years
- Expirations staggered for continuity
- \*Number of Councillors may vary each year*

## CANDIDATES

for President-Elect

**MOST VOTES = President-Elect**



**2<sup>nd</sup> MOST VOTES = Vice-President**

Vice-President is a one-year position



## MORE INFO

[apega.ca/election](http://apega.ca/election)

elections@apega.ca



Toll free: 800-661-7020

# APEGA's Next President

*Editor's Note: Following is the personal statement submitted by the incoming President of APEGA. The name Nima Dorjee, P.Eng., appears on the ballot, but it's there as information only—he was elected last year. From page 12 onward in this edition of The PEG, personal statements written by candidates for the Executive and Council appear.*



We've also posted candidate election videos to help you make your decision.

**ELECTED PRESIDENT-ELECT IN 2017** Nima Dorjee, P.Eng., FEC, FGC (Hon.)



- Led intern program at Schulich School of Engineering to largest-in-Canada status
- Recipient of Canada Peace Medal, Calgary Freedom of Expression Award
- More advocacy on behalf of members and APEGA professions necessary

Nima Dorjee, P.Eng., was born in a Tibetan refugee settlement in India. Nima has called Calgary home since 1981. He graduated with a bachelor of science degree in chemical engineering from the University of Calgary in 1992. While attending the university in 1989, he was elected President of the 18,000-member students' union.

Upon graduation, Nima founded EngIT Engineering Services, which specialized in providing E.I.T.s to employers for a short-term basis. In 1995, he joined the Faculty of Engineering at the University of Calgary. Under his leadership, the engineering internship program became the largest of its kind in Canada. In 2008, he was recognized with the Schulich School of Engineering's Champion Award.

The YMCA recognized Nima's involvement in human rights by awarding him the Canada Peace Medal in 1997, and in 2007, he received the Calgary Freedom of Expression Award.

Since 2008, Nima has devoted his time to projects related to the Dalai Lama's work on human values. This included working at the private office of the Dalai Lama in India. Since 2011, Nima has served as the President of Project Tibet Society, which is responsible for the resettlement of 1,000 Tibetan refugees from northern India to Canada. Nima was elected the President-Elect of APEGA in 2017.

Nima and his wife of 27 years, Dr. Tsering Dorjee, have two daughters.

## APEGA Activities

- President-Elect, 2017–2018
- Governance Committee, 2017–2018
- Vice-President, 2015–2016
- Audit Committee, 2015–2016
- Co-chair, Joint Legislative Review Committee, 2015–current
- Member, Investigative Committee (2012–present)
- Member, Nomination Committee (2011–2012; 2004)
- Member, Licensure Task Force (2001–2003)



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**ELECTED PRESIDENT-ELECT IN 2017** Nima Dorjee, P.Eng., FEC, FGC (Hon.)
 

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**APEGA Activities continued**

- Member, Council (2000–2003)
- Member (1992–present)

**Present and Past Non-Profit Board Service**

- President, Project Tibet Society
- Chair of Fundraising, APEGA Education Foundation (now APEGA Foundation)
- Board Member, Calgary Catholic Immigration Society
- Co-chair, International Tibet Support Network
- Chair, Engineering Alumni Chapter, University of Calgary
- Member, Task Force on Racial and Cultural Diversity, City of Calgary
- Board, Calgary Multicultural Centre
- President, Students' Union, University of Calgary
- Member, Board of Governors, University of Calgary

**PERSONAL STATEMENT**

APEGA is the largest professional association in Alberta. We have been entrusted with the privilege of self-regulation and with this comes great responsibility.

First and foremost is our responsibility to maintain the public's trust through effective licensing of competent and ethical professional engineers and geoscientists.

The economic downturn of recent years in Alberta has been very difficult for many of our members; APEGA must restore and increase membership services to help members. We must work with our permit holders, government, and membership to find solutions to ease the difficulties members face. We must develop closer relationships with other organizations that serve members.

In today's environment, it is conceivable for a project to have the entirety of its engineering and design work completed overseas (outside of APEGA's regulatory authority) and only to have the final work assembled in Alberta. So, one of the most important issues facing APEGA today is the challenge of regulating the engineering profession in an era of outsourcing and offshoring. We need to ensure consistent regulation of technical work in engineering and geoscience, regardless of where the work is done.

We must find the right balance between adapting to changes in technology and the global economy, and APEGA's duty to uphold professional and ethical standards to ensure public safety in Alberta. We must seek to become an effective and compassionate regulator.

APEGA members work on some of the most complex engineering and geoscience projects around the world. They provide technical solutions to some of the most challenging problems society faces. We have a duty to participate in the public debate on the issues that involve our professions, and to inform the public and elected officials of options so that they can make the right decisions to serve Alberta's interests.

I believe APEGA must provide the forum in which our members—with their professional and technical expertise—can be heard and engage in discussions with the public to better serve our communities and our province.

Our professions' impact on Alberta and its economy is significant, and we must not be shy in advancing the interests of our members and professions with government. We must engage in greater advocacy work. We must also be mindful of the enormous trust society has placed upon us.

I look for your support and look forward to engaging you in discussions on these and other matters that concern you and our association.

**FOR EXECUTIVE** George Eynon, P.Ge., FGC, FEC (Hon.)

- Extensive regulatory, board, and governance education and experience
- Six years of current experience on Council
- Strong belief in maintaining our self-regulatory privilege

We need to continue improving APEGA’s regulatory functions and maintain our self-regulatory privilege, manage a serious difference of opinion with the Association of Science and Engineering Professionals of Alberta (ASET), and revise and renew our enabling legislation, the *Engineering and Geoscience Professions Act*.

Given our public safety and public interest mandate, maintaining the self-regulatory privilege granted by the government is a paramount issue. APEGA’s professional members are the best equipped to manage our affairs. That’s why our regulatory focus is on the investigation, compliance, enforcement, and discipline functions; together they demonstrate and validate our self-regulatory status and reputation.

Revising and renewing our Act is one of our most important tasks, but there is a significant divergence of positions between APEGA and ASET within the one Act, two associations arrangement. ASET’s demand for an independent scope of practice is something we must resolve.

These matters require oversight and direction by Council as a whole, but it’s the executive that provides Council leadership and continuity of oversight and direction for management and staff in the months between Council meetings. The Executive Committee needs hands-on, board-level education and experience to work effectively on behalf of APEGA members—I have that, as well as current experience at the Council table.

**APEGA ACTIVITIES**

I have six years’ current experience on Council and four years as our Geoscientists Canada Director (President, 2015–2016). I serve on Council’s Governance Committee and its bylaws subcommittee. I served on the Practice Review Board as both a Member and Chair in the past, and performed a number of other volunteer tasks over the years.

**PERSONAL INFORMATION**

I came to Canada in 1970, after earning a B.Sc. (London) and teaching high school, to study at McMaster. After earning an M.Sc., I moved to Calgary in 1972 to begin a career in oil and gas. Joyce (a teacher) and I married in 1972; we have two adult daughters and three grandchildren.



**PROFESSIONAL BACKGROUND**

Currently, I am the principal of geos • eynon & associates, providing consulting services on energy-related matters (regulatory issues, community and stakeholder relations, board and governance functions). Clients span a spectrum of organizations—governments at all levels, industry companies and associations, and the

public. I do some work with the School of Public Policy, and provide energy literacy short courses for industry, governments, and the public. I also serve on the board of directors of Canadian Society for Unconventional Resources. As well, I have taught at the University of Calgary’s Haskayne School of Business for the last five years.

In 2008, cabinet appointed me to the board of the Energy Resources Conservation Board—Alberta’s oil and gas industry regulator. I served through 2013, for the last six months as a hearing commissioner with the Alberta Energy Regulator.

For the prior 15 years I provided energy resources consulting and research services with GEOS Energy Consulting, Ziff Energy, Cambridge Energy Research Associates, and the Canadian Energy Research Institute.

I spent 20 or so years in oil and gas exploration and development in Canada and internationally, moving through increasingly senior technical, management, and executive positions with a broad spectrum of companies—an international major, and Canadian and U.S. independents and small juniors. This provided me with worldwide experience—in Western Canada, the U.S., the North Sea, Pakistan, Indonesia, and several other countries.

**AFFILIATIONS AND COMMUNITY SERVICE**

- Fellow of Geoscientists Canada, and Honorary Fellow of Engineers Canada
- Honorary Member of both the Canadian Society of Petroleum Geologists and the American Association of Petroleum Geologists. Served on numerous CSPG committees, and as President; and on numerous AAPG committees, as Chair of the House of Delegates, and on the executive committee.
- Volunteer at Calgary’s Drop-in Centre, serving meals to clients for over 10 years.

- Members should consider experience and traits when voting
- 2018 President-Elect will lead APEGA into centennial year spotlight
- A career of recognized excellence in academics, education, and industry consulting

Professional association leadership should be built upon transparency, knowledge, ethical honesty, empathy (listening), and the courage to change. I strive to live up to these traits in all facets of my life, including 20 years as a not-for-profit board member. I have served APEGA, the Canadian Institute of Mining, Metallurgy and Petroleum (four years as Vice-President), and the University of Alberta Faculty Club (as President), and also chaired societies, national and regional technical conferences, and international counselling and advisory groups. I have participated in and led provincial and local OH&S and educational committees and groups.

This volunteerism includes extensive experience in restructuring governance, financial oversight, and membership processes, allowing me to see the wheel turn multiple times, nationally and locally. However, leading APEGA requires even more commitment. This is especially true now, as you consider who will be your President to kick off APEGA's centennial year in the 2019/20 term.

A 2019 provincial election approaches, pushing provincial approval of our revised Act and General Regulation to two or three years from now. This APEGA election is about meeting the challenge to lead us into the last stretch of regulatory changes, which must stand us in good stead and protect the public for many years. This endorsement will help assure our continued provincial approval as a self-regulatory body, in an era when the viability of self-regulation in Canada is frequently questioned and sometimes revoked.

Our centennial will place APEGA under the spotlight and build government and public expectations. We should use this to clearly show our pride in our professions, demonstrating our adherence to the highest standards of practice, self-regulation, and ethical obligation to the public and our communities. This can be realized through APEGA's support of meaningful voluntary and other initiatives, and through each of us giving of ourselves. As you consider the candidates before you, also consider what you could do to become more involved as a volunteer, through your branch, through other APEGA-supported events, or even by running for APEGA Council.

The commitment of the President-Elect you choose now will span the entire period of strategically planning our centennial activities and ensuring that initiatives target the future and are put on a viable path beyond 2020. These initiatives must extol the traits I hold true, create knowledge and trust with the Alberta people, and provide great benefit to APEGA members. Albertans are aware of our existence, but they are largely unaware of what we do, and of the impact we have as engineers and geoscientists on the assurance of their safety and protection, and the protection of the environment. If there were ever an opportune time to extol our pride and show our province the great works and deeds that we all perform, it is our centennial year.



When I was approached to consider running for President-Elect in 2018, my immediate thought was that there must be better candidates. The candidates before you are excellent, and I would be proud to work with any of them. Don't vote for Tim Joseph or for any candidate just because you know them or because their designation matches yours. Take the time to consider

experience and traits carefully. This election, maybe more than ever before, represents a great responsibility: setting APEGA and its members on a path beyond 2020.

#### **EDUCATION AND AWARDS**

- University of Kent—bachelor of science, chemistry, 1985
- University of Alberta—bachelor of science, 1996, and PhD, 2000, mining engineering
- Multiple industry scholarships and institutional awards, including APEGA Gold Medal
- 2004 Surface Mining Association for Research and Technology (SMART) Award for contributions to furthering safety and education in the global surface mining industry
- CIM—2009 Past President's Medal for achievements in education; fellowship, awarded in 2009; 2011 Distinguished Service Medal for contributions to the global mining industry

#### **UNIVERSITY OF ALBERTA CAREER**

- Associate Dean, Faculty of Engineering, responsible for student and co-op services
- Professor of mining engineering
- Director, Alberta Equipment – Ground Interactions Syndicate (AEGIS), a mining research consortium of researchers, industry, government, and manufacturers investigating sustainable operational mining practices.
- Member, Mining Industry Advisory Committee and many university committees
- Trainer of more than 50 highly qualified PhD, M.Sc., and M.Eng. professionals, who have gone on to roles in academia, government, industry, and consulting worldwide

#### **ENGINEERING CONSULTING CAREER**

- James Progithin International Ltd. principal, Responsible Member
- 15 years specializing in mining equipment performance evaluations, solutions
- Clients worldwide in mine operations, mining equipment manufacturers
- Mine engineering design for improving operations, tools
- Professional development and short-courses
- Expert witness testimony, industry counsel on mining equipment designs



**FOR EXECUTIVE** Shawn Morrison, P.Eng., FEC, FGC (Hon.)

- Strong volunteer history with APEGA and greater community
- Regulatory work must continue and improve
- Other APEGA services are also important in members' lives

Shawn Morrison, P.Eng., was born and raised in Edmonton. After graduating from Bonnie Doon High School, he started working as a process operator at Celanese Canada and continued there during university. He obtained a bachelor of science degree in mechanical engineering in 1980 from the University of Alberta.

After graduation he worked for Canadian General Electric, followed by Dillingham Construction, where he obtained his designation. Shawn then worked at Syncrude Canada Ltd. in various roles in Fort McMurray for the next 14 years. There, he started volunteering with APEGA's Fort McMurray branch and for the community.

A more challenging career awaited in Calgary—and more APEGA opportunities. Serving on Council was a humbling experience Shawn enjoyed. Volunteering for APEGA committees and events identified the incredible depth and breadth of our professions. When Shawn attended Member Induction Ceremonies, he learned of the knowledge base and experience continually joining APEGA. Life Member Ceremonies revealed amazing things our members have accomplished. The volunteer bug had bitten, and Shawn was elected to a second APEGA Council term. Among his duties were serving on at least three committees a year. The most rewarding was the Finance Committee, which Shawn chaired for two years. Being fiscally responsible while providing regulatory activities and member services is a challenging task for APEGA staff.

During this time, Shawn's career proceeded on a number of Alberta megaprojects. The technical opportunities and challenges led Shawn to volunteer for a committee of the American Society of Mechanical Engineer (ASME). The Piping and Pressure Vessel Division had a challenging design and analysis sub-committee, which dealt with technical challenges of interest to Shawn. Starting his own consulting firm during this time resulted in some amazing opportunities for work and technical knowledge growth. Travelling to world-class manufacturing locations and interacting with the companies that provided the very complex equipment for many of the mega projects was both rewarding and challenging.

Current economic times have slowed down the pace of work on megaprojects. This gives Shawn more time to volunteer for our professional organization.

**APEGA ACTIVITIES**

- Council Member (2008–2011)  
Member Nominating Committee, Finance Committee Chair, Member Audit Committee, Life Member Induction Ceremonies, New Member Induction Ceremonies, etc.
- Council Member (1999–2002)
- Calgary Branch Member at Large (1998–1999)
- Fort McMurray Branch Executive (1995–1997)
- Member (1980–present)



**PROFESSIONAL ACTIVITIES**

- American Society of Mechanical Engineers, Pressure Vessel and Piping Division, Design and Analysis Committee (2008 to present)
- ASME, PVP, D & A Technical Program Representative (2014)

**COMMUNITY VOLUNTEER ACTIVITIES**

- Children's sports coach and organizer
- Shaw Charity Golf Tournament and ATB Financial McKenzie Tour
- Various others

The Alberta economy appears to be rebounding. The employment and growth opportunities for our professions remain challenging, partially due to forces and constraints outside Alberta. We must therefore focus mainly on activities within Alberta, while closely monitoring the impact of outside forces.

APEGA's regulatory work continues to be challenging, especially because of business requirements to compete on the world market. Our members perform many activities that continue to provide safe and corrective services to maintain public safety. Outsourcing design to locations beyond our borders occurs in many economic sectors, but our members are required to ensure that designs are constructed and operated within the safety standards necessary to protect our citizens. APEGA must lead members and help them continue delivering these requirements. Our professions provide world-class solutions to complex technical challenges. Our expertise and knowledge are used at home and around the world.

APEGA must continue to demonstrate that members perform our work ethically and competently, ensuring the safety and benefit of the public. The privilege of self-governance cannot be taken for granted. Through regulatory activities, APEGA must continue to earn the public's trust. Permit to practice holders need to be consulted more about their contribution to APEGA's regulatory role.

A question that I often hear is, "What does APEGA do for me?" My response is that APEGA provides a mix of regulatory benefits—and advocacy benefits, from outreach and branch support to member discounts. Members can do their part by volunteering. It provides help and support for many people and organizations. I am especially impressed with the depth and breadth of APEGA volunteer activities. Volunteering with APEGA is always a bonus, but all volunteer activities are fantastic. Helping others and helping the community have always provided me with an extra benefit. Volunteering does not have to cost anything, but typically it provides a huge benefit to someone else.

- Proven record with engineering and industry associations
- Long history of success in family business
- Outreach and dialogue will give APEGA a higher public and government profile

I hold degrees in chemistry and civil engineering from the University of Regina and the University of Saskatchewan, respectively. Thirty years ago, I began working in the family business, Clifton Associates Ltd., as a laboratory technician. Now, as VP Alberta, I have gained a thorough understanding of the engineering profession, along with its challenges, its benefits, and our role in the economy.

I have volunteered with the Consulting Engineers of Alberta (CEA) and was elected to its board (2009), as Vice President (2012), and as President (2013). I worked with government departments to address issues ranging from relationships with Alberta Transportation to coordination with the Southern Alberta Flood Recovery Task Force, which helped expedite damage assessments and design of flood mitigation works.

As President, my goals were to enhance the image of CEA, align committees to achieve the goals of the strategic plan, and continue to press for legislated qualifications-based selection (QBS) for publicly funded projects within Alberta. CEA began an outreach program to the Alberta Construction Association, the Alberta Chamber of Resources, the Edmonton Chamber of Commerce, and other industry groups to find common issues to address jointly. My committee alignment efforts helped create a more focused organization, delivering better value to members.

I worked with a core group of CEA representatives to educate elected officials and familiarize government personnel on the benefits of QBS. The work on QBS continues and is expected to be completed within the next few years.

My time on the CEA board has shaped my view of engineering as a driver of the economy and public safety. This societal benefit goes beyond work done—it is also work enabled. Typically, every \$ 1 billion of engineering remuneration results in \$10 billion of investment. Work by professional engineers enables investment in and construction of safe, efficient structures and infrastructure for Albertans.

In 2012, I was elected to the board of directors of the Alberta Chamber of Resources (ACR). Being involved with ACR has led to a greater understanding of how integrated the resource sector is with the economy of the province and how the orderly and responsible development of



our resources benefits all Albertans. Currently, I am the Transportation Committee Chair for ACR. I recently helped complete a pilot program for a new Alberta heavy module in conjunction with the Construction Owners Association of Alberta and the CEA. The program will decrease capital costs, promote Alberta-based module construction, improve safety,

and facilitate quicker royalty payments to the province.

In 2015 I was appointed to the board of the Calgary Construction Association, and I volunteered to help organize the OAEC conference, which helps improve relationships between owners, architects, engineers, and contractors in the construction industry.

If elected to APEGA Council, I would encourage council to be more intentional about not only the enhancement of the image and identity of our professions, but to actively engage in public dialogue on topics that affect the professions. I understand that public safety is the mandate of the association, but it should be up to the association to define what a professional engineer is for the public and not other entities. Over the last few years, I feel that there have been times when APEGA should have offered proactive public comment rather than remain silent. Examples that come to mind are third-party accreditation of work that is historically done by a professional engineer (such as an erosion sediment control professional), or the whole pipeline debate that has been happening within the country.

I don't suggest advocating for the pipeline, or any other industry for that matter. That is clearly not in the mandate of the association. However, when the public discussion is so hyperbolic, I feel it is completely appropriate for the association to remind the public that design and construction would be under the supervision of professional engineers, people who have sworn an oath to public safety. Let the public debate be on the social benefit, or acceptable risk, but don't let it disparage our profession.

APEGA works to protect public safety, ensuring the practice of engineering and geoscience are being performed appropriately. Few people know exactly what APEGA is doing to fulfill its mandate. Improved, proactive communication would help.

I believe my personal and professional experience could be an asset to the APEGA Council, and I look forward to the opportunity to contribute.

**FOR COUNCIL** Jennifer Enns, P.Eng.

- Regulatory experience in career and APEGA service
- Strong supporter of self-regulation and community science outreach
- Valuable knowledge for APEGA and its committees

Jennifer Enns was born in England and moved to Canada as a teenager in 1971. Jennifer received her bachelor of civil engineering degree from Carleton University, Ottawa, in 1978. Starting her career with Bell Canada, she moved on to project management roles and then worked as a transportation engineering consultant.

In 2002 Jennifer moved to Calgary with her family, and for more than 11 years has worked for the City of Calgary. At the city, she worked in transportation planning, moving on to the position Leader Professional Practice. In this latter role Jennifer grew the city's E.I.T. Rotation Program to one of the largest and best-in-class programs of its kind in the country. For many years Jennifer presented the city's internal, mandatory Professional Practice Management Plan seminars. She is currently Manager Corporate Engineering & Energy, a group that focuses on sustainable buildings, energy efficiency, renewable energy, and professional practice.

After election to APEGA Council in 2015, Jennifer served on the association's 2020 Task Force and chaired the Policy and Standards Task Force. Jennifer was a member of the APEGA Practice Review Board for over six years, until 2015, and was APEGA's representative on the University of Calgary's Schulich School of Engineering Faculty Council. Jennifer has mentored and continues to mentor APEGA E.I.T.s and young engineers.

Jennifer has a long history of volunteering in both community and professional organizations. A long-time science fair supporter, she chaired the Ottawa Regional Science Fair for many years. Other roles included serving as a local and a national science fair judge, presenting at career days in schools, and helping launch a science magazine pilot. Since 2008, Jennifer has been the public member on the Alberta Association of Architects Practice Review Board. In 2015, Jennifer was the recipient of the Consulting Engineers of Alberta President's Award.



A strong supporter of self-regulation, Jennifer's diverse background and extensive experience are assets to APEGA Council. Her experience in professional practice and engineering governance provides valuable knowledge to both Council and the APEGA committees she sits on.

Jennifer lives in Calgary with husband Bill. Her daughter attends university and her son is an APEGA P.Eng.

**APEGA ACTIVITIES**

- Member, APEGA Council (2015–present)
- APEGA Policy and Standards Task Force (2016–present)
- APEGA 2020 Task Force (2015–2016)
- APEGA Legislative Review Champion (2014)
- Member, Practice Review Board (2008–2015)
- APEGA representative, University of Calgary, Schulich School of Engineering Faculty Council (2009–2015)
- APEGA Graduating Workshop, Iron Ring Ceremony (2008)

**AFFILIATIONS, CORPORATE OR COMMUNITY SERVICE**

- Chair, Scholarship Committee, City of Calgary Society of Professional Engineers (2014–present)
- Public Member, Practice Review Board, Alberta Association of Architects (2008–present)
- President, City of Calgary Society of Professional Engineers (2014–2016), Member (2006–present)
- Judge, Consulting Engineers Alberta Showcase Awards (2011–present)
- Member, industry liaison committees (2007–present)
- Member, school, and resource centre boards
- Volunteer, judge and chair science fairs
- Recipient of Volunteer of the Year Award, Central Volunteer Bureau Ottawa

- Broad Canadian and international experience
- Service on APEGA Practice Standards Committee
- Professional qualifications, outsourcing and data authentication are critical issues

My wife, two children, and I have lived in Calgary since 1979.

I have a University of Alberta bachelor of science degree in mechanical engineering (1978) and have taken several graduate level courses in chemical engineering and project management from the University of Calgary. I became a member of APEGA in 1980.

My career in upstream oil and gas engineering has lasted 38 years.

A year ago, a colleague asked me to consider running for election to APEGA Council. That caused me to evaluate whether I have the necessary experience, qualifications, and skills to address the challenges facing the practices of engineering and geoscience in today's Alberta.

For example, not long ago, authenticated hard documents were used to transfer information; now information is transferred as bits and bytes. Professionals need confidence that authenticated data of many types can be transferred, unaltered, to intended parties and used only for its originally intended purpose. This needs to happen without burdening practitioners with unproductive, inefficient processes, procedures, and documentation.

The ability to transfer data has led to the execution of engineering and geoscience design for Alberta projects by foreign practitioners. Consequently, APEGA members are increasingly asked to authenticate work performed by others, and APEGA is asked more frequently to recognize professionals living in other countries (as licensees allowed to use an APEGA professional designation) and to issue permits to practice to entities with operations in other countries. How does APEGA evaluate the qualifications and ethics of foreign practitioners? How does APEGA enforce its guidelines and standards in other jurisdictions? These issues must be addressed to ensure Albertans' health and safety; to conserve the environment; and to enhance Albertans' regard for APEGA.

Society's expectations of all professions continue to increase. How does APEGA ensure its members are qualified? How does it see that they upgrade their skills to keep pace with new technology? What must APEGA do to retain self-regulation and ensure government isn't motivated to take over?

Motivated professionals with diverse backgrounds, working as a cohesive team, are needed to effectively address APEGA's challenges. A summary of my professional experience demonstrating ability to work collaboratively follows.

My first job was that of a production well, open hole, logging engineer. This entailed leading a three-person



logging crew; safe handling of radioactive sources; logging tool operation and recording of borehole measurements; and log interpretation.

Next, I worked for a company that designs and builds oil and gas production equipment packages. Responsibilities of this position included collaboration with drafters, welders, and fabrication personnel to

improve designs and reduce costs; process, mechanical, and control system design; customer liaison; and site commissioning.

Currently I work for an engineering company that has grown from a local 65-person outfit to a multinational that has employed as many as 40,000 people. Positions from this period have been Lead Mechanical Engineer, Mechanical Department Manager, Manager of Engineering and now Chief Engineer for the Calgary location.

I've worked on every stage of project development from feasibility studies to detailed engineering, including start-up and commissioning. Several of the projects have been executed with team members located both in the Calgary home office and in a workshare office in China or India.

I've worked on small brownfield projects for junior oil companies, and on multi-million-dollar heavy oil facilities for tier-one international oil companies. In addition to Canadian facilities, I've been on teams that designed pipelines and processing plants for locations in the Middle East and Africa.

For several years I was part of the company's global Engineering Leadership Team. The ELT is responsible for developing, implementing, and maintaining ISO 9001 compatible work processes and procedures, including those used on workshare projects. The team also authors and reviews specifications and guidelines that assist project teams in developing efficient, repeatable designs.

I also have contributed to teams that determined the root cause of a catastrophic steam pipeline failure, and evaluated alternative technologies for treating boiler feedwater, improving steam generator thermal efficiency, and alternative technologies for making steam from untreated produced water.

Outside of professional work I have volunteered time and talent to several organizations. I was an assistant coach for the Calgary Buffalo Juvenile AA Rangers. I've served on a couple of church councils and a condominium association board of directors. And since 2012 I have been a member of APEGA's Practice Standards Committee.

I believe the practical knowledge and experience I've gained will enable me to contribute to development of practicable solutions to APEGA's challenges today and tomorrow. I would like the opportunity to serve on APEGA Council.



**FOR COUNCIL** Walter Kozak, P.Eng.

- Experience in factual communications about hydraulic fracturing
- Ongoing viability of APEGA critical to members and the public
- APEGA must steward intellectual capital in down times

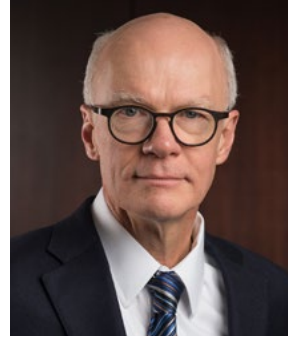
Walter (Wally) Kozak was born in Edmonton. While his life has taken him many places, it has always centred on Alberta. Upon graduation from the University of Alberta in 1977 with a bachelor of science degree in chemical engineering, Wally enrolled as an M.I.T. with APEGA and joined BP Canada. This began a 40-year engineering career in upstream oil and gas.

Road trips throughout Alberta and northeastern British Columbia characterized the early years of his career, occupied with well completions and tie-ins, and the field handling of facilities. As skills were demonstrated, production operations became an increased portion of the mix. After progressing through increasing responsibilities, Wally moved to business development for midstream processing and transportation.

In 1989, Wally's midstream experience earned him the opportunity to support business development for a North Sea offshore pipeline expansion. This began his overseas decade, which had Wally applying, adapting, and honing technical and management skills in new and differing geography, regulatory regimes, and social contexts. The focus of his work, primarily in Central and Eastern Europe, cycled back to upstream development and operations, including the emerging area of unconventional hydrocarbons. Wally learned that, while education and expertise are critical, sound professional practice requires a legal framework, current regulations and standards, and ethical codes of practice. To remain relevant, all of these must be subject to ongoing review and renewal, and above all, Alberta was—and remains—a fine example.

In 2002, at the outset of the unconventional gas era, Wally joined Calfrac Well Services and gained experience in hydraulic fracturing. The early years featured rapid growth in the sector—and a steep learning curve for Wally. Increased activity meant increased visibility, and hydraulic fracturing faced negative public sentiment.

As Engineering Manager, Wally became a resource for explaining the technology. To do this, he engaged with the Canadian Society for Unconventional Resources (CSUR) as Chair of the Technical Committee and a board director. He remains a director and is the current Chair of the board. In 2011, against a backdrop of increasingly vocal challenges, Wally took on his present role, Director of Industry and Government Relations for Calfrac. Frequently with peers in industry, government, and academia, Wally presents responsible upstream oil and gas development in factual, professional terms.



Wally's first priority for APEGA Council is continuing good governance. Over his 40-year association with APEGA and through several cycles of the economy, this association has been an effective regulator of professional practice. It has been well-managed and financially prudent, and it has supported its members. It is essential to maintain this steady, reliable record

of delivery to maintain our professions' self-regulation and governance. The ongoing viability of APEGA as a relevant and thriving organization is important to all members, regardless of their practice sector. It is also the cornerstone of maintaining government, public, and societal trust.

Demonstrating the relevance to society of APEGA members and their organization also interests Wally. The increasing trend of skepticism toward institutions, professionals, and experts has too frequently manifested itself as a grasp for veto power rather than a process for informed communication and decision-making. As a regulator, APEGA can speak in general terms to the standards of qualifications for its membership and a literally professed code of ethics, without necessarily speaking either on behalf or in defence of members. Efforts in this area will provide additional relevance to members, aiding us in retention and recruitment.

Regardless of one's views, Alberta's economy is highly dependent upon natural resources and will remain so for many years to come. By extension, APEGA and its members are also tied to the Alberta economy in varying degrees. As a regulator of the practices of engineering and geoscience, APEGA has a role in the stewardship of the intellectual capital represented by its membership for the benefit of members and the Alberta economy. Just as APEGA responded to high demand for professionals through various initiatives such as streamlining the review of foreign qualifications, today's APEGA must strive to preserve intellectual capital through a period of low demand. While there is no single, simple solution, APEGA's actions on this issue will contribute to society's, the public's, and members' economic well-being and relevance.

**SERVICE**

- CSUR director since 2005, chair since 2012
- PSAC Hydraulic Fracturing Committee, Chair, since 2012
- SAIT Bachelor Applied Petroleum Technology Advisory Committee since 2012
- Volunteer instructor Canadian Association for Disabled Skiing, 2005–2009

- Broad geological practice experience around the world
- Leadership experience in geoscience corporate world
- Regulatory experience advising stock exchanges

**INTRODUCTION**

Keith McCandlish has over 30 years of geological and engineering experience in minerals, oil sands/heavy oil, precious stones, coal, and industrial minerals. In 2006 he took over as Vice President and General Manager of a newly formed company, Associated Geosciences Ltd. (AGL), focusing on corporate finance, technical audits, mineral project evaluation, and mining fraud investigations. In 2008 AGL was purchased by DMT GmbH & Co. KG, and Mr. McCandlish was appointed Managing Director. In February 2011 Mr. McCandlish was appointed to the board of DMT Consulting Limited of the U.K. as a non-executive director. AGL was renamed DMT Geosciences Ltd. in October 2012.

He has extensive experience in the securities regulatory framework, corporate governance, and capital markets advisory services, acting as an independent mining and oil and gas analyst for the TSX, and the TSX-Venture Exchange and its predecessors, the ASE and CDNX.

**MY STATEMENT**

I have been extremely fortunate to have worked in many countries, including operational experience in Angola,



Argentina, Australia, Bolivia, Botswana, Brazil, Bulgaria, Burkina Faso, Canada, Chile, China, Colombia, Cuba, Ghana, Guinea, Finland, Honduras, Indonesia, Jamaica, Mali, Malaysia, Mexico, Nicaragua, Nigeria, New Zealand, Norway, Peru, Philippines, Russia, Spain, Solomon Islands, South Africa, Sweden, Tajikistan, Thailand, Trinidad, Uruguay, the U.K., and the U.S. As for

specialist expertise, I conducted high arctic exploration in Canada and Europe.

I think this officially qualifies me as a Star Alliance seat tester!

On a personal note, I am an avid cook, having studied at the Culinary Institute of America in St. Helena, California, and worked with a number of chefs in Calgary. One of the most challenging board positions I have held is that of president of my condominium corporation, dealing with the divergent interests of the various owners. I also enjoy teaching and have been fortunate to be invited to present to mining engineering students at the University of Alberta and geology students at Mount Royal University.

I am also very fortunate to be married to a lovely woman, Gillian Lawrence, who has put up with my travels for a very long time.

**FOR COUNCIL** Jim McCuaig, P.Eng., CD

- Perspective of a multi-disciplinary technologist and professional engineer
- Distinguished reserve and regular force military experience
- APEGA relevance, public awareness, effects of legislative review are key issues

Born in Belleville, Ontario, Jim McCuaig lived in various communities across Canada while growing up. After graduating from high school, he went to the Southern Alberta Institute of Technology and earned his diploma in mechanical engineering technology.

During this time, Jim was also active in the Canadian Armed Forces Reserve with 746 (Calgary) Communication Squadron and trained as a radio/teletype operator, a teletype technician, and a radio technician. He reached the rank of sergeant in 1985 and received his commission as second lieutenant in 1986. At the Canadian Forces School of Communications and Electronics in Kingston, Ontario, he trained as a communications and electronics engineering officer.

In 1986, Jim moved to Victoria and served with 741 (Victoria) Communication Squadron, transferring to the regular force in 1987. He attended the Canadian Forces School of Electrical and Mechanical Engineering in Borden, Ontario, training as a land electrical and mechanical engineer. Jim transferred back to the reserve force, serving as a troop officer and an operations officer with 741.

In 1989, Jim moved to Castlegar, B.C., where he taught high school as a teacher on-call before attending Selkirk College in Castlegar, where he received a diploma in electronics engineering technology. In 1992, Jim joined EMCO Engineering Ltd. in Castlegar, working until 1999 as an electrical and mechanical engineering technologist.

Jim maintained his army reserve status and attended the Canadian Forces School of Military Engineering in Chilliwack, B.C., and trained as a military engineering officer. He served with 44 Field Engineering Squadron in Trail, B.C., as a troop officer and an operations officer. Promoted to captain in 1994.

Jim attended Lakehead University in Thunder Bay, Ontario, receiving his bachelor's degree in electrical engineering in 2001. He then went to work for Hemisphere Engineering in Edmonton as an electrical design engineer. Maintaining his employment with the Reserve, he was Regimental Adjutant with 8 Field Engineering Regiment in Edmonton, before retiring from the CAF in 2003.

Jim accepted an offer with ATCO Electric in 2003 to work as the senior regional engineer in Peace River. After this position closed in 2006, he remained in Peace River to briefly operate Peace Engineering before accepting a position with BAR Engineering Co. Ltd in Lloydminster, Alberta. Here, he was employed as a senior staff engineer working on various interdisciplinary projects. In 2014, Jim left BAR Engineering to join Smith + Andersen in Edmonton as an



Associate Principal, where he managed the firm's electrical group. In 2016, Jim accepted employment with the Town of Peace River, where he is now the Director of Engineering and Infrastructure, overseeing engineering, planning and development, public works, solid waste management, cemetery operations and water/wastewater infrastructure.

Jim is a professional engineer registered to practice in Alberta, British Columbia, Saskatchewan, and the Northwest Territories. He is a member of the Institute of Electrical and Electronics Engineers.

Jim became involved with APEGA in 2003 when he joined the Peace River Branch as a member at large. He volunteered with other branches as he moved with his career. He has been active in the APEGA legislative review sessions, and in recruiting and mentoring new members to volunteer for their branches.

Jim believes his varied background as an engineering technologist and then an engineer, in various disciplines, would bring a balanced perspective to Council. His involvement in various branches gives him an appreciation of members' needs in both urban and rural areas.

If elected, he would like to help APEGA continue to be relevant to members, including those in non-consulting areas. He also wants to increase public awareness of APEGA's mandate and help us become the most trusted profession. Jim is interested in how legislative changes will affect practice standards to ensure we maintain our high level of service delivery to the public.

Jim and his wife have four children. His past community involvement includes volunteering with Scouts Canada groups, and he currently supports his wife's involvement in Girl Guides, particularly around engineering and STEM. Jim is an avid rugby fan, cheering on Canada's men's and women's teams, Scotland, and New Zealand's Mighty All Blacks.

**APEGA ACTIVITIES**

- Professional Member (2003–present)
- Edmonton Branch—Chair (2016), Vice-Chair (2015–2016)
- Vermilion River Branch—Chair (2014), Vice-Chair (2013), Secretary (2012), Member at Large (2008–2012)
- Peace River Branch—Member at Large (2004–2006), Volunteer Member (2016–Present)

**AFFILIATIONS, CORPORATE AND COMMUNITY SERVICE**

- Past Cub Leader, Beaver Leader, Scouts Canada (2002–2003, 2004–2006)
- Past Vice-President Debney Armoury Officers Mess Committee (2003)

- U.S. and Canadian experience dates from 1997
- Wide-ranging geotechnical, materials, project, leadership, and other experience
- Recently opened a new engineering company to serve Albertans

I graduated from Lamar University in Texas and started my career in Houston as a geotechnical and materials junior engineer in 1997. I worked for a major company in the United States, called Professional Service Industries (PSI). I had very good mentorship and learned quickly about materials testing and engineering, and geotechnical engineering. I was promoted to the project manager position before moving to Canada. I moved to Fort McMurray in 2005, stayed there until 2012, and started working in Edmonton in 2013.

I have 20 years of geotechnical design, materials engineering, and project experience, including project management, bid preparation, and foundation analysis and design. My experience also includes concrete mix design analysis, reinforcing steel inspection, lime stabilization, construction monitoring, compaction, and municipal project management from design concept to final acceptance certificate inspection. I have significant experience with high-rise construction monitoring and testing and project management of large oil sands projects in Fort McMurray. Clients have included the City of Edmonton, the Regional Municipality of Wood Buffalo, Suncor, Syncrude, CNRL, OPTI, Nexen, and Shell.

My career highlights include numerous positions and roles of leadership and engineering in major international consulting companies. I always wanted, however, to open an engineering company. I finally got the opportunity in 2016, and I am really enjoying building my business and serving Alberta.



**BACKGROUND**

During my career so far, I have:

- provided consulting engineering services as engineering manager, for clients in oil and gas, the private sector, and provincial and municipal agencies
- conducted investigations and analyses for projects, directed and guided geotechnical engineers and

technicians in compiling and analyzing data, provided principal supervision on all investigations, authored and reviewed geotechnical reports, provided technical guidance and support to professional staff, and prepared and reviewed soil and foundation reports and specifications

- maintained principal involvement with or directed all aspects of operations, including construction monitoring, field and laboratory testing of construction materials, pavement design, environmental assessments, forensic analysis, and related activities
- implemented quality, health and safety, technical, and client-driven initiatives
- participated in business development and client management initiatives
- actively participated in APEGA, CSCE, and Chamber of Commerce activities

I enjoy building future of Alberta and Canada by mentoring junior engineers



**FOR COUNCIL** Bob Rundle, P.Eng.

- More than two decades in construction industry
- Dedicated to professional development and mentorship
- Pursues fitness through sports, volunteers as coach

Bob Rundle, P.Eng., was born in Calgary but lived in many other cities around the world before landing in Edmonton in 2005. Bob obtained his B.Sc. in civil engineering in 1994 from the University of Alberta. His executive development included completing the Business Leadership for Technical Professionals program from the University of Alberta and numerous professional development seminars from APEGA.

Bob has been involved in the construction industry for 22 years. He started his career as a junior engineer with GPEC Consulting in 1994 and moved to Commonwealth Construction. Bob relocated to Indonesia with Commonwealth Construction in 1996 to work on a remote pulp mill project. He returned to Canada in 2003 and returned to GPEC Consulting. Bob moved to Voice Construction as a project manager in 2005 and moved to Bird Construction as a senior project manager in 2013. Bob started with Nillex as Projects Manager in 2016 and most recently served as a senior project manager with Kich-ton Contracting. Throughout his career, Bob has dealt with people of varied backgrounds and has developed an ability to mentor people and help them achieve and contribute both professionally and personally.

Bob is the proud father of two boys that keep his home life busy. Bob enjoys golf and both ice hockey and ball hockey as his way of keeping fit. Bob also volunteers as a coach for his son's ball hockey teams.



**APEGA ACTIVITIES**

- Chair, Edmonton Region Branch Executive (2016–2018)
- Chair, Golf Sub-committee (2010–2017)
- Vice-Chair, Edmonton Region Branch Executive (2016)
- Past-Chair, Edmonton Region Branch Executive (2014–2015)
- Chair, Edmonton Region Branch Executive (2013–2014)
- Treasurer, Edmonton Region Branch Executive (2012–2013)
- Secretary, Edmonton Region Branch Executive (2011–2012)
- Member-at-Large, Edmonton Region Branch Executive (2008–2011)
- Volunteer, Science Nights
- Volunteer, Ethics Workshop
- Volunteer, Science Olympics
- Member (2003–present)

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## FOR COUNCIL Muhammad Tayyab (Tab), P.Eng.

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- Megaproject experience in a variety of types of construction
- Current engineering team has innovative vision for green technology
- Interested in representing the current and future needs of engineering

I am logical, purposeful and tough. I can be your voice representing you in APEGA for engineers integrity, honour and ability to persevere. I am a highly motivated, social, and caring individual. I have a bachelor of civil engineering degree and a master's degree in civil structural engineering from the University of Alberta. Like all of you I love my job, but the slump in oil prices and massive job loss in last two years in Alberta made me worried and sad. I strongly believe APEGA can play an important role in reshaping Alberta



What motivated me to be part of APEGA Council is my interest in representing engineering's current and future challenges to meet APEGA's engineering obligations efficiently.

economy and future needs by influencing both the public and private sectors.

I am currently working with ATCO Electric, where I am part of large, multidisciplinary engineering team. Through this team, I am aware of engineering's future needs of new and innovative materials and designs for green and sustainable technology.

## FOR COUNCIL Jason Vanderzwaag, P.Eng., MAsC, LEED AP, PMP

- See proposed legislative changes to fruition
- Voice for members in Alberta's regions
- Wide-ranging civil and public health engineering experience

A current APEGA councillor winding up a one-year term, I am seeking re-election to continue my involvement in the legislative review and other initiatives. I am passionate about APEGA's role as a self-governed regulator and the inherent responsibilities of Council to members—and of members to the health and safety of the public and the environment. So far, I have been part of many initiatives, including:

- regulatory changes required to help APEGA meet the challenges of evolving demands of our professions and maintain the privilege of self-regulation
- committee work to review and approve key changes in our regulatory boards
- interface with the Consulting Engineers of Alberta to review how engineering services are procured in Alberta
- budget and expenditure reviews to ensure that the association responsibly allocates members' dues and other fees, while continuing to meet regulatory obligations

I am a civil engineer with 15 years of experience. As the office manager for Associated Engineering in Fort McMurray, I lead a team of engineers and technologists to support the Regional Municipality of Wood Buffalo and other clients in municipal infrastructure and community development projects. Recent ones include Snye Channel rehabilitation, offsite infrastructure for the MacDonald Island Park Expansion, and recovery works following 2013 flooding in Fort McMurray.

In response to the 2016 Fort McMurray wildfire, I led the Associated Engineering team to assist the regional municipality in its response. We provided remote operation of the water treatment plant to meet firefighting needs and the subsequent Water System Recovery Plan. The latter included draining and cleaning every water reservoir and flushing every watermain to provide potable water for the community. Our team won two Awards of Excellence from the Consulting Engineers of Alberta for the services we provided.

I have an undergraduate degree and a master's degree, both from the University of British Columbia. During my undergraduate program I participated in the Engineering Co-op Program, taking placements with the Corporation of Delta in B.C., Progressive Engineering in Calgary, Habitat for Humanity in Costa Rica, and the Department of Fisheries and Oceans Habitat Enhancement Branch in Vancouver. I also studied one semester on exchange at the University of Chile in Santiago.



After graduation, my work experience included water resources engineering with Associated Engineering in our Burnaby office. I also took a six-month internship in Guatemala through the City of Calgary's Central American Water Resources Management Network, providing technical support to community development projects in rural communities.

I completed my master's in pollution control and waste management. This was through a multidisciplinary program that combined public health, public policy, and engineering. My thesis topic was *Use and Performance of BioSand Filters in Posoltega, Nicaragua*. Field research included three months visiting rural communities in Nicaragua to assess the long-term efficacy of household drinking water treatment. Follow-up work included education and training programs to improve the biosand filter program in this region of Nicaragua. The work was performed in collaboration with several organizations, including the Centre for Affordable Water and Sanitation Technology in Calgary.

My thesis work and related technical presentations were recognized with several major awards, and I published two papers based on my research work in the *Water Quality Research Journal of Canada*.

My past participation in APEGA includes Chair and other executive positions with the Fort McMurray Branch, from 2012 to 2017. I helped engage local members and students in STEM activities, including science fairs and science olympics, scholarships, teacher awards, and technical talks. I was proctor for the National Professional Practice Examination, 2013–2015, and have been an APEGA mentor since 2015.

Also since 2015, I have been on the champions collaborative of the APEGA legislative review, gaining insight into the proposed changes to address challenges APEGA faces as a self-regulating association. A key motivation for running for Council is to be involved in the implementation of changes arising out of the review. I also want to act as a voice for the Fort McMurray region and other regional branches, in recognition of the challenges we continue to face across the province.

As for my other interests and activities, I am a youth coach for cross-country ski lessons with the Ptarmigan Nordic Ski Club and also sit on the board of directors. I am a board member for my condominium corporation in Fort McMurray. I like hiking, running, cycling, skiing, scuba diving, and travel.

I hope I can count on your support in APEGA Election 2018!

- Desire to build on first Council term
- Teaching, project engineering, governance experience
- Strengthen Council through diversity

Why join APEGA Council again? Because after only one term as a councilwoman, there is still much work left for me to do.

I have been a member of APEGA for 22 years. Being on Council has given me the opportunity to give back to our regulator and to you, our members.

After graduating from the University of Alberta with two engineering degrees, I volunteered with two APEGA programs that filled a strong desire in my heart: the desire of being a teacher. Those two APEGA programs were Outreach and the examinations committee for the National Professional Practice Exam.

I am a technical instructor at MacEwan University, and I previously taught engineering and project management at NAIT. Also, I spent 16 years as a project engineer in the oil and gas industry, including three years in management. All this while being a proud Hispanic woman, a working wife, and the mother of three kids.

Furthermore, I have extensive governance experience in the charity sector. My first board role started 14 years ago at



the Edmonton VBAC Support Association, where later I was president for seven years. Then for two years I was on the board of ICAN International, based in California, as the Education Director.

Five years ago I joined the board of Alberta Synchro, the regulatory body for synchronized swimming in Alberta, for a term of two years. I was chosen because of

my long experience as a judge in the sport.

Finally, within the last four years I have been Vice President of Education, President, and Area Director for two chapters of Toastmasters.

Overall, I have a diverse governance and organizational management resume that shows my commitment to my career and my community.

My continued participation and suggestions will make for a stronger and more effective APEGA Council, because it is in the multitude of perspectives that the best solutions are found.

It will be my great pleasure to continue my role on Council.



# ANNUAL GENERAL MEETING & CONFERENCE 2018

**APEGA 2018 Annual General Meeting and Conference takes place at the Shaw Conference Centre in Edmonton from April 19 to 20, 2018.**

**The Annual General Meeting and Conference brings members, Permit Holders, government representatives, and other professionals together for two days of professional development, collaboration, and celebration.**

## **AGM LUNCHEON SPEAKER**



### **DR. JULIELYNN WONG**

APRIL 20, 2018

Dr. Julielynn Wong is a Queen's- and Harvard-educated physician-scientist, innovator, and educator whose life's mission is to take technology to the extreme to benefit the world. She is internationally recognized as a 3D printing, drone, robotics, telemedicine, and digital health pioneer who uses cutting-edge technology to deliver healthcare solutions across diverse environments, from outer space to remote communities with limited access to healthcare resources. She was the first to 3D print medical supplies on the International Space Station and she designed a solar-powered, ultra-portable 3D printing system that can make medical supplies in remote, off-grid communities.

Buy your tickets at [apegaconference.ca](http://apegaconference.ca).

# ANNUAL GENERAL MEETING & CONFERENCE

## PROFESSIONAL DEVELOPMENT SESSIONS

APRIL 19 AND 20, 2018  
SHAW CONFERENCE CENTRE

**Thursday, April 19:** 8:00 a.m.–4:15 p.m.

**Friday, April 20:** 8:30 a.m.–11:45 a.m.

*Earn up to 10 professional development hours under the CPD Program.*

Keeping up with the evolving business environment is a challenge for every professional. The APEGA Conference offers a choice of 25 seminars over a day and a half, with subjects ranging from regulatory and technology to social good and innovation. For more information and to register, visit [apegaconference.ca](http://apegaconference.ca).

## SUMMIT AWARDS

APRIL 19, 2018  
SHAW CONFERENCE CENTRE

**Reception:** 5:00 p.m.–6:00 p.m.

**Dinner and Awards Presentation:** 6:00 p.m.–9:00 p.m.

The annual Summit Awards is APEGA's pre-eminent event. The awards recognize excellence in professional engineering and geoscience and the valuable contributions APEGA members make to their communities. Buy your tickets at [apegaconference.ca](http://apegaconference.ca).

## ANNUAL GENERAL MEETING AND LUNCHEON

APRIL 20, 2018  
SHAW CONFERENCE CENTRE

**Registration:** 11:00 a.m.

**Luncheon:** 12:00 p.m.–1:30 p.m.

**Annual General Meeting:** 2:00 p.m.–5:00 p.m.

**Post-AGM Reception:** 5:00 p.m.–6:00 p.m.

Open to all members and the public, the Annual General Meeting is your opportunity to discuss issues important to the professions, vote on matters brought before Council, and present motions for Council consideration.

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

# How to Prepare for Your Permit Dues Increase

If you represent a permit holder employing six or more members, your company has probably already been affected by APEGA's July 1, 2017, [permit dues](#) increase. If your company employs fewer than six Members, however, it hasn't been affected yet—but it could be as soon as this summer. The launch date of the second stage of the two-stage increase is July 1, 2018.

## WHAT CAN I DO TO PREPARE?

You'll want to know how many members are associated with your APEGA permit. [Visit the APEGA Company Self-Service Centre \(CSSC\)](#). The login information to this site is given to the Chief Operating Officer registered with the APEGA permit. It's here that permit holders can maintain and edit the APEGA listing of members associated with their permit. They can adjust their Responsible Member listings and maintain their contact information on file with APEGA.

The CSSC features an estimator so you can estimate what your permit dues will be for the upcoming year.

## WHEN WILL MY COMPANY BE BILLED?

Your billing date is tied to your permit due date. APEGA sends out the permit dues renewal package 60 days ahead of the permit due date, allowing the permit holder 30 days to manage and edit its information about APEGA members on file.

Thirty days ahead of the permit due date, the invoice is finalized and the company has one month to pay. Once the permit dues are paid, the permit certificate is issued. It's valid for one year.

## WHICH COMPANIES REQUIRE PERMITS TO PRACTICE?

Permits are required by any company that engages in the practices of engineering or geoscience in Alberta.

- APEGA Council approved a change in its permit dues model in December 2016
- Permit dues increase with the size of the company, as measured by the number of APEGA members employed, as per APEGA's permit files
- Types of members included in the calculation are Professional Members, Licensees, Professional Licensees, restricted practitioners, Provisional Licensees, Members-in-Training, and exam candidates
- The increase was effective July 1, 2017, for permit holders employing six or more members
- The next increase is effective July 1, 2018, for permit holders employing five or fewer members

The permit gives the company the right to practice—and also to use reserved words within its name.

## WHY DO THESE COMPANIES NEED PERMITS IN THE FIRST PLACE?

Regulation of the professions is vital to protect public safety and interest. Companies that practise engineering and geoscience must have systems in place to enable members to do their jobs competently and ethically.

## WHEN AND WHY DID APEGA COUNCIL INCREASE PERMIT DUES?

APEGA Council approved a change in its permit dues model in December 2016. Permit dues increase with the size of the company, as measured by the number of APEGA members employed, as per APEGA's permit files.



# Movers & Shakers

## E.I.T. NAMED TO CANADA'S OLYMPIC BOBSLEIGH TEAM



**Oluseyi (Seyi) Smith, E.I.T.**, has been competing for Canada for almost half his life, and he's doing it again now—on the bobsleigh team in the Winter Olympics in Pyeongchang, South Korea. Mr. Smith got his first shot at Olympic glory in 2012, running for Canada in the London Summer Olympics. His 4x100-metre relay team won the bronze medal. Then, heart wrenchingly, the team was disqualified because of a lane violation.

Once specializing in the 100-metre, the 200-metre, the long jump, and the relay, his drive to succeed also got him to the World Youth Championships, the Pan American Junior Championships, the World Junior Championships, the World University Games, the Commonwealth Games, and multiple World Championships.

After missing out on the Rio Olympics in 2016, Mr. Smith left the track to focus on his career—until his coach suggested he give bobsleigh a shot. The challenge was accepted, and he and his bobsleigh team placed in the top three at two World Cups.

SLEIGHING FOR GOLD  
 Oluseyi Smith, E.I.T., and his team compete for their position on the Canadian National team. From front are pilot Nick Poloniato, Lascelles Brown, Ben Coakwell, and Mr. Smith  
 -photo by Jeff Burgess



## TRAFFIC, BONES, BRAINS—UNIVERSITY OF ALBERTA LANDS MAJOR SUPPORT FOR RESEARCH

What can you get for \$2.3 million? If three engineering researchers and their teams at the University of Alberta succeed, the answer is a better morning commute, better bone repair, and better brain treatment for babies. Through federal grants awarded by [Canadian Institutes of Health Research \(CIHR\)](#) and [Western Economic Diversification Canada \(WEDC\)](#), **Tony Qiu, P.Eng., PhD**, **Hasan Uludag, P.Eng., PhD**, and **Larry Unsworth, P.Eng., PhD**, will be able to continue their work in their transportation and biomedical areas.

Dr. Qiu, an associate professor in the U of A Faculty of Engineering's Civil and Environmental Engineering Department, and his ACTIVE-AURORA team have accepted \$934,000 from WEDC. It will allow them to continue testing the ability of vehicles with special technology to receive, use, and transmit information about location, speed, following distance, weather, road conditions, and more. The widespread use of this connectivity would help ease gridlock, improve safety, and increase energy efficiency. The City of Edmonton and Alberta Transportation also provided financial support for the project.

"Our objective is to identify (connected-vehicle) applications relevant to Western Canada that could have a positive effect on the environment by reducing fuel consumption, improving the efficiency of vehicles, and reducing emissions," says Dr. Qiu in a [U of A website story](#). "New technology allows us to travel in greater safety, deliver goods and people on time, and even reduce greenhouse gas emissions. As roads, cars, and people become connected and share information, our daily lives will improve."

Dr. Uludag, a professor in the Chemical and Materials Engineering Department, and his team have \$505,000 from CIHR to bolster their bone repair research. Using gene therapy and strategic protein delivery, the plan is to provide a new way of mending bones that isn't subject to grafting's risks of clotting,



### TALKING CARS

Dr. Tony Qiu, P.Eng., and the Hon. Amarjeet Sohi, Federal Minister of Infrastructure and Communities, discuss a connected vehicle project that could change the way traffic works.

-photo by Aalyssa Atley

bleeding, infection, and chronic pain. If successful, the method would remedy a variety of bone disorders caused by injury or disease.

"It's gratifying to be given the means to tackle this problem. As in any research project, there are some risks in our approach—we are proposing a new approach to regenerate bones that is different from conventional methods. Unforeseen obstacles are probably waiting for us, but I have complete trust in my colleagues and our research team," Dr. Uludag says.

Finding a treatment for prenatal brain injury in infants is the province of Dr. Unsworth and his team. A brain that doesn't develop as it should, whether because of abnormality or trauma, can lead to cerebral palsy. Dr. Unsworth's team hopes to develop a peptide that can shuttle drugs to an afflicted part of the brain, broadening the opportunities for therapy. The team will use \$218,000 from CIHR in their research.

"It's heartbreaking to think that so many infants worldwide suffer brain injury and acquire a spectrum of motor, behavioural, and intellectual impairments that so drastically affect their entire lives and those of their families. Their plight is even more astounding when you consider that these infants have little to no treatment and diagnostic options available to them," says Dr. Unsworth, a professor in the Department of Chemical and Materials Engineering.

# THIS COMPELLING CALGARIAN BRINGS CLEAN WATER TO THE WORLD

**David Manz, P.Eng., PhD**, decided early in his life that he'd be among that small percentage of people who really do change the world. It's safe to say he's succeeding.

With a storied career that includes working as a provincial flood forecaster (and predicting the 2013 flood in Calgary) before becoming an environmental engineering professor at the University of Calgary, Dr. Manz hit his stride when he started working on the developing world's water problems. "While water was available, almost 100 per cent of the time it was not safe to drink," says Dr. Manz, who's earned a spot on the [Calgary Herald's 2018 list of the 20 most compelling Calgarians](#).

Dr. Manz channelled his concern into the development of better water filters. He improved traditional filters, making them smaller, more affordable, and easier to construct locally, and his filter has seen worldwide success. The new filter increases the safety of drinking water, food preparation, hygiene, and sanitation for at-risk communities. Initial testing in Nicaragua even led to the country's only cholera-free area.

After leaving the university (and donating the technology and training programs), Dr. Manz helped found the [Centre for Affordable Water and Sanitation Technology \(CAWST\)](#) and was instrumental in bringing better water or sanitation to 15.4 million people in 164

countries. In 2011, he won the Alberta Science and Technology Leadership Foundation's Societal Impact Award for his humanitarian efforts.

Although he's retired from the CAWST, his work isn't done. Millions of people are accessing clean water thanks to his filter, but Dr. Manz wants to rocket that number into the billions. "It was, and is, my big opportunity to do something for the world in my life."



FILTRATION FRIENDS  
Course participants in South Africa pose for a photo with Dr. David Manz, P.Eng., their instructor in the use of his water filtration technology.  
-photo courtesy Dr. David Manz, P.Eng.





-photo by Nick Croken, Redline Photography



-photo by Katherine Calnan



-photo courtesy Higher Ground Consulting

## APEGA MEMBERS TAKE A STROLL ALONG RECOGNITION AVENUE

Question: What’s better than an engineer making *Avenue* magazine’s 2017 list of top young influencers? Answer: Multiple engineers making the list!

*Avenue* publishes two versions of the Top 40 Under 40 every year, [one in Calgary](#) and [one in Edmonton](#), to celebrate influential early to mid-career adults in the two cities. Among artists, medical professionals, philanthropists, business leaders, and others are several young engineers, recognized for their contributions to their communities and industry.

An Edmonton engineer *Avenue* highlights is **Greg Nakatsui, P.Eng.** In 2010, he accepted the role of Vice-President of Administration and Operations for Lincolnberg Homes, a company founded in part by his father. He merged the builder of single-family homes with one focused on multi-family homes to create Lincolnberg Master Builders—a unified company with a unified philosophy.

Mr. Nakatsui kept most of the company’s staff during the recent economic downturn, by finding other ways to tighten up financially. Although revenues decreased, many jobs remained.

**Tulika Gupta, P.Eng.**, her family’s first female engineering student, left her hometown in India to attend the University of Toronto, where she earned a computer engineering degree. Rather than head for Silicon Valley with her peers, she blazed a trail in the oil and gas industry. Working for Suncor in Calgary, Ms. Gupta created a way for employees to suggest corporate improvement methods to senior leadership,

### CREAM OF THE CROP

(photos from left) Greg Nakatsui, P.Eng., put his employees first when times got tough; Tulika Gupta, P.Eng., created an informational bridge between Suncor leaders and their staff; Richard MacDonald, P.Eng., helped lead a new engineering company to success.

such as ideas on how to cut carbon and reduce costs. The result was 40 new possibilities for the company to explore, representing potential savings in the millions of dollars. Ms. Gupta has also participated in the Women’s Diversity Initiative at Suncor, designing its Resiliency to Change Day and hosting Bring Your Daughter to Work Day, all in the name of allowing women to share the lessons they’ve learned and the skills they’ve honed.

Is there more greatness to come for Ms. Gupta? Very likely. Especially when you consider that she’s currently on leave from Suncor to attend Harvard Business School.

Also claiming a space on Calgary’s list is **Richard MacDonald, P.Eng.**, who took the risk of leaving a well-paying job to join the fledgling engineering company **Higher Ground Consulting**. As managing partner, he helped the company survive—and thrive—during the recent economic downturn. Instead of packing it in when things got tough, Higher Ground held on and has grown to a team of 20 with annual revenues in the millions.

When he’s not running a business, Mr. MacDonald is running marathons of various types and intensity. He represented Canada in the 2013 Ironman World Championships. Gruelling, perhaps, for other reasons was the 2017 Calgary Marathon. For that, he joined 113 other runners in setting a Guinness World Record for the most runners to complete a marathon while linked together—they used surgical tubing—thereby raising more than \$150,000 for charity.

## UNIVERSITY OF CALGARY CELEBRATES ENGINEERING LEADERSHIP

As always, the Dean's Holiday Reception for the University of Calgary's [Schulich School of Engineering](#) was a festive affair. Hosted by **Bill Rosehart, P.Eng., PhD**, at the Palliser Hotel, it attracted more than 450 business leaders, partners, donors, and alumni to salute another year at the school—and celebrate engineering leadership by presenting awards.

APEGA permit holder **Spartan Controls** received the Dean's Award for Corporate Leadership. Dr. Rosehart commended the company for its support of future engineers, as well as its investment in education and innovation. Spartan has made a name for itself in Western Canada's oil and gas industry with green technologies and advanced control solutions that reduce unwanted emissions, increase efficiency, and maintain a return on investment.

Spartan recently threw its support behind Schulich's commitment to expanding hands-on opportunities for students. How so? By sponsoring a new lab for interdisciplinary work on instrumentation systems

measurement. "We believe collaboration and innovation go hand in hand and are key to meeting industry challenges," **Grant Wilde, P.Eng.**, the President and CEO of Spartan, says in a story on the U of C website. "When you talk about entrepreneurship, it's really at the heart of what we stand for and what we do, and we try to give back to the community. At Spartan, we invite all our people to bring out the best in themselves, and we're always looking for bright young minds to join our company."

Ian MacGregor, Chairman and CEO of NW Refining Inc., and Chairman of **Enhance Energy Inc.**, received the Canadian Engineering Leader Award. (Although not a member of APEGA, Mr. MacGregor is a U of C engineering graduate, and Enhance is an APEGA permit holder). Mr. MacGregor has helped initiate, develop, and grow pioneering Alberta-based businesses and projects. These include the North West Redwater Partnership, which is bringing to Alberta the world's first bitumen refinery that's been fundamentally designed to incorporate CO<sub>2</sub> capture and storage. Enhance Energy is on track to build the largest carbon capture storage system in the world.



HOW'S IT LOOK?  
Schulich School of Engineering  
Dean Dr. Bill Rosehart, P.Eng., right,  
presents Spartan Controls President  
Grant Wilde, P.Eng., with the Dean's  
Award for Corporate Leadership.  
-photo by Colleen De Neve



## A LITERARY GREAT IN THE MAKING: Calgary Library Is Still Under Construction But It's Already Famous



### CRACKING OPEN A NEW CHAPTER

The much-lauded new Calgary Central Library will have something for just about everyone when it's complete, including its very own CTrain tunnel.

-artist's renderings courtesy DIALOG and Snøhetta

The people of Calgary's East Village—and the rest of the city—are finding lots of reason to love their library. Even though construction is still underway, the new Calgary Central Library is garnering attention at home and in the U.S.

The brainchild of **DIALOG** and the design firm **Snøhetta**, the \$245-million project was recognized at the [2017 Mayor's Urban Design Awards](#). The library received the Great City, Great Design Award, in anticipation of its improvements to the health and well-being of Calgarians. The library also secured a spot on *Architectural Digest's* list of the 12 most anticipated buildings of 2018. The project is in good company on the list, which also includes a Danish power plant, a Scottish museum, and a Chinese skyscraper.

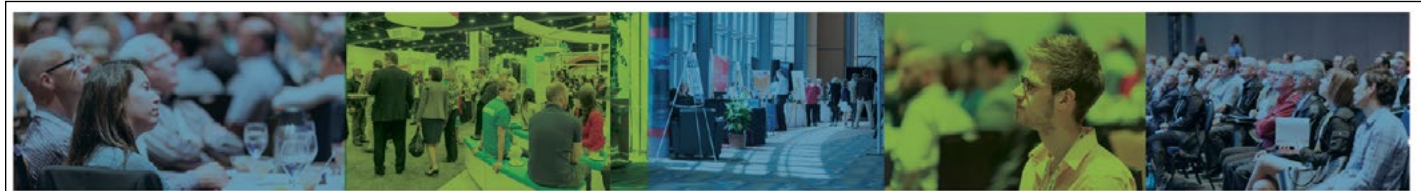
LITERARY GREAT CONTINUED >>

“I think what a library means to our community has changed, but this type of designation really shows that not only is this going to be a huge landmark for Calgary, this is going to be an internationally recognized landmark for Western Canada,” says Mary Kapusta, the Director, Communications, for Calgary Public Library.

Scheduled to open in November, the long-awaited library is rising up just east of City Hall. It will boast an impressive 240,000 square feet of space, making it about two-thirds larger than the existing downtown library, and it will contain more than half a million books. Other planned amenities include multiple meeting rooms, a performance hall, separate spaces

for children and teens, a technology commons, and an innovation lab. It will be easily accessible by CTrain, which runs under the building. (By the way, the trains remained active while a tunnel was built around the tracks—the first time for such a feat in Calgary.)

While the use of wood and the incorporation of large windows and a grand staircase are nothing to scoff at, the library’s pièce de résistance may well be an enormous skylight designed to look like a human eye. Among various personalizing flourishes, the most endearing has to be the 700 messages written by library lovers on a massive steel beam, intended to inspire generations to come.



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## APEGA PERMIT HOLDERS THINK GREEN

In the fall 2017 PEG, we shone a light on the inclusion of the University of Alberta and the University of Calgary on the annual Canada's Greenest Employers list. Organized annually by [Mediacorp Canada](#), the competition honours employers that have shown their commitment to environmental leadership.

Some of our corporate permit holders also made the list:

<b>DIALOG</b>	<b>Siemens Canada Limited</b>
<b>EllisDon Corporation</b>	<b>Symcor Inc.</b>
<b>Hatch Ltd.</b>	<b>TELUS Corporation</b>
<b>Hemmera Envirochem Inc.</b>	<b>WalterFedy</b>

Each employer was considered for its presence and success in green initiatives, its involvement in sustainable programs, and its success at aligning brand awareness with environmental practices.

Mediacorp Canada also scours the nation every year to compile Canada's Top 100 Employers. Innovation and improvement are always buzzwords for employers, but there's another one that's often just as important: retention. More and more, employers are going to great lengths to entice and retain their staff, and their efforts are not going unnoticed.

Judges this year looked at physical workplace, atmosphere, benefits, time off, communication, performance management, training and development, and community involvement. Organizations were also held up to others in their field to determine who comes out on top.

The following permit holders received mention in the 2018 awards:

<b>BioWare ULC</b>	<b>Pembina Pipeline Corporation</b>
<b>CBCL Limited</b>	<b>Rogers Communications Inc.</b>
<b>EllisDon Corporation</b>	<b>Schneider Electric Canada Inc.</b>
<b>Enbridge Inc.</b>	<b>Shaw Communications Inc.</b>
<b>Hatch Ltd.</b>	<b>Siemens Canada Limited</b>
<b>Keyera Corp.</b>	
<b>Manitoba Hydro</b>	
<b>NAV Canada</b>	
<b>PCL Construction</b>	

## CALGARY ENGINEER LANDS ON A MORE TERRESTRIAL CONNECTION TO MARS ONE

Four years ago, Calgarian **Zac Trolley, P.Eng.**, was shortlisted for an interplanetary adventure. Its end goal was that he'd become part of the Mars One initiative—changing his address to the Red Planet and helping establish a permanent colony. A trip home would not be in the cards, so to call it a life-changing adventure is an understatement.

Unfortunately (or fortunately, depending on who you ask), Mr. Trolley won't be making his dream voyage. But he is expressing his passion in a different way: speaking in earthbound schools and other venues. Mr. Trolley is sharing his knowledge and excitement of space exploration with the young



**DIDN'T MATT DAMON GET THERE FIRST?** Zac Trolley, P.Eng., won't be churning soil on Mars any time soon, but his passion and support for the Mars One project carry on.

and the curious. "Getting people to Mars is the most amazing thing we can do as a species," he says. "That will be what resonates for the next 1,000 years. That will be the stepping stone to the stars."

While he may not be going to Mars any time soon, his contribution to the project continues. He spent the end of January and the beginning of February at the [Mars Desert Research Station](#) in Utah, where he donned a spacesuit, took care of a simulated Mars station's systems, grew plants, and recycled waste water. The information collected will educate researchers on what's necessary for humans to survive when they actually do arrive on the Red Planet. "They replicate some of the same experiments you would do if you were on Mars. Collecting rocks, doing samples, doing surveying. What works, what doesn't," says Mr. Trolley.

He was one member of a six-person crew selected for the two-week simulation. Since its creation in 2001, more than 181 crews have taken part.

# Movers & Shakers

## OUR WOMAN IN HOLLYWOOD—WRITER’S WORK EARNS L.A. ACCOLADES

**Nattalia Lea, P.Eng.**, has been busy since we brought news of her debut short film, *Spikes at Her Elbow*, in the winter 2016 edition of *The PEG*. The film has been picked up for distribution by the Winnipeg Film Group, and there’s a lot more going on in a life that’s getting glitzy.

In 2017, Ms. Lea won a third-place prize at the Los Angeles Independent Film Festival Awards for a feature animation screenplay she wrote called *Joe Rat*. She was also hard at work on pre-development for two television series—*Ghetto Moms*, a sitcom about three single moms who chase get-rich-quick schemes to save money for their children, and *Lady with the Iron Ring*, a 1970s drama about the guts and glory of a female engineer in the oilpatch.

Ms. Lea, who graduated from the University of British Columbia’s bioresource engineering program in 1978, says it’s not unusual to find people with an engineering background in Hollywood. She met an actor who repairs his own car and has a background in mechanical engineering.

The film world is challenging, the Calgary resident says, but in a way that’s what aligns it with engineering. There’s the need to secure financing, to scope out a design, to find proper locations, to be accountable, to provide a detailed budget, to build a team that meshes, and to communicate well. “In film and engineering, it doesn’t matter what your background is—if you work hard and do good work, you have a chance of getting noticed.”

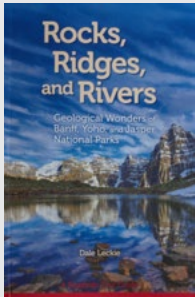
### WALKING THE RED CARPET

Nattalia Lea, P.Eng., has always had a writing bent—a fact well-known at *The PEG*, given that she used to freelance for the magazine. These days, Ms. Lea is an award-winning screenwriter and independent filmmaker.



-photo courtesy Nattalia Lea





## Rocks, Ridges, and Rivers: Geological Wonders of Banff, Yoho, and Jasper National Parks

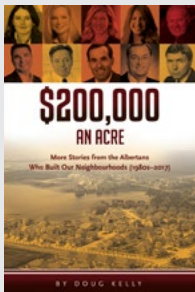
BY **DALE LECKIE, P.GEOL., PHD**  
\$27.95, [www.brokenpoplars.ca](http://www.brokenpoplars.ca)

### SCIENCE, HISTORY, AND ARTISTRY IN THE ROCKY MOUNTAINS

Dale Leckie, P.Geol., PhD, is a captivating guide as he offers the average traveller a scientist's view of the Canadian Rockies. Explaining the hidden story behind three of the four national parks in the UNESCO World Heritage Site called Canadian Rocky Mountain Parks, Dr. Leckie takes you on an expedition you won't soon forget, from the mountains and the valleys to the rivers and the glaciers.

Dr. Leckie, an adjunct professor at the University of Calgary and a former scientist with the Geological Survey of Canada, delves under the surface for a detailed exploration of this beautiful region, hitting the hot spots along popular routes through Banff, Yoho, and Jasper—and giving GPS coordinates and other helpful travel advice for each location. He combines facts with analysis, giving not just the story of what you're seeing but why you're seeing it, and he peppers his pages with photos, maps, and artwork. Cognizant that we're not all geoscientists, Dr. Leckie shares what he knows in a way that's digestible and easy to understand. It works as a guidebook to carry with you on your next mountain adventure and just as well as a reference book in your home library.

If you've enjoyed the Canadian Rocky Mountain Parks but wanted to deeply understand what they're all about, this book is for you. It's a marriage between a geologist's technical view of the world around us and a layperson's gentler one, and it works.



## \$200,000 An Acre: More Stories from the Albertans Who Built Our Neighbourhoods (1980s-2017)

BY **DOUG KELLY, P.ENG.**  
\$24.95, [www.dougekelly.ca](http://www.dougekelly.ca)

### THE NEXT CREW OF LAND DEVELOPERS INCLUDES—WAIT FOR IT—WOMEN

Most of us can mentally list the major industries that got Alberta where it is today. Oil, of course, is the big one—especially when its subsets and spinoffs are considered, not the least of are the research and technological breakthroughs that created oil sands mining. But there are others, including agriculture and agri-food, renewable energy, forestry, and tourism.

It's through a different lens, however, that Doug Kelly, P.Eng., an APEGA life member, looks at his province's success: one that studies our neighbourhoods, along with the lives and stories of the people who created them. His writerly journey down this path began with *\$100,000 An Acre: A Candid History of Alberta's Land Development Industry (1950s-1980s)*, so this most recent outing is the sequel.

What's changed since the 1980s? For one, the referenced value of an acre of land has gone up. Just as noticeable is the new array of 10 headshots on the cover. Where there were no women depicted, this time there are four.

Mr. Kelly dedicates his first chapter to profiles of female developers, among them Karin Finley, P.Eng., a former VP with Qualico Communities in Calgary. Even in the late 2000s, it wasn't always conceivable to the men in the room that Ms. Finley was in management. Upon joining a meeting, she would sometimes be asked whether she was in marketing. In the years covered in the first book, the professional roles of women would rarely be mislabeled; most of the time, clerical and secretarial work was as close as they got to management.

One thing that hasn't changed is the basic integrity of land developers. Mr. Kelly, who has more than 40 years of experience in the industry but is now semi-retired, says that the cartoonish, villain developers and home flippers of lore don't lineup with his experience. "Developers are good people," he writes. "We're among you and sometimes we're your best friends. We're thoughtful, caring and wanting to do the right thing." After more than 300 pages of tales about developers of various ages and disciplines, the reader will no doubt agree.

# The Buzz

## BETTER YEAR? MOST BUSINESSES THINK SO

Alberta businesses are optimistic about their fortunes in 2018, suggests a recent survey by the [Business Development Bank of Canada](#). Almost 70 per cent of respondents say they expect higher revenues in 2018 and plan to invest more money in their businesses. If this holds true, investments by small and medium-sized businesses in Alberta should rise by 12 per cent this year—higher than in any other province in Canada. The survey also showed that 35 per cent of small and medium-sized businesses plan to hire in 2018.

-rendering courtesy Calgary Municipal Land Corporation



## THE HUMBLE CAR PARK GETS A RETHINK

An \$80-million, 250,000-square-foot structure in Calgary's East Village could change how Albertans think of multi-storey car lots. The 9th Avenue Parkade, a project of the city-owned [Calgary Municipal Land Corporation \(CMLC\)](#), will initially function as both a large car park featuring 500 stalls on five levels and, on some of the first floor and all of the second floor, as a spacious home for a business incubator called Platform.

But what if parking demand decreases? Perhaps public transit makes a huge dent in traffic, or

### BUILD A BETTER CAR PARK

The ubiquitous, multilevel parking lot is getting a rethink in Calgary, coming to fruition through the design represented here. A major non-parking use and features that simplify conversion, someday down a less car-reliant road, are part of the plan.

autonomous vehicles that drop you off downtown become the norm. What then?

That's where things get really interesting. Forward-thinking design features, such as increased ceiling heights and a central atrium, will simplify conversion into a residential, commercial, or mixed-use building. CMLC plans to break ground on the project in 2019.

## MINE YOUR BITCOIN HERE

You can't hold bitcoin in your hand like a nugget of gold, but the digital currency is being mined around the world by computer-savvy entrepreneurs looking to cash in on the cryptocurrency boom. What exactly does mining mean, in this context? It's a process of verifying bitcoin transactions and adding them to the public ledger, or block chain.

A growing number of Bitcoin miners are coming to Alberta to operate their computer-based businesses, thanks to the cheap electricity that makes it possible to put more computing power into their efforts. They're being joined by some Alberta energy companies in Alberta who've chosen to expand into cryptocurrency, like oil and gas explorer **Iron Bridge Resources Inc.** It recently announced plans to create a cryptocurrency mining division in northern Alberta.



## BALZAC GET A MALL THAT PUTS SOME SMALL IN BIG

You've heard of big-box stores and the malls that welcome them. Well, the one almost ready for tenants near Balzac, north of Calgary, is more like a small-box mall. It is the yin to a neighbouring yang, Cross Iron Mills, which is renowned for its big-box outlet stores.

The \$200-million, [New Horizon Mall](#) was nearly four years in the making, and it will welcome its first customers this summer. Located along the QE II Highway just north of Calgary, New Horizon will feature 500 shops—that's about twice as many as a typical city mall—a food court with 26 restaurants, and a main stage for multicultural entertainment. It will create as many as 1,400 jobs.



### NEW HORIZON IN THE MAKING

An emphasis on smaller shops will set New Horizon apart from many of its peers. The mall is set to open this summer.

-photo courtesy dHzMedia



## CANNABIS OPERATORS GET SET TO TURN OVER SOME NEW LEAF AND BUD

With [pot legalization just around the corner](#), marijuana growing operations are popping up across Alberta. In fact a new cannabis production facility near Edmonton, in a converted modular home factory, could be among the largest in the country. Freedom Cannabis is working to capitalize on the multi-billion-dollar industry by converting the 125,000-square-foot former factory in Acheson, just west of the city.

The company must complete the facility and get its licence from Health Canada, but it plans to start production in late 2018 or early 2019. When operational, it could employ about 150 people.

Even bigger will be a massive greenhouse for recreational marijuana coming to Alberta's southernmost city. A Calgary company called Fifty First Parallel has purchased five acres of land at a Lethbridge industrial park, where it will build a 180,000-square-foot greenhouse in three phases. The company expects to start the first phase—a 50,000-square-foot greenhouse with the capacity to produce 3,500 kilograms of cannabis per year—early in 2018. In late 2019, the company hopes to move forward with the construction of the second phase, a 30,000-sq.-ft. extension of the first greenhouse that will increase production by 2,100 kg per year.

And there's more. If all goes according to plan, the company will purchase another five acres of land in 2020 and build a 100,000-sq.-ft. greenhouse.

When complete, the facility would produce up to 12,600 kg of recreational marijuana each year, for distribution in Alberta. New jobs created will, like the Edmonton project, total about 150.



## WASTEWATER TREATMENT RECEIVES ALBERTA GOVERNMENT SUPPORT

To better protect the health of small-town residents, all three levels of government are funding more than \$16 million in improvements to aging wastewater treatment and other water facilities. The towns of Vermillion, Barrhead, and St. Paul will receive upgrades to increase

capacity and better meet the needs of the population. The Municipal District of Pincher Creek will build the hamlet of Beaver Mines a new water reservoir to ensure an emergency supply of clean water.



## FORT HILLS PROJECT STARTS PRODUCTION AND BEGINS RAMPING UP

After numerous delays, [Suncor's Fort Hills](#) oil sands project has begun production and should reach 90 per cent capacity by the end of the year. Located 90 km north of Fort McMurray, Fort Hills has a maximum capacity of 194,000 barrels per day, making it one of the region's largest oil sands operations.

The project is also one of the longest in the making. After being shelved for five years in reaction to the 2008 downturn, construction was green-lit in 2013. But then it was delayed because of the Fort McMurray wildfire and complications in the commissioning of a secondary extraction facility. When the mine is fully operational, it will create about 1,600 jobs. It's expected lifespan is 50 years.

## BOWDEN REFINERY GETS A SECOND ACT—AS A RE-REFINERY

It's a re-refinery in two different ways. First, because the Bowden Refinery is getting a new lease on life. And second, because its job will be to re-refine used oil from industry.

Energy company [Gen III Oil Corp.](#) has announced plans that will return to duty the neglected refinery near the town, located about 45 kilometres south of Red Deer. After sitting idle for 17 years, the refinery could resume activity as soon as the first quarter of 2019, with construction slated to start this summer. Once the \$90-million project is complete, the redeveloped facility will become the first re-refinery in the Prairies and process about 2,800 barrels per day.



### MEANWHILE, IN FUTURE BLATCHFORD

It doesn't look like this yet, but the Blatchford District is slowly taking shape on the old airport lands in Edmonton.

-artist's rendering courtesy the City of Edmonton

## BABY BLATCHFORD STEPS TAKEN ON OLD AIRPORT LANDS

After lengthy delays—including a year-long hiatus—redevelopment of the 500-plus-acre [Blatchford district in north Edmonton](#) is nearing the first phase of housing construction. In 2017, the city installed more than eight kilometres of water, drainage, and thermal heating pipeline under the old airport lands, as well as the community's first paved road. The city is now selecting from among about 60 housing developers and hopes to start construction in the summer.

## THE SUN'S THE LIMIT IN SOUTHERN ALBERTA, WHERE SOLAR FARMS ARE JOINING THE RENEWABLE ENERGY LANDSCAPE

Everyone knows that southern Alberta is windfarm central. But now solar farms are popping up across the area, too, among them a 30-hectare farm outside of Brooks. It is, by the way, the largest solar facility in Western Canada. This winter, Vancouver's [Elemental Energy](#) launched the \$30-million farm, which includes 50,000 panels with the capacity to power 3,000 homes. Several larger projects are also being developed in the region, and so are a growing number of smaller entries into the market.

In the nearby Taber and Vauxhall districts, for instance, local governments recently greenlit three solar facilities proposed by [Solar Krafte](#) and two projects proposed by [Canadian Solar/Bow Mount](#). Also under consideration is a project by [Aura Power](#).



-photo courtesy Elemental Energy

**A CROP OF PANELS**  
It's not just about the wind, folks. The renewable energy industry is starting to catch rays as well as wind in southern Alberta. This farm near Brooks puts 50,000 panels to use.

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## EDMONTON BRANCH CALENDAR

### LUNCHEONS

**WEDNESDAY, MARCH 14**

**Bike Lanes Project**

*Daniel Vriend, P.Eng., and Olga Messinis, City of Edmonton*

**THURSDAY, APRIL 5**

**LRT Program Update**

*Guy Boston, P.Eng., City of Edmonton*

**THURSDAY, MAY 17**

**Off-Grid Solar Energy: Powering the Future**

*Brian Krest, P.Eng., ATCO Electric*

**Luncheons held at:** Lindberg Conference Centre, APEGA  
1500 Scotia One, 10060 Jasper Ave. NW

**Schedule:** 11:30 a.m. Registration  
12 p.m. Lunch  
12:30 p.m. Presentation

**Cost:** Members—\$35 (\$40 at door)  
Non-Members—\$40 (\$45 at door)  
Students—\$20

To register: [apega.ca/events](http://apega.ca/events)

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## CALGARY BRANCH CALENDAR

### LUNCHEONS

**THURSDAY, MARCH 15**

**Competition in Alberta's Electricity Market**

*Elizabeth Moore, Vice President, Commercial for AESO*

**THURSDAY, APRIL 26**

**Advanced Work Packaging**

*Dan Canning, Vice President of Construction and Commissioning for Wood Group*

**THURSDAY, MAY 24**

Topic and speaker TBA

**Luncheons held at:** Fairmont Palliser Hotel, 133 Ninth Ave. SW

**Schedule:** 11:15 a.m. Registration  
11:45 a.m. Lunch

**Cost:** Members & Guests—\$50  
Students—\$25  
ASAP (APEGA Student Advantage Program)—\$15

To register: [apega.ca/events](http://apega.ca/events)

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# Make an Impact

## Build the Future by Volunteering

### **Volunteer Opportunities**

- Boards, Committees, and Panels
- Community, University, and Youth Outreach
- Mentoring
- Special Events

Current APEGA volunteer opportunities are posted on the volunteering section of the APEGA website

### **Volunteer Benefits**

- Earn Continuing Professional Development Credits
- Expand Your Business Network
- Develop Skills, Knowledge, and Experience
- Give Back to Your Profession
- Have Fun

*Note: Your acceptance in a particular volunteer position depends on space being available and the suitability of your qualifications.*

### **Contact APEGA Volunteer Management**

1-800-661-7020, Ext. 1556

[volunteer@apega.ca](mailto:volunteer@apega.ca)





# Share Your Knowledge and Experience

APEGA members are needed for the following volunteer opportunities



## Discipline Committee Members

Committee members are needed for the Discipline Committee, which hears and decides on complaints of unskilled practice and unprofessional conduct against APEGA members and permit holders, brought before it by the Investigative Committee.

## Wetlands Science and Engineering Working Group Members

APEGA is seeking geoscience and engineering professional members for the Wetlands Science and Engineering Working Group. This group aims to produce a practice guideline for implementation of the Alberta Wetlands Policy.

## Mentors

APEGA invites experienced professional members to volunteer their time to mentor less-experienced members. Mentors are matched with mentees to provide guidance in many areas of their career and professional growth.

## Subject Matter Expert Panel Members— Outsourcing of Professional Work

APEGA is seeking panel members who are subject matter experts on the sourcing of professional work. The panel will help enhance APEGA members' awareness of outsourcing issues of a professional nature through the combining of two existing practice guidelines into a single *Professional Practice Standard for Outsourcing of Professional Work*.

## Environmental Practice Standard Panel Members, Environmental Professional Standards Subcommittee Members

Panel and subcommittee members are needed for the Environmental Practice Standards Panel and for the Environmental Professional Standards Subcommittee. This subcommittee ensures APEGA professional practice standards, guidelines, and bulletins related to the professional practice of environmental engineering and geoscience are adequate to protect the public interest.

## More volunteer opportunities

### Geoscience, Engineering Professional Standards Subcommittee Members

Members are needed for the Geoscience Professional Standards Subcommittee and the Engineering Professional Standards Subcommittee. These subcommittees ensure APEGA professional practice standards, guidelines, and bulletins will, when implemented, protect the public interest.

### Branch Executive Committee Members

Executive committee members are needed for APEGA branches, an integral part of APEGA operations. APEGA has 10 branches across the province, which act as conduits between APEGA's offices and APEGA members, and offer local luncheons and professional development opportunities.

### Requirements for Registration Seminar Presenters

Presenters are needed to deliver in-person seminars on APEGA's requirements and process for registration. Volunteers must present at least twice between July 2018 and June 2019, typically in either Edmonton or Calgary.

### Expert Witnesses in Geoscience

APEGA seeks two geoscience expert witnesses for short-term contract positions. These individuals will assist APEGA's Compliance Department with specific compliance cases.

### Edmonton & Calgary University Outreach Volunteers

APEGA members and human resources professionals are invited to use their valuable knowledge and experience at fun and worthwhile university student events, aimed at helping students prepare for their entry into the industry.

### APEGA Science Olympics Volunteers

Share your passion for your profession by helping inspire the next generation of professionals. APEGA seeks volunteers to facilitate hands-on challenges for students in Calgary on May 12.

### Subject Matter Expert—Registration Committee

APEGA is looking for members to serve as subject matter experts (SMEs) on the Registration Committee. An SME's primary duty is to review and provide recommendations on whether an applicant for professional registration has met our requirements for registration.

### Graduating Students Workshop Volunteers

Volunteers are needed to help enable small groups of students evaluate case studies that demonstrate the importance of ethical considerations in the practice of the professions. The workshops will be held on March 10 in Calgary and on April 7 in Edmonton.

For further information on any of the opportunities listed here—or other APEGA-related volunteer opportunities—please contact:

**APEGA Volunteer Management**  
1-800-661-7020, Ext. 1556  
[volunteer@apega.ca](mailto:volunteer@apega.ca)

You can also check out the [volunteer section of the APEGA website](#).

# WORLD WATCH

## ROBOTS ARE GETTING SMARTER AND MORE MOBILE ALL THE TIME — BUT CAN WE MAKE THEM CROWD SAVVY?

Making your way along a crowded sidewalk can be tricky, even for us humans. Imagine what it's like for a robot. Pedestrians weave their way around other people in intricate, quickly calculated patterns, adjusting constantly for unpredictable and erratic behaviour. Then there are all those ingrained social conventions to follow.

Not surprisingly, designing an autonomous robot with crowd-navigation capabilities has been challenging. Most robots have been either too cautious or too aggressive in crowds. (And—as any science fiction fan will tell you—we really want to avoid creating aggressive robots!)

Recently, [engineers at the Massachusetts Institute of Technology reported a possible breakthrough](#). Using reinforcement



### LOOK OUT, COMING THROUGH

A decidedly well-behaved MIT robot makes its way past dawdling humans.

-photo courtesy MIT

learning (a type of machine learning), the MIT researchers trained robots to follow paths they adjust every tenth of a second.

The approach so far has resulted in smooth robotic passages through crowds for 20 minutes at a time.

The learning included adhering to conventions like passing oncoming pedestrians on the right. And not taking over the world.



## AUSTRALIAN RESEARCHERS LOOK AT TURNING THOUGHTS INTO ACTIONS FOR PEOPLE WITH ROBOTIC LIMBS

Bionic humans had a certain cache on the small screens of the mid-1970s, in the form of the *Six Million Dollar Man* and the *Bionic Woman*. But here in the real world, the challenges of bionics have been many, even though hundreds of thousands of humans have benefited from them.

So far, bionic devices—or artificial body parts—have been helpful for some of us, but they're poor replacements for normal hearing, vision, and strength, says David Grayden, PhD, of the University of Melbourne's Department of Biomedical Engineering. More research and development are needed to catch the world up to our fictional antecedents.

But when it comes to robotic limbs, at least, promising developments are happening in Australia. [Dr. Grayden is part of a team working on a device called a stentrode, described as a small stent with electrodes attached.](#) The stentrode—a sort of spine for bionics, in terms of what it does—can be inserted into a blood vessel next to the brain's motor cortex. The hope is that it could then be used to help paralyzed patients control robotic limbs with their thoughts.

The device is currently being developed for its first in-human trials, the university reports. Researchers are also working on designing algorithms to decode neural signals from the brain.

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## SPRAY A FEW SENSORS UNDER THAT WING, PLEASE

Monitoring the health of flat or curved structures like airplanes could become easier, thanks to recent innovations by mechanical engineers in Hong Kong. [A team from the Hong Kong Polytechnic University has developed spray-on sensors from nanocomposites.](#) The sensors can be networked, providing rich real-time information on a structure's health.

The spray is lightweight and affordable to fabricate, meaning that large quantities can be used at once to search for flaws, fissures, and other material trouble spots. The innovation could signal the start of a new era of ultrasonic monitoring of infrastructure health, the university says.

## NATURE'S MIGHTIEST FURNANCE CREATES NEW MINERAL

When you conduct research into something as geologically amazing as a volcano, you never know what you'll find. Investigations into the dramatic eruption of Iceland's Hekla in 1991, for example, have many years later yielded a new mineral.

Special geological processes occur in volcanoes, resulting in unusual minerals. In this case, [reports the magazine ScienceNordic, Hekla yielded topsøeite,](#) named after a prominent scientific family in Denmark. It's one of seven new minerals discovered in Iceland since 2009. The elements iron and fluorine, along with water molecules, combine to form topsøeite.

Geologists have seen the chemical structure previously, but—important distinction alert—never has it been found in mineral form. To be recognized as a mineral, a substance must occur naturally; it cannot be formed in a laboratory only.



### HEKLA RESTS

When Mount Hekla in Iceland isn't erupting in awe-inspiring fashion, it looks like this. A dramatic eruption in 1991 created a new mineral.

## BIG BRIDGE, TINY BRICKS: LEGO POINTS KIDS TOWARDS ENGINEERING

[Want to see the world's largest LEGO bridge?](#) Then add the Capital Building in Liverpool to your travel plans. The world-record-holding bridge stands three metres and has a 31-metre span, or nearly the length of three double-decker buses. It consists of more than 200,000 individual LEGO pieces.

Built by the United Kingdom's Institution of Civil Engineers for a public exhibition in London, it's now been rebuilt, tiny brick by tiny brick, in Liverpool. "It's LEGO and it's fun. But also, some of the children who come to marvel at it will perhaps start to think about becoming civil engineers one day," says an institution spokesperson.

By the way, the U.K. has declared 2018 the Year of Engineering. The national campaign, aimed

at young people aged seven to 16, will focus on increasing awareness and understanding of what engineers do. The United Kingdom Space Agency is funding numerous projects, such as developing curriculum resources to encourage young people to consider a space industry career, and analyzing key North Pole and South Pole data.

If that part doesn't sound very tourist-friendly, try some of the interactive displays in science and discovery centres across the U.K. The focus of these will be the exciting work of engineers and scientists in British space missions. No word yet, however, on whether visitors get free trips to space.

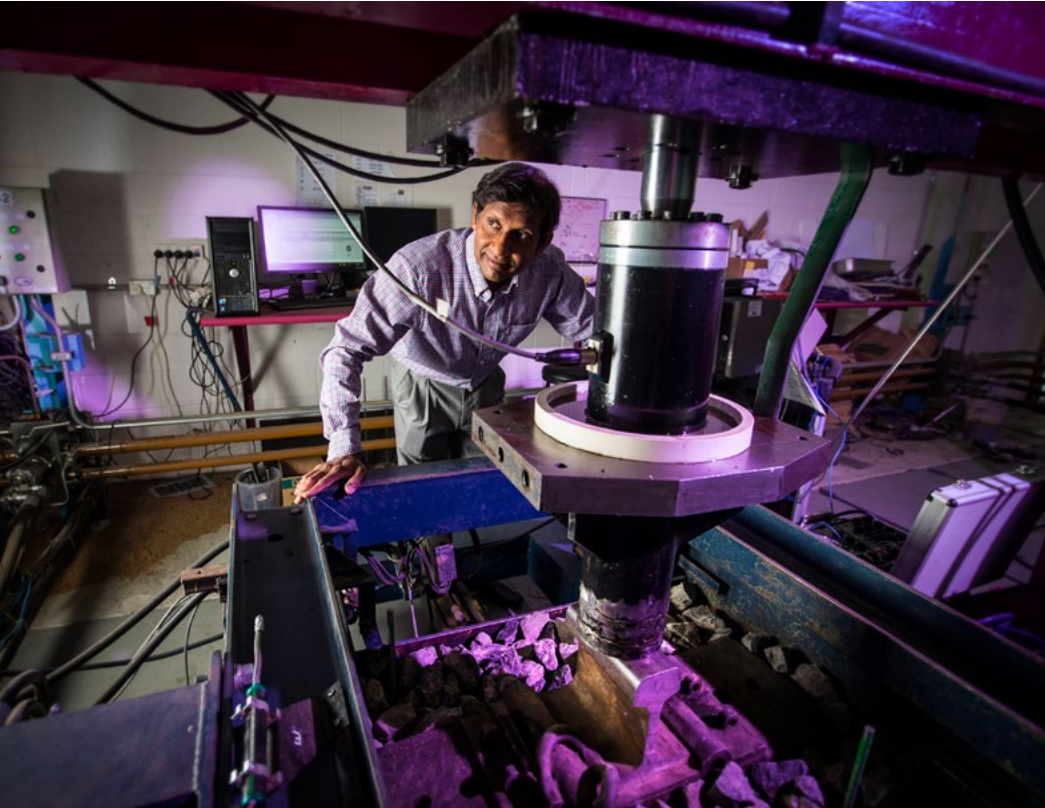
-photo courtesy the Institution of Civil Engineers



### BRIDGE ALIGNMENT

Staff members with the Institution of Civil Engineers line up beside the world's largest LEGO bridge, on display in the U.K.





## NOT EXACTLY TRACKSIDE

Dr. Buddhima Indraratna crouches over a simulator, which he's using to help improve train safety at high speeds over waterlogged track beds.

-photo by Paul Jones, University of Wollongong

Demand for rail travel is on the increase in Australia and the rail network is one of the world's largest. Even if that weren't the case, safe and reliable tracks for fast shipping and travel are important. Currently, trains need to slow down significantly over areas susceptible to mud pumping.

That's the safety and economic backdrop for funding being awarded to a team that's taking on mud pumping. [Led by researchers at the University of Wollongong's School of Civil, Mining and Environmental Engineering](#), the team will dig deeper into the causes of the problem. It will also look at ways to promote better drainage and build up soil. Improving ground conditions and train speed would thus have "huge benefits," says team leader Dr. Buddhima Indraratna.

## FARTHER DOWN UNDER—AUSTRALIANS LOOK AT FACTORS THAT UNDERMINE RAILWAY TRACKS

Trains traversing Australia's massive rail network are often responsible for mud pumping, an action that quite literally undermines track safety. Mud pumping typically occurs when fast, heavy trains, such as those used in mining, pass over waterlogged areas. This can result in mud holes and track depressions, both of which increase the risk of derailment.

## HOW ABOUT A COOLING SYSTEM THAT DOESN'T USE ELECTRICITY?

[Stanford electrical engineers—irony alert—have found a way to \*not\* use electricity.](#) Water required for air conditioning, refrigeration, and other cooling systems can be changed to its useful and non-heated condition with nary an electron delivering a charge.

As reported in *Nature Energy*, the engineers have taken a major step by developing a specialized

optical roof atop Packard Electrical Engineering Building at Stanford in California.

The system uses a natural process called radiative sky cooling to release heat, the same way asphalt roads do at sunset. A special film reflects most of the sun's daytime heat, creating conditions that allow heat to radiate into surrounding air and, sometimes, all the way to the cold reaches of space.



## DID NOT SEE THAT ONE COMING: EVERY DISASTER IS UNPRECEDENTED

Prepare all you want: the disaster you get won't be the one you planned for. That's because no disaster is ever the same as the ones before it. This is the key challenge every community faces while doing the hard work of developing disaster response and recovery plans.

Hussam Mahmoud, PhD, a civil engineer at Colorado State University, is proposing and developing a new approach. It's a mathematical model that allows planners to see how disruption in one location affects an entire community. Typically, the university reports,

communities focus on the lifelines that matter most to them, like water, power, or transportation networks. But actual disasters are less selective. If one lifeline is affected, others usually are, too.

[Dr. Mahmoud's model, based on a fictional city, focuses on all lifelines.](#) This involves considering not only the robustness of infrastructure but also social vulnerabilities and the availability of disaster funding. One important insight already gained is that fast recovery is not always the best, because of the instability it can cause.



### NOT YOUR USUAL DOCKING SPOT

A boat sits at dock on a southern Alberta street, in the aftermath of the floods of 2013. No matter what the type of disaster, the right algorithm may be able to improve responses, research in Colorado suggests.

-file photo courtesy David Richeson

## FOSSIL-FUEL CARS DRIVE INTO A NORWEGIAN SUNSET

It is full speed ahead for electric cars in Norway. [The Nordic country has announced it will phase out fossil-fuel vehicles by 2025](#)—which would make it the first country in the world to do so. Plug-in electric or hybrid cars already account for more than 25 per cent of new-vehicle sales in Norway.

Norway also recently introduced the world’s fastest charging station for electric cars. With a view to meet the needs of long-distance electric vehicles, the station is located on the main north-south highway of the peninsula that extends from the tip of Sweden to Kirkenes, Norway, in the Arctic Circle. The station provides fast charges for all three systems now used. It’s capable of delivering nearly 2,000 kilowatts when all chargers are running.

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## CHILDHOOD DEHYDRATION TARGETED BY ZURICH ENGINEERING STUDENTS

Dehydration kills more than one million children a year in hot weather, usually in impoverished countries. Many of them are too young to tell anyone what they feel or need. Now, mechanical engineering expertise is being applied to the deadly problem, through the creation of a device that will help laypersons recognize when treatment is necessary.

[Mechanical engineering students and others at ETH Zurich’s Mobile Health Systems Laboratory and Zurich University of the Arts developed the prototype.](#) It consists of identical blue cuffs, one for the hand and one for the foot. The cuffs are embedded with electrodes linked by a cable. A weak current sent through the electrodes enables resistance to be calculated.

The information reflects water concentration in the body. It’s gathered in real time without medical professionals and the process is relatively inexpensive. Further field studies are planned, but so far the researchers in Switzerland think it could be useful in diagnosing conditions like dehydration, especially in developing countries.

### A SUBDUCTION PRODUCTION

Clashing tectonic plates gave rise to the Andes, part of which is shown here—the Torres del Paine in Patagonia, Chile.



## QUESTION: WHEN A CONTINENT COLLIDES WITH A SUBDUCTION ZONE, WHAT DO YOU GET?

The collision of continents created major mountain belts like the Himalayas and the Alps. But what about the Andes? They’re located not at a point of continental collision but in a subduction zone—a place with one tectonic plate atop another. [What sort of geologic roughhousing created them?](#)

Whatever their origin story, the outcome is that the Andes are the longest and second-highest mountain belt in the world. Dutch geophysicist Wouter Schellart, PhD, spent more than a decade pondering how it all began for the Andes, and now, through his research, he’s come up with what he thinks is the answer, says information released by Vrije University Amsterdam.

Using Australia’s supercomputer Raijin, Dr. Schellart discovered that the subduction zone is about 7,000 km long, the world’s largest. That fact was crucial for mountain building. As well, the existence millions of years ago of long, narrow seas at the western edge of the South American continent contributed to the formation of the massive mountain chain.

Downward flows from the narrow seas into the depths the subduction zone dragged South America westward. The continent didn’t collide with other another continent—it collided with the subduction zone itself, thereby forming the Andes, concludes Dr. Schellart’s research.





#### GREAT SNOW FOREVER?

Snowmaking in Europe is getting more creative, given the warmer winters that ski resorts are enduring. Here, the iconic Matterhorn in Switzerland adds to the fun.

## MAKING SNOW IS GETTING MORE COMPLICATED IN EUROPE—BUT A FUTURE BYPRODUCT COULD KEEP THE LODGE WARM

Warmer winters have made for some less-than-stellar skiing conditions in Norway and other European countries. Advances in snowmaking are therefore a hot topic, especially where the economy depends on skiers and their pocketbooks.

Conventional methods simply spray water into cold air. Obviously, that doesn't work in warmer temperatures. One advance seeds water with a protein from a bacterium to create snow at temperatures around the freezing mark. But supply for that process can't keep up with demand.

Researchers at the Norwegian University of Science and Technology, and SINTEF, Scandinavia's largest independent research institute, have come up with a new approach. The project, called [Snow for the Future, aims to make snow in an energy-efficient way, even at warmer temperatures](#). The Norwegian approach relies on heat pumps, like those in freezers and refrigerators, to cool water for snow at even higher temperatures.

How is that environmentally friendly? The heat generated by the pumps can be diverted to buildings.



## GETTING ROBOTS TO BEHAVE LIKE HUMANS IS ONE THING—GETTING THEM TO BEHAVE LIKE INSECTS IS ANOTHER

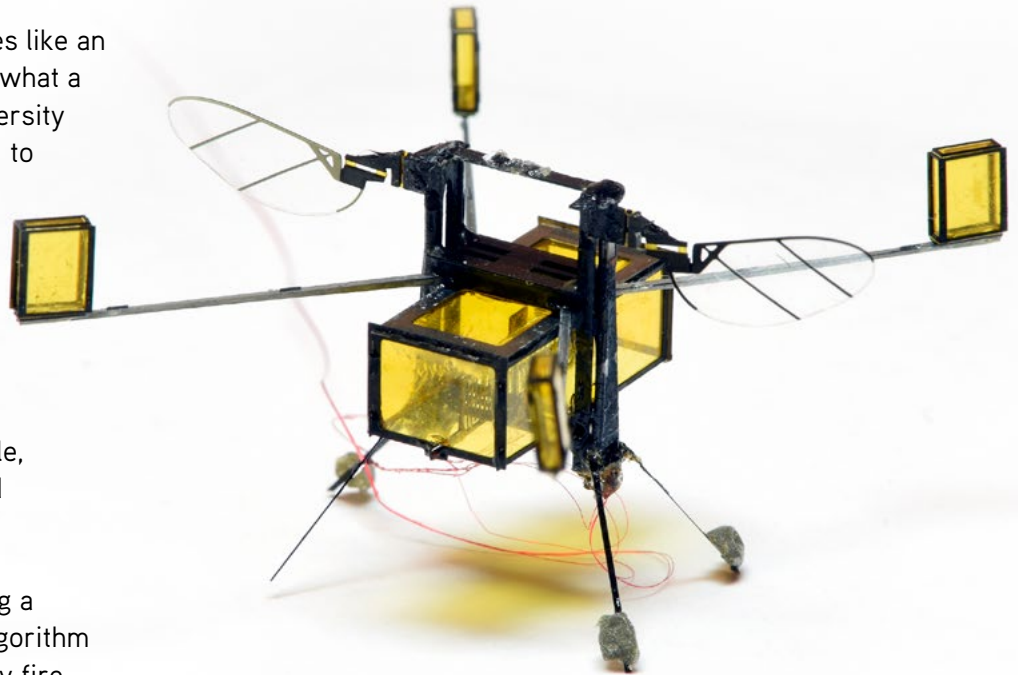
If it looks like an insect and it moves like an insect, it might be—a robot! That’s what a group of engineers at Cornell University in Ithaca, New York, would like you to come to terms with, someday.

[The engineers have succeeded in building robots that are insect-like in many ways](#), but behaviour has proved particularly challenging.

Programming an insect robot to sense a gust of wind, for example, or land on a swaying flower, would require that it carry a desk-size computer on its back.

The researchers are developing a new type of sensing and control algorithm that uses neuromorphic chips. They fire like the neurons in your brain, and they use much less power than traditional chips.

This means you will never, ever see robot bees strapped to computer towers flying around your neighbourhood.



### WHAT'S THAT BUZZ?

Robots like this one may soon be better pollinators, thanks to the development of special computer chips and algorithms.

-photo courtesy Yufeng Chen/Harvard SEAS

## SIMULATED DRIVING TESTS ARE PART OF THE LICENSING JOURNEY IN CHINA

Each year, about 30 million people in China obtain their driver’s licences. There’s nothing surprising about that, given the increasing wealth of the country and its massive population. But here’s something your average Canadian teenager never has to do: pass numerous tests on a driving simulator. It’s a legal requirement for learners in China.

[Mechanical engineering and computer expertise recently intersected to develop a more authentic virtual driving experience](#), says Germany’s Karlsruhe Institute of Technology. Because the simulator more closely mimics actual driving conditions, it should make Chinese roads safer.

The result, using software developed through a China-Germany technology transfer, is a new driving simulator called DriveSim. It features a mid-sized car modified for virtual training and automatic feedback, with displays that produce a lifelike experience. Drivers feel and react to simulated road bumps and changes in acceleration. Changing driving environments like weather are replicated on a three-dimensional wall projection.

A virtual instructor points out mistakes to help the driver learn from them. A real driving instructor then uses the information to design follow-up exercises tailored to individual needs.

## DESPAIR IN THE WORKPLACE

The economic downturn, especially in Calgary, correlates with a spike in suicides. Those who lose their jobs—and those still at their desks or in the field—are susceptible to spiraling into depression.



# Lift the Barricades

**One Man's Suicide Leads to National Push for More Awareness and Prevention**

Elizabeth Turnbull describes her late husband as “a talented, thoughtful, complex man.” Educated in computer engineering, he had switched to a career in woodworking, something he loved deeply. His world featured other passions, too, including music and photography.

It may be a cliché, but Chris Kubash had plenty to live for. He kept busy, he was loved, he was understood.

Yet in 2015, Mr. Kubash died by suicide, and Elizabeth became one of the tens of thousands of Canadians every year left to wonder why it happened.

For virtually everyone affected by someone’s suicide, a question lingers: is there something I could have done?

Marcel Chichak, P.Eng., says he has been touched by four suicides. “One of the legacies of suicide is guilt: the feeling that I could have made more of an effort,” says Mr. Chichak, a senior bridge planner and river engineering specialist at Stantec in Edmonton. “That will never go away.”

He manages a group of engineers and loves helping people succeed. But when it comes to dealing with suicide and mental illness, he admits that he feels unqualified. “Maybe that’s part of the problem: few of us have any training to deal with mental illness, so we don’t discuss it at all,” says Mr. Chichak.

experience and the knowledge to help suicidal people, but they struggle for recognition and support.”

Dr. Fair thinks more members and others need to realize that mental health issues are common but treatable. He admires Ms. Turnbull’s initiative, particularly because it comes in the wake of her husband’s suicide. A professional opera singer, she reached out to her musical friends throughout Canada to create a sunrise-to-sunset series of concerts, called [Mysterious Barricades](#), to promote hope and awareness in conjunction with World Suicide Prevention Day. In 2018, the concerts take place on Saturday, September 15.

More awareness is great. And another place ripe for improvement is health insurance and benefits

“One of the legacies of suicide is guilt: the feeling that I could have made more of an effort. That will never go away.”

**MARCEL CHICHAK, P.ENG.**  
*Edmonton*

Professional engineers and professional geoscientists should address suicide by standing together and spreading awareness, says Ivan Fair, P.Eng., PhD, the Chair of Electrical and Computer Engineering at the University of Alberta. Ms. Turnbull is a friend and so was her late husband, a former roommate.

“The engineering community is one of my communities,” says Dr. Fair. “I am an engineer, and I teach engineering, which is seen as a staid, stolid profession. Let’s recognize the importance of mental health and support not just engineers and geoscientists but society at large. Organizations exist with the

packages, Dr. Fair says. If you injure a shoulder or leg during sports, getting treatment is likely straightforward. Getting help for mental illness? Not so much.

“Allowances for mental health are often limited in comparison to what’s available for physical health. It might be only a fraction. So many people don’t go for treatment when they need it,” says Dr. Fair. “I would be so proud of our professions, our members, and our permit holders, if we were to take a stand to say that mental health is important.”

FEATURE CONTINUES ON NEXT PAGE >>



# A Recession's Hidden Costs

## You are More Than Your Paycheque

Alberta, of course, is far from being alone in coping with suicide. The World Health Organization puts the number on Planet Earth at about 800,000 a year. That's more than the number of people who die each year from war and homicide combined.

The numbers here tend to correlate with the economy. Alberta experienced a 20 per cent spike in suicides in 2015. It's almost certainly not a coincidence that the province was also deep into the worst recession the province has experienced since the early 1980s.

For each one per cent increase in unemployment, there's a corresponding 0.79 per cent increase in suicides, says Mara Grunau, Executive Director of the Centre for Suicide Prevention in Calgary. "It can take up to two years before we see the increase, as people typically exhaust their personal resources first, before finding themselves completely hopeless," Ms. Grunau adds.

Deaths by suicide in the province numbered 547 in 2014, reveal data from the Office of Chief Medical Examiner in Alberta. The total was 662 in 2015, and the total returned in 2016 to a more historically representative number, 539.

Rochelle Adcock, now with Alberta Health, worked in the human resources department of a major engineering consulting company in Alberta when layoffs occurred there in 2014. She says transition support from employers is important. "We were able to provide outplacement services for a period of time, usually around three to six months, to

help those affected determine what they wanted to do next, whether it was finding a new job or a new career, retiring, or a combination of those things."

That kind of help to relieve stress, whether or not a company is laying off staff, is the right thing to do, Ms. Adcock says. "I've always been fortunate to work for organizations that are able to give people access to resources like an employee family assistance program for immediate, confidential help."

Ms. Adcock recalls how the recent downturn took Albertans by surprise. "When things got really bad in 2014, we didn't see the upswing in the market immediately afterwards that we had experienced in previous years. Severance packages or Employment Insurance benefits were running out and job prospects were minimal."

The effect of layoffs is not only on the suddenly jobless and their families. It ripples

through the worksite and office, too, where the ones with jobs sometimes suffer survivor guilt. "You have to consider that the ones who are laid off are often known at work on a personal level," says Ms. Adcock. "Those still working may feel as though it should have been them laid off, not the 57-year-old who's close to retirement and whose job prospects are not great."

Even the fear of losing your job can trigger depressive thoughts. Stress levels were particularly elevated in Calgary, where professionals and others endured repeated rounds of layoffs. The tension was thick, reinforced by the expressions on people's faces, the empty seats on the CTrain, and the vacated offices of colleagues.

"There was a palpable paranoia at every company."

**ROSS GILKER.**

*Outplacement Transition Counsellor  
Calgary*

“Billions of chemical reactions make up the dynamic system that is responsible for your mood, perceptions, and how you experience life.”

-HARVARD MEDICAL SCHOOL



“There was a palpable paranoia at every company,” says Ross Gilker, a Calgary outplacement transition counsellor. The stress continues at home in such situations, mental health experts say, as income uncertainty shakes up family security. No escape from stress is rarely healthy, because the hormone release of fight-or-flight reactions is supposed to be short term.

Robert Olson, a librarian and writer with the Centre for Suicide Prevention, says that he hopes the stigma is fading, both about suicide and mental health generally. One reason for the reduction in suicides in 2016 may be that people are “seeking help more readily than they used to.” But he says that the numbers in Alberta remain too high.

Which leads back to the nagging question: is there anything that individuals, as co-workers, family, and friends, can do? And what about society?

## **PROTECT YOURSELF**

For one thing, you can learn how to look after your own mental health, professionals say.

Alberta’s culture is steeped in stories of the strong and the brave. Our campfire tales are about putting in the hard work and being rewarded with success. We can trick ourselves into tying our value to our status and money.

But status and money are not the entire tapestry of a person, mental health professionals say. You’re worth more than your paycheck, so understanding your actual value is important.

## **THE CHEMISTRY OF DEPRESSION**

Depression is deeper, longer, and uglier than a bad mood or a few hours or days of not being your usual self.

Your body gets in on the act, pumping chemicals through your blood that cloud your thinking and keep you low. People who attempt suicide often have all kinds of people in their lives who love them. But because of those depressive chemicals, they may not perceive or believe it.

“It is not a simple matter of one chemical being too low and another too high. Rather, many chemicals

are involved, working both inside and outside nerve cells,” says an article on the website of the Harvard Medical School. It is “billions of chemical reactions that make up the dynamic system that is responsible for your mood, perceptions, and how you experience life.”

Harvard cites two handfuls of interacting chemicals that researchers are targeting, along with genetics, childhood factors, stressful events, social safety nets, weather, sleep patterns, and other medical issues. “With this level of complexity, you can see how two people might have similar symptoms of depression, but the problem on the inside, and therefore what treatments will work best, may be entirely different.”

### SIGNS OF POTENTIAL SUICIDE

Ms. Grunau, of Calgary’s Centre for Suicide Prevention, confirms that there can be a wide variety of signs that someone is feeling suicidal. And the signs don’t necessarily align with our stereotypes.

She says: “Any significant change in behaviour is a warning sign for suicide. If someone who is

usually happy is very sad, this is a warning sign. Alternatively, if someone is usually melancholic and is suddenly happy or peaceful, this may indicate that they’ve made the decision to take their life and are settled with their decision. If a person who really enjoys playing the piano suddenly doesn’t like it anymore and doesn’t get pleasure from it, this is also a warning sign.”

Direct threats of suicide are warning signs. Talking about death or talking about wanting to die—so are those. “People don’t just joke about that for no reason,” says Ms. Grunau.

MORE ON THE NEXT PAGE >>

#### LINKS

[Mysterious Barricades](#)

[Centre for Suicide Prevention](#)

[Harvard Medical School—Causes of Depression](#)

## An Inside Story

Joel—who doesn’t want his actual name used—says that when he attempted suicide, he felt like his life was a dead end.

“If someone says that life is boring, or not beautiful, or that they don’t know what to do with their future, that can be a sign,” he says. “A difficult event like a bankruptcy or a burnout can trigger a suicide attempt. Life can move from hard to unbearable quite quickly. It’s a question of resilience.”

Addressing issues early is critical. Joel continues: “The problem with someone who has become willing to die by suicide is that by then, they are beyond the control of anyone. It’s a decision you make alone, and it becomes, well, irresistible. The pain inside is so big that nobody else can impeach it. We know that we’ll destroy family and friends but we still do it, just to explain how big the despair is. In my case, it was a tsunami of despair, no control, craziness.”



# Put Together a Plan—Just Like You Would for Any Other Risk

APEGA professionals know all about health and safety plans on job sites. You know what dangers to anticipate, and you know where the emergency exits and escape routes are.

Experts say you should treat your mental health the same way. Know what to do to keep yourself safe when you unexpectedly sink too low to think clearly. Treat this as you would any other emergency.

## ESCAPE ROUTE AND RESOURCES

Don't play tough and imagine you can go it alone. Just like you can't escape from an H<sub>2</sub>S pit alone if you're overcome by gas, people often can't pull themselves out of a suicidal pit, either. Fall back on the plan, and that plan is to reach for help.

### By Phone

Calgary Distress Centre  
403-266-HELP (4357)

Edmonton Distress Line  
780-482-HELP (4357)

Alberta Rural Distress Line  
1-800-232-7288

Any Alberta Location  
211



### The Web

[Canadian Mental Health Association—Alberta](#)

[Alberta Crisis Centres](#)

[211 Alberta](#)

### THE RIGHT PERSONNEL

You wouldn't expect someone who's not trained in the emergency at hand to rescue you in the field. In the same way, family and friends who have never experienced depression may not be the best people to turn to for help.

They may tell you to "just cheer up" or "stop whining." Perhaps there's some other chestnut of folk wisdom they've picked up along the way. But guess what? Self-help aphorisms can be worse than no help at all, the experts say.

“I would be so proud of our professions, our members, and our permit holders, if we were to take a stand to say that mental health is important.”

**DR. IVAN FAIR, P.ENG.**

*Edmonton*

Also, remember that not all doctors are well trained to deal with depression. Seek the right doctor. Your family GP may well have a great recommendation for you.

Finding a knowledgeable psychologist or psychiatrist can be a huge relief, particularly for intelligent people who try to logic their way through a situation that requires something more.

### **DO NOT SELF-DIAGNOSE, DO NOT TREAT IT ALONE**

Depression is not your fault. It's the result of chemical changes in your body. Preventions are never foolproof, and once you've started down the slippery slope of sadness, it is ridiculous (though sometimes instinctive) to go it alone.

Men, it seems, are more prone than women are to hide in their caves when they're sad. That could be connected to this fact: three out of four suicides are at the hands of men.

### **SAFETY MAINTENANCE PLAN**

Act like a spider. Build yourself a safety net with many points of contact. Stay-safe procedures involve reaching out to those points of contact on

a regular basis, just as a spider repairs tears in the strands of its web.

Don't know what to do to reach out? Try these actions:

- In an email to a friend or a relative you like, provide an update about your kids or spouse, and ask for the same in return
- Offer to do small favours for people
- Invite people to share a meal, a walk, or a workout—on a regular basis

Put actions like these on repeat in your calendar. And remember that there are other benefits to web strengthening, too. Yes, it helps keep you healthy and exposes you to new ideas and hobbies. But you may also notice that it benefits your career.

### **DOES YOUR COMPANY HAVE A PLAN?**

Corporate and group training in suicide prevention is available. Courses and workshops available through the Centre for Suicide Prevention cover various topics, including applied suicide intervention skills training, suicide alertness for everyone (safeTALK), recovery and growth, and suicide prevention for children, youth, and Indigenous peoples.

# Recommended Orders

Date: January 15, 2018

Case No.: 17-019-RDO

## IN THE MATTER OF THE ENGINEERING AND GEOSCIENCE PROFESSIONS ACT, AND IN THE MATTER OF THE CONDUCT OF [PERMIT HOLDER A]

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has conducted an investigation into the conduct of [Permit Holder A] with respect to a complaint initiated by a former employee (the “Complainant”), dated August 8, 2017.

### A. THE COMPLAINT

The Complainant alleged that, as part of the settlement of a dispute between the Complainant and [Permit Holder A], regarding the cessation of his employment, [Permit Holder A] inappropriately required him to withdraw a complaint that he had submitted to APEGA in 2015, following the cessation of his employment.

### B. AGREED STATEMENT OF FACTS

#### (a) The First Complaint

1. The Complainant was employed by [Permit Holder A] from February 2012 through to January 2015.
2. Following the cessation of his employment, the Complainant submitted a letter of complaint to APEGA, dated January 28, 2015, in which he alleged that [Permit Holder A] and his former supervisor, who was a professional member of APEGA (the “Former Supervisor”), had engaged in unskilled practice and/or unprofessional conduct (the “First Complaint”).

#### (b) [Permit Holder A]’s Requirement for the Complainant to Withdraw the First Complaint

3. While the Investigative Committee was investigating the First Complaint, [Permit Holder A] and

the Complainant were engaged in settlement discussions regarding the cessation of the Complainant’s employment.

4. In or about July of 2015, [Permit Holder A] (through its legal counsel) proposed a settlement which included (among other things) a term requiring the Complainant to notify APEGA that he wished to withdraw the First Complaint to APEGA and to advise APEGA that he was satisfied that [Permit Holder A] and the Former Supervisor had acted in good faith and with due regard for the environment at all times during the period prescribed in the First Complaint, and that to the best of his knowledge, neither [Permit Holder A] nor the Former Supervisor had contravened the *Engineering and Geoscience Professions Act* (the “Act”), its regulations, *Code of Ethics*, or any other applicable guideline.
5. Subsequently, on July 31, 2015, the Complainant notified APEGA in writing that he wished to withdraw the First Complaint in order to receive the settlement payment from [Permit Holder A]. In addition, he provided a letter to APEGA indicating that: “I am satisfied that both [my supervisor] and [Permit Holder A] have acted in the public interest, with integrity, good faith and due regard for the environment, public safety and other persons at all times during the period described in my Complaint.”
6. On August 11, 2015, APEGA received a further email from the Complainant, in which he stated that his letter dated July 31, 2015, did not reflect his opinion and that he felt that APEGA should expand its investigation rather than contracting or pausing it.



*Case No. 17-019-RDO continued***(c) Investigation of the First Complaint**

7. Despite the communications from the Complainant indicating that he wished to withdraw the First Complaint and that he no longer had concerns about the conduct of [Permit Holder A] and his Former Supervisor, the Investigative Committee determined that it would proceed with its investigation.
8. The Investigative Committee continued to investigate the concerns raised by the Complainant in regard to the conduct of [Permit Holder A] and the Former Supervisor. On September 1, 2016, the Investigation Panel issued its report, in which it recommended that the investigation be terminated in accordance with section 51 of the *Act*.
9. The Investigative Committee accepted the Panel's recommendations and terminated the investigation on the basis that there was insufficient evidence of unskilled practice or unprofessional conduct on the part of [Permit Holder A] or the Former Supervisor.

**(d) Letter to [Permit Holder A] Regarding Requirement for Complainant to Withdraw Complaint**

10. Although the Investigative Committee decided to terminate the investigation, the Investigative Committee was concerned that [Permit Holder A] had purportedly required the Complainant to seek a withdrawal of the First Complaint as part of the employment settlement between [Permit Holder A] and the Complainant. As a result, on or about November 30, 2016, the Investigative Committee's legal counsel forwarded a letter to [Permit Holder A's] legal counsel notifying [Permit Holder A] that the Investigative Committee was concerned about this conduct, since it appeared to be an attempt to interfere with APEGA's duty to protect the public, and the discipline process set out in the *Act*.
11. On December 9, 2016, [Permit Holder A's] legal counsel responded that the gravity of the issue was understood, that it had not been [Permit Holder A's] intent to interfere with the discharge of APEGA's legislative mandate or public interest obligation, apologized, and confirmed that the information provided by APEGA's legal counsel would guide [Permit Holder A's] future actions.

**(e) Appeal to Appeal Board**

12. The Complainant subsequently appealed, to the Appeal Board, the Investigative Committee's decision to terminate its investigation with respect to the First Complaint.
13. The appeal was heard by the Appeal Board on June 16, 2017. During the course of the appeal, the Complainant raised concerns regarding [Permit Holder A]'s conduct in requiring him to withdraw the First Complaint as part of the employment settlement.
14. On August 2, 2017, the Appeal Board issued a written decision dismissing the Complainant's appeal of the First Complaint and upholding the Investigative Committee's decision to terminate the investigation. The Appeal Board indicated that it did not consider whether [Permit Holder A] inappropriately required the Complainant to withdraw his complaint as part of the employment settlement, since that issue was outside the scope of the Investigative Committee's investigation into the First Complaint.

**(f) The Second Complaint**

15. On August 8, 2017, the Complainant submitted a further complaint to APEGA, in which he alleged that [Permit Holder A] inappropriately required him to sign a letter withdrawing his First Complaint while under duress (the "Current Complaint").
16. APEGA notified [Permit Holder A] of the Current Complaint on August 9, 2017.
17. [Permit Holder A] responded, and stated that [Permit Holder A] and the Complainant are currently involved in litigation which will determine (among other things) whether he was actually under duress when he signed and submitted to APEGA the letter stating that he wished to withdraw the First Complaint.
18. [Permit Holder A] explained that it had requested that the Complainant withdraw the First Complaint as part of the settlement based on its experience negotiating resolutions of complaints to other bodies, such as the Human Rights Commission and the Privacy Commissioner. [Permit Holder A] explained that it was unaware that it was inappropriate to make a similar request with

**Case No. 17-019-RDO** continued

respect to an outstanding complaint to APEGA.

[Permit Holder A] indicated that it did not intend to interfere with APEGA's discharge of its statutory duties and that it understood that APEGA would make its own determination of the matters raised in the First Complaint.

19. [Permit Holder A] also acknowledged that it is now aware that requiring an individual to withdraw a complaint to APEGA as part of the settlement of a dispute could potentially interfere with APEGA's ability to fulfill its statutory mandate to investigate complaints in furtherance of the public interest, and that similar requests would not be made in the future.
20. Accordingly, [Permit Holder A] confirmed that it was willing to resolve the Current Complaint without the need for further extensive investigation.

**C. CONDUCT**

21. [Permit Holder A] freely and voluntarily admits that:
  - a) [Permit Holder A] required the Complainant to submit a request to withdraw the First Complaint and to advise APEGA that he no longer had concerns about the conduct of [Permit Holder A] and his Former Supervisor as part of the settlement of an employment dispute.
  - b) [Permit Holder A's] actions in doing so were inappropriate.
  - c) Although the Investigative Committee proceeded to investigate the First Complaint with full compliance by [Permit Holder A] and participation by the Complainant, notwithstanding the Complainant's purported withdrawal request, such a requirement could have potentially interfered with the Investigative Committee's ability to fulfill its statutory mandate.
  - d) [Permit Holder A] acknowledges that the conduct described above constitutes unprofessional conduct as defined in the *Act*:
 

**44(1)** *Any conduct of a professional member, licensee, permit holder, certificate holder or member-in-training that in the opinion of the Discipline Committee or the Appeal Board:*

a) *is detrimental to the best interests of the public;*  
 b) *contravenes a code of ethics of the profession as established under the regulations; . . .*

*. . . whether or not that conduct is disgraceful or dishonourable, constitutes either unskilled practice of the profession or unprofessional conduct, whichever the Discipline Committee or the Appeal Board finds.*

- e) [Permit Holder A] also acknowledges that the conduct described above breaches Rules of Conduct #3 and #5 of the *Code of Ethics*:
 

**3** *Professional engineers and geoscientists shall comply with applicable statutes, regulations and bylaws in their professional practices.*

**5** *Professional engineers and geoscientists shall uphold and enhance the honour, dignity and reputation of their professions and thus the ability of the professions to serve the public interest.*

**D. RECOMMENDED ORDERS**

22. On the recommendation of the Investigative Committee, and by agreement of [Permit Holder A] with that recommendation, following a discussion and review with the Discipline Committee's Case Manager, the Discipline Committee hereby orders that:
  1. [Permit Holder A] is hereby directed to cease requiring employees, contractors, or others to withdraw a complaint that has been submitted to APEGA, as part of a settlement of a dispute between [Permit Holder A] and its employees, contractors, or others.
  2. [Permit Holder A] shall receive a Letter of Reprimand, a copy of which will be maintained permanently in its registration file and may be considered at any future date by APEGA.
  3. The details of this matter will be published on APEGA's website and/or in *The PEG* magazine, but will be published in a manner that does not identify the names of the parties.
23. The parties submit that the Orders referred to above are appropriate, having regard to the following factors:
  - a. [Permit Holder A] was unaware that requiring a requested withdrawal of a complaint

*Case No. 17-019-RDO continued*

to APEGA as part of a settlement was inappropriate and did not consider that it could potentially impair APEGA’s ability to fulfill its statutory mandate;

- b. [Permit Holder A]’s actions were not intentional;
- c. [Permit Holder A] accepted responsibility for its actions at the earliest opportunity, thereby avoiding the need for a lengthy and protracted investigation or hearing;
- d. There is no evidence that [Permit Holder A] has engaged in a pattern of conduct, and this is therefore an isolated incident;
- e. [Permit Holder A’s] actions did not impact the Investigative Committee’s investigation of the First Complaint, and the investigation proceeded despite the Complainant’s attempt to withdraw the First Complaint;
- f. Publication of the Recommended Discipline Order will serve to educate APEGA’s members with respect to this issue and will also serve as a deterrent; and

g. The parties are unaware of any precedents that would assist in determining the appropriate Orders in this case.

24. Although there is a presumption that RDOs are normally published in a manner that identifies the name of the permit holder or member who is the subject of the RDO, publication without the name is being recommended in this case, given the concern that publishing the RDO with [Permit Holder A’s] name will indirectly identify the name of the Complainant. This is a consideration in this case, given that the RDO refers to the Complainant’s employment circumstances.

Signed,

**[PERMIT HOLDER A REPRESENTATIVE]**, *P.ENG.*

**KEVIN WILLIS**, *P.ENG.*

Panel Chair, APEGA Investigative Committee

**CHRIS GOULARD**, *P.ENG.*

Panel Chair, APEGA Discipline Committee

*Date: January 15, 2018*

Date: December 19, 2017

Case No.: 17-020-RDO

**IN THE MATTER OF THE ENGINEERING AND GEOSCIENCE PROFESSIONS ACT,  
AND  
IN THE MATTER OF THE CONDUCT OF MR. HARPREET S. DINSA, P.ENG.**

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has investigated the conduct of Mr. Harpreet S. Dinsa, P.Eng., with respect to allegations of unprofessional conduct pursuant to section 44(1) of the *Engineering and Geoscience Professions Act* (the *Act*).

The investigation related to allegations that Mr. Harpreet S. Dinsa, P.Eng., (the “Member”) engaged in unprofessional conduct with respect to online commentary on the social networking website LinkedIn.

On February 9, 2017, APEGA received a complaint from [Complainant A], P.Eng., concerning his public,

online conversation with the Member. It was noted by the complainant that the Member posted unprofessional comments by referring to the complainant in derogatory terms. As a result of the complaint, APEGA began monitoring the Member’s public postings. The Panel noted that these postings also contained derogatory comments towards APEGA and its staff.

**A. COMPLAINT**

1. The Member has engaged in conduct that contravenes Section 44(1)(b) of the *Act* and the *Code of Ethics* #5



*Case No. 17-020-RDO continued*

## B. AGREED STATEMENT OF FACTS

As a result of the investigation, it is agreed by and between the Investigative Committee and the Member that:

1. At all relevant times, the Member was a Professional Member of APEGA, and was thus bound by the *Act* and the *APEGA Code of Ethics*.
2. The Member graduated from University of Alberta (B.Sc. in Petroleum Engineering) in 1997.
3. The Member posted the comments on LinkedIn as referenced in the initial complaint and also posted comments with respect to APEGA.
4. The Member admits that these comments were inappropriate and that his conduct amounted to unprofessional conduct.
5. Considering the Member's foregoing admissions respecting his conduct and the cooperation of the Member in this investigation, it is the Panel's recommendation that the matter be resolved through a Recommended Discipline Order.

## C. CONDUCT

The Member freely and voluntarily admits that his conduct, described above, constitutes unprofessional conduct.

Section 44(1) of the *Act* states:

**44(1)** Any conduct of a professional member, licensee, permit holder, certificate holder or member-in-training that in the opinion of the Discipline Committee or the Appeal Board

- a) is detrimental to the best interests of the public,
- b) contravenes a code of ethics of the profession as established under the regulations,
- c) harms or tends to harm the standing of the profession generally,
- d) displays a lack of knowledge of or lack of skill or judgment in the practice of the profession, or
- e) displays a lack of knowledge of or lack of skill or judgment in the carrying out of any duty or obligation undertaken in the practice of the profession,

*whether or not that conduct is disgraceful or dishonourable, constitutes either unskilled practice of the profession or unprofessional conduct, whichever the Discipline Committee or the Appeal Board finds.*

The Rules of Conduct of the *APEGA Code of Ethics* state:

- 1 *Professional engineers and geoscientists shall, in their areas of practice, hold paramount the health, safety and welfare of the public and have regard for the environment.*
- 2 *Professional engineers and geoscientists shall undertake only work that they are competent to perform by virtue of their training and experience.*
- 3 *Professional engineers and geoscientists shall conduct themselves with integrity, honesty, fairness and objectivity in their professional activities.*
- 4 *Professional engineers and geoscientists shall comply with applicable statutes, regulations and bylaws in their professional practices.*
- 5 *Professional engineers and geoscientists shall uphold and enhance the honour, dignity and reputation of their professions and thus the ability of the professions to serve the public interest.*

## D. RECOMMENDED ORDERS

On the recommendation of the Investigative Committee, and by agreement of the Member with that recommendation, and following a discussion and review with the Discipline Committee Case Manager, the Discipline Committee hereby orders, pursuant to Section 63 of the *Act*, that:

1. The Member will be assessed, and will pay, a fine of \$500, pursuant to Section 64(1)(b) of the *Act*, within 90 days from the date this Order is approved by the Discipline Committee Case Manager. If the fine is not paid within 90 days from the date this Order is approved, the Member shall be suspended from the practice of engineering.
2. The Member will receive a Letter of Reprimand, a copy of which will be maintained permanently in the Member's registration file and be considered at any future date by APEGA.
3. This matter and its outcome will be published by APEGA as deemed appropriate and such publication will name the Member.

I, Mr. Harpreet S. Dinsa, P.Eng., acknowledge that before signing this Recommended Discipline Order, I consulted with legal counsel regarding my rights or that I am aware of my right to consult legal counsel and that

*Case No. 17-020-RDO continued*

I hereby expressly waive my right to do so. I confirm that I agree to the facts and admissions as set out above in this Recommended Discipline Order, and that I agree with the Orders that are jointly proposed.

IN WITNESS WHEREOF the undersigned agrees with the Agreed Statement of Facts and Acknowledgment of Unprofessional Conduct in its entirety.

Signed,

**MR. HARPREET S. DINSA, P.ENG.**

**GEORGE ANDERSON, P.ENG.**

Panel Chair, APEGA Investigative Committee

**WANDA GOULDEN, P.ENG., P.GEO.**

Panel Chair, APEGA Discipline Committee

*Date: December 19, 2017*

Date: December 14, 2017

Case No.: 17-021-RDO

**IN THE MATTER OF THE ENGINEERING AND GEOSCIENCE PROFESSIONS ACT,  
AND  
IN THE MATTER OF THE CONDUCT OF [PROFESSIONAL MEMBER A], P.ENG.**

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has conducted an investigation into the conduct of [Professional Member A], P.Eng., (the “Member”). The investigation has been conducted with respect to a complaint initiated by [Complainants B] (the “Complainants”) who submitted a letter of complaint dated May 30, 2016.

**A. BACKGROUND**

The Complainants purchased a home in September/October 2014 located on an acreage in [Alberta County C]. The house, built in 1990, contained a preserved wood foundation (PWF) basement consisting of only a 4-foot crawlspace. As part of the purchase process, the previous owners (the “Client”) retained the Member to inspect the PWF basement of the home. This was initiated by the Complainant’s Realtor to ensure the foundation was structurally intact without major issues.

The Member completed an onsite inspection and produced a report that did not identify any concerns. In his report, the Member stated, “...no long-term problems and suggests this foundation is quite adequate in all relevant ways for the foreseeable future.” Furthermore, the Member recommended that a follow-up engineering inspection of the crawlspace be completed again in 12–15 years.

The Complainants were also required to have a home inspector inspect the home as a condition of the purchase of the home. This inspection was completed after the Member’s inspection. The home inspector identified wood rot within the built-up platform associated with the construction of the jet tub located in the master ensuite, which included floor joists and plywood decking, and these defects were noted while the home inspector was inside the crawlspace.

The Member was contacted by the Client regarding the home inspector’s findings. The Member returned to the site to re-inspect the identified area of concern, and supplied a second report that outlined repair requirements for the specific damages referenced in that report.

The Member believes his Client did not share the second report with the Complainants as the sale price was renegotiated, and the difference settled on was less than the repair cost estimate the Member provided.

In June 2015, the house was hit by a hail storm, requiring repairs to the siding and roof. During the repair of the property, further rotting of the PWF basement was discovered on the southwest side of the house. Again, the damage could be seen from the PWF crawl space. The Complainants allege the Member, when contacted, also offered to come back to look at the property; however, the Member did not re-visit the site and did not contact the Complainant again.

**Case No. 17-021-RDO** *continued*

The Complainants have corrected the concerns at their cost; however, the damage was clearly caused over an extended period of time. The Complainants trusted the Member as a professional and expected him to be competent in his field of work. Instead they have found issue after issue with the structure of their home that they now own.

The Complainants feel the Member failed to identify and inform them of the major concerns regarding the foundation of the house they purchased. They feel the Member's actions reflect a major oversight that either highlights his incompetence as a professional engineer or his possible affiliation with the previous owners. They feel the Member's assessment and recommendations were inappropriate and did not in any way protect the Complainants as the buyer.

The Member has indicated his scope was to review and comment on the PWF elements only and not to conduct a full structural evaluation of the house. Although rot was found inside the crawlspace, he believes it was associated with the floor and rim joist framing which formed the main floor and contained a raised platform built to house the ensuite hot tub.

**B. THE COMPLAINT**

The Investigative Committee appointed an Investigative Panel to conduct an investigation into whether the Member engaged in unprofessional conduct and/or unskilled practice arising from the field inspection conducted by the Member with respect to the PWF components of the home. A Notice of Investigation was sent to the Member on January 10, 2016, requesting the Member to respond to the Complainant's allegations.

**C. AGREED STATEMENT OF FACTS**

1. The Member attained his degree in civil engineering from [a Canadian university] in May 1985.
2. The Member has been practising as an engineer in Canada for approximately 32 years and has been a member, in good standing, of APEGA since August 26, 1998, with no prior findings of unprofessional conduct or unskilled practice since he has been a member.

3. His background and experience have been primarily in the consulting engineering fields, generally related to structural and architectural work in the building construction field, taking on a variety of different projects through his company, [Company D].
4. The Member made a verbal contract with his client with specific instructions to complete a review and engineering assessment on the conditions of the preserved wood foundation (the bearing components of the floor structure sitting on the footings) of the home. He was not asked to complete a structural analysis of the floor or the walls.
5. The Member did not have a formal, written contract to confirm his scope of work with his client.
6. The Member did access the home's unique crawlspace; however, he did not inspect every area of the crawlspace and did not utilize a checklist to assist with his inspection.
7. The Member did verify the PWF studs (vertical supports) and baseplates (resting on a concrete footing) of the foundation wall were intact and performing as intended.
8. The Member admitted he did not identify some wood rot located in the top plates of the PWF wall framing.
9. The Member also identified some of the interior bearing components of the house (supporting posts and beams) were suspect in nature; however, he did not include any comment regarding this in his report, indicating they did not relate to the PWF system.
10. The Member's report erroneously indicated the primary structural components of the PWF system appeared to be fine and that it should be rechecked in 12 to 15 years.
11. After being contacted by the Complainants with additional concerns, the Member indicated he had intentions of revisiting the house; however, he got very busy and never made it back out to the house.
12. The Member fully cooperated with the investigation.

**D. CONDUCT**

13. The Member freely and voluntarily admits that:



*Case No. 17-021-RDO continued*

- a. During his field inspection he did not identify the items set out in paragraphs 8, 9, and 10 of the Agreed Statement of Facts and thereby demonstrated a lack of judgment in carrying out a duty or obligation undertaken in the practice of engineering.
14. The Member acknowledges that the conduct is a breach of Section 44(1)(e) of the *Act* and therefore constitutes unprofessional conduct as defined in the *Act*.

**E. RECOMMENDED ORDERS**

15. On the recommendation of the Investigative Committee, and by agreement of [Professional Member A] and following a discussion and review with the Discipline Committee’s Case Manager, the Discipline Committee hereby orders that:
- 1. The Member shall receive a letter of reprimand and a copy to be retained on his APEGA file.
  - 2. The Member shall pay a fine in the amount of \$2,000 to APEGA, the amount to be paid within 60 days after the Discipline Committee’s Case Manager approves the Recommended Order.
  - 3. Should the Member fail to submit the above-mentioned requirements within the designated timelines, his registration will be suspended until such time as he does.
  - 4. The matter to be published without names.
    - a. Although the Investigative Committee and the Member understand and acknowledge

that APEGA’s usual policy is to publish Recommended Discipline Orders in a manner that identifies the Member by name, the parties understand that the decision to publish with or without name is discretionary. The parties submit that publication without name is appropriate, given the specific facts in this case, including the following:

- i. The Member has been in good standing as an engineer with APEGA and has had no prior findings of unprofessional conduct or unskilled practice since he has been a member.
- ii. This matter contained unique circumstances that the Panel felt would not have been duplicated with any other previous inspection conducted by the Member.
- iii. The Member willingly admitted fault.
- iv. The Member fully cooperated with the investigation and it was determined there was no further risk to the public.

Signed,

**[PROFESSIONAL MEMBER A], P.ENG.**

**SIDDHARTA DASGUPTA, P.ENG.**

Panel Chair, APEGA Investigative Committee

**RALPH HILDENBRANDT, P.ENG.**

Panel Chair, APEGA Discipline Committee

*Date: : December 14, 2017*

Date: December 6, 2017

Case No.: 17-017-RDO

**IN THE MATTER OF THE ENGINEERING AND GEOSCIENCE PROFESSIONS ACT,  
AND  
IN THE MATTER OF THE CONDUCT OF MR. OLUTOYIN OKELANA, P.ENG.**

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has conducted an investigation into the conduct of Mr. Olutoyin Okelana, P.Eng.

The investigation has been conducted with respect to a complaint initiated by [Complainant A] (the “Complainant”), who submitted a letter of complaint dated March 3, 2017.

*Case No. 17-017-RDO continued***A. BACKGROUND**

The Complainant filed a complaint against Mr. Olutoyin Okelana (herein referred to as “the Member”), alleging the Member provided a false reference to an applicant applying for his professional member designation with APEGA.

The Complainant had historical familiarity with the Member and the applicant in this case but declined all attempts for either a face-to-face interview or a telephone interview. Initial research into the statements made by the Complainant revealed sufficient evidence for the panel to proceed with the investigation.

The final condition that led to the Board of Examiners (BOE) approving the applicant’s application was the required one year of Canadian work experience record, on which the applicant listed the Member as his supervisor. The Member completed and submitted the APEGA Reference Questionnaire, for this Canadian work experience, with his name as the applicant’s supervisor even though he wasn’t. The Member also confirmed, while providing the reference, that the applicant’s work experience record was accurate when it was not.

The applicant is the subject of a separate investigation.

**B. THE COMPLAINT**

The Investigative Committee conducted an investigation with respect to the following allegation to determine if the actions of Mr. Olutoyin Okelana, P.Eng., contravened Section 44(1) of the *Engineering and Geoscience Professions Act*:

Specifically, the Investigation Panel considered whether Mr. Olutoyin Okelana, P.Eng., colluded with the applicant on his APEGA application to provide a false/fraudulent supervisor reference for the applicant’s claimed Canadian work experience with [Company B] from May 2015 to October 2016.

**C. AGREED STATEMENT OF FACTS**

1. The Member was a professional member of APEGA and was thus bound by the APEGA *Code of Ethics* at all relevant times.

2. The Member was asked by the applicant to provide a co-reference for his May 2015-to-October 2016 work experience reference with [Company B].
3. The Member agreed to provide a co-reference in his capacity of professional engineer licensed with APEGA.
4. The applicant sent the Member his May 2015-to-October 2016 work experience record with [Company B]. When the Member received this work experience record it already had his name typed into the “supervisor” fields and the “reference” fields.
5. The Member accessed, filled out, and submitted the APEGA Reference Questionnaire. In the questionnaire, the Member intentionally selected “supervisor” in the field that asked for his relationship to the applicant during his May 2015-to-October 2016 work term with [Company B].
6. The Member was not the applicant’s supervisor during this work term. The Member did not supervise the applicant during this work term.
7. The Member chose “supervisor” because he judged “supervisor” to be the type of reference that best represented a “co-reference”. The Member understood that the applicant had a supervisor that resided outside of Canada, and that the Member was co-referring the applicant’s supervisor’s reference.
8. In the reference questionnaire, the Member wrote “yes” in the field that asked if he verifies that the work experience record he received from the applicant was accurate and valid for the time period. That work experience record claimed the work was conducted in Alberta when it consisted solely of outsourced projects in Nigeria and Chad. That work experience record claimed work with a Canadian company called [Company C], when the applicant had never worked for, nor with, [Company C].
9. The Member admitted to verifying the applicant’s work experience record based on the trust he had in the applicant, who he had known for 19 years. The Member has learned from this experience to double check and read between the lines when he becomes a reference of future applicants.

**Case No. 17-017-RDO** *continued*

10. The Member was acting with the intent to support who he thought was a reputable person who needed his support to obtain his professional membership. The Member had no ulterior motive and no financial gain through this act.
11. This experience was the only time the Member provided a reference of any kind to an applicant applying for their APEGA professional membership.
12. The Member has cooperated with the APEGA investigation and admitted that he provided a false reference for the applicant's May 2015-to-October 2016 work term with [Company B].

**D. PANEL FINDINGS**

1. The Panel determined there was sufficient evidence to suggest that Mr. Olutoyin Okelana, P.Eng., provided a false/fraudulent supervisor reference for the applicant's claimed Canadian work experience with [Company B] from May 2015–October 2016.
2. By stating he was the applicant's supervisor for this essential, and only, one-year workterm of Canadian experience, Mr. Olutoyin Okelana, the Panel finds, significantly misled the BOE in the final vital element they required to grant the applicant his professional designation.
3. By affirmatively stating that the applicant's work experience record was accurate and valid, as a trusted APEGA member, Mr. Olutoyin Okelana, the Panel finds, significantly misled the BOE in the final vital element they required to grant the applicant his professional designation.

**E. CONDUCT**

Mr. Olutoyin Okelana, P.Eng., freely and voluntarily admits that he provided a false reference for the applicant's May 2015-to-October 2016 work term with [Company B], on the applicant's APEGA application.

Mr. Olutoyin Okelana acknowledges that the conduct described above constitutes unprofessional conduct as defined in the *Act*.

Mr. Olutoyin Okelana also acknowledges that the conduct described above contravenes section 44(1)(b) and Rule of Conduct #3 of the *Code of Ethics*:

**3** *Professional engineers and geoscientists shall conduct themselves with integrity, honesty, fairness and objectivity in their professional activities.*

**F. RECOMMENDED ORDERS**

On the recommendation of the Investigative Committee, and by agreement of Mr. Olutoyin Okelana, and following a discussion and review with the Discipline Committee's Case Manager, the Discipline Committee hereby orders that:

1. Mr. Olutoyin Okelana write the National Professional Practice Exam within one calendar year of this Recommended Order being approved by the APEGA Discipline Committee Case Manager.
2. If Mr. Olutoyin Okelana does not successfully complete the National Professional Practice Exam, his professional membership with APEGA will be suspended until such successful completion is achieved.
3. If this order is not completed within the one-year timeline, Mr. Olutoyin Okelana's professional membership with APEGA will be suspended until he successfully completes the National Professional Practice Exam.
4. This matter and its outcome will be published by APEGA as deemed appropriate, and such publication will name Mr. Olutoyin Okelana.

Signed,

**OLUTOYIN OKELANA, P.ENG.**

**KAREN DEMONTARNAL, P.ENG.**

Panel Chair, APEGA Investigative Committee

**RALPH HILDENBRANDT, P.ENG.**

Panel Chair, APEGA Discipline Committee

*Date: December 6, 2017*



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# MEMBER BENEFITS

Eligible APEGA members can take advantage of the following discounts. Complete details of these group benefits can be found at [apega.ca](http://apega.ca) under [Member Benefits](#) and Member Insurance. Due to seasonal or other limited-time promotions, the member discount may not be the lowest price—you are advised to compare. APEGA does not hold any member insurance profile or policy information.

To inquire about these benefits, check your eligibility, or provide service feedback, please email [memberbenefits@apega.ca](mailto:memberbenefits@apega.ca).

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