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Association of Professional Engineers
& Geoscientists of Saskatchewan

THE PROFESSIONAL

EDGE

ISSUE 172

JANUARY / FEBRUARY 2018



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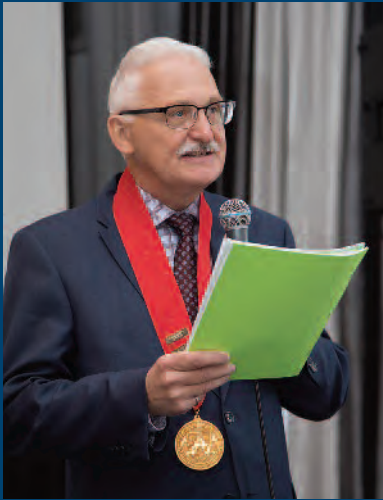


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BY JOHN THOMPSON, P.Geo., RFG2018 CONFERENCE CHAIR AND
OLIVER BONHAM, P.Geo., CEO, GEOSCIENTISTS CANADA

President's Message



Ernie Barber, P.Ag., P.Eng., APEGS President

As the articles in this edition of the *Edge* attest, the engineering and geoscience professions offer satisfying careers, a platform for meaningful work, a chance to make a difference. So much of our economy and of the things that contribute to a high standard of living would not exist without these professionals. Because of the privilege afforded those who become engineers and geoscientists and because of the importance of the work these professions do, it is imperative that there be no artificial barriers limiting the inclusion of any individuals who have the talent and who would aspire to be a professional engineer or geoscientist.

The membership of APEGS is not as diverse as one might expect based on demographics. Women and men participate nearly equally in many other STEM-related disciplines (e.g. medicine, pharmacy, agrology, biology), yet women account for fewer than 20 per cent of engineers and geoscientists in Saskatchewan and Canada. The number of Indigenous persons studying in Canadian universities across all disciplines is steadily increasing but participation in physical sciences and engineering is lagging. Apparently there are reasons not related to their individual abilities and potential that inhibit the full participation of some talented individuals.

Diversity refers to any characteristics that differentiate amongst individuals – the familiar ones like race, gender, age, sexual orientation and physical abilities, as well as a host of other characteristics such as ethnicity, socio-economic status, spirituality and family support. Inclusivity exists when diverse individuals feel respected, when there is a culture within organizations of explicit inclusion, when there is equitable access to jobs, to leadership positions and to professional development opportunities.

It will require collaborative, persistent and systematic attention by many (including families, communities, the K-12 education system, post-secondary institutions, business leaders, employers and individual engineers and geoscientists) to knock down the barriers to full inclusion of diverse individuals. For its part, APEGS can make sure that our regulatory processes are free of bias, that our processes for recruiting and electing volunteers are sensitive to diversity, that our staff office is itself an inclusive workplace.

Among the 94 calls to action articulated in the final report of the Truth and Reconciliation Commission are the calls for teachers, students and professionals to engage in “skills-based training in intercultural competency, conflict resolution, human rights and anti-racism.” We are called to an awareness of the inclusive history of the diverse Indigenous peoples of Canada, to the faithful observation of the treaties with Indigenous peoples and to the imperative for engaging respectfully with Indigenous communities in economic development projects. We are called to develop our personal and professional capacity for “intercultural understanding, empathy and mutual respect.”

Engineers Canada initiated the “30 by 30” program specifically to address the persistent under-representation of women in engineering. APEGS identified a “30 by 30” champion in the person of



Margaret Anne Hodges, P.Eng., FEC and created a “30 by 30” task group to give direction and focus to initiatives seeking to increase the proportion of women in APEGS to at least 30 per cent by 2030.

Among its many early accomplishments, this task group is responsible for a half-day program at the upcoming PD days in March, entitled “Watch out for unconscious biases: If I looked at the world in a different way . . .” which will be a terrific opportunity for our members to examine implicit bias and to understand privilege conferred upon those who are among the majority.

“Project RISE – Realizing Identity-Safe Environments” is a multi-year research initiative involving four Canadian universities. The initiative includes industry partners in STEM fields who voluntarily hold workshops and engage their employees in reflections on implicit bias, as well as personal responsibility to create inclusive workplaces. This program stands out for me because it demonstrates the opportunity and necessity for each of us and our

employers to be part of the crucial changes that will result in engineering and geoscience becoming more diverse and fully inclusive professions.



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2017 PROFILES IN ACHIEVEMENT



Usually our job at *The Professional Edge* is telling Saskatchewan engineering and geoscience stories to APEGS members. This month we're turning the tables. We invited APEGS members to send us pictures and descriptions of their proudest achievements from 2017.

We want to thank the contributors to this special feature. For those of you who didn't contribute this year, we will be doing it again next year, so keep your cameras handy to capture your 2018 engineering or geoscience success stories.

ENGINEERING AND GEOSCIENCE PROJECTS



INNOCORPS'S AWARD-WINNING STRATO Water Treatment Technology

The Company:

Innocorps provides clean water solutions for on-site water treatment in the harshest of environments. Their technology is built to reuse and recycle highly contaminated water, using cost-effective materials and less energy than conventional thermal methods, making clean water more affordable. The successful start-up is located in Innovation Place in Saskatoon.

The Achievement:

In 2009, Innocorps began working on prototype models to test ideas on how to desalinate water. The project, dubbed the STRATO Mobile Desalination Platform, has now developed into a commercial product. STRATO is an energy-efficient, modular, self-contained water purification platform that produces distilled water from any type of source water.

Treated water can be reused and recycled in applications

such as treating flowback from fracking operations, decentralized remote drinking water utilities and emergency water services in disaster relief applications. This technology is also mobile allowing it to address a wide range of markets including mobile drinking water, industrial waste recycling, environmental remediation and humanitarian aid.

In November 2017, STRATO received the Saskatoon Regional Economic Development Authority's Science, Technology, Innovation and Collaboration Project Award.

The Team:

In addition to Innocorps CEO Aarya Shahsavar, P.Eng., the company has four Professional Engineers on its advisory board and employs five Engineers-In-Training and one Geoscientist-In-Training. The Innocorps team also worked closely with Tyson Pederson, P.Eng. of Tyson Pederson Consulting Ltd.



WARMAN'S MUNICODE SERVICES LTD. NOW OFFERS Building and Fire Code Engineering Consulting



Building Officials (left to right) Clayton Meier, Travis Elkin, Shenah Cartier, Ryan Thiessen

The Company:

Based in Warman, MuniCode Services Ltd. has over 30 years of experience helping municipal and provincial governments and building owners and designers in the application and enforcement of building and fire code requirements by providing plan review and inspection services. MuniCode Services Ltd. has provided services for more than 26,000 projects in over 400 different municipalities. MuniCode Services Ltd. currently employs four building officials, including a building official manager, and three administrative staff, including an office manager.

The Achievement:

As of December 2017, MuniCode Services Ltd. Services qualified to offer consulting engineering services in the

fields of fire and building code engineering. These branches of engineering have typically only been offered primarily by architects in the past.

The focus is on reviewing new buildings being constructed and existing buildings being renovated to ensure designs meet or exceed the National Building Code of Canada and National Fire Code of Canada or to provide an alternative to those codes in cases where the codes cannot be met.

This past year, MuniCode Services Ltd. was nominated for the Warman and Martensville Chamber of Commerce Business and Customer Service Awards. MuniCode Services Ltd. was one of the top five finalists for the Business of the Year award. It was also nominated for the Saskatchewan Chamber of Commerce ABEX Awards, Customer Service of the Year.

The Team:

At the start of 2017, Shenah Cartier, P.Eng. joined MuniCode Services Ltd.'s team of building officials, allowing the firm for the first time to qualify as a consulting engineering firm. She has since completed two of the three exams required to be licensed through the government of Saskatchewan as a building official and is a Restricted Class 3 Building Official. Before joining the team in 2017, Shenah worked for over four years at a structural consulting engineering firm in Saskatoon and gained extensive experience in residential and commercial construction.

Shenah received her degree in Civil Engineering from the University of Saskatchewan in 2012 and her professional engineering designation in 2016. During her schooling, she was awarded the SaskTel Métis Scholarship as well as the Wally and Mavis Pieczonka Bursary for Academic Achievement. Shenah is also a member of the Saskatoon Construction Association Young Executives Committee.



SAL ENGINEERING LTD.'S AWARD-WINNING

Pelican Narrows High School Addition and Renovation Project



The Company:

Saskatoon-based SAL Engineering Ltd. has been providing engineering and project management services to clients throughout Saskatchewan since 1980. In that time, SAL Engineering Ltd. has completed over \$400 million of municipal and transportation engineering projects for communities both large and small. SAL Engineering Ltd. has a proven record of working with federal, provincial and municipal governments as well as rural water utilities, First Nations and the private sector.

The Achievement:

SAL Engineering Ltd. provided project management services to the Peter Ballantyne Cree Nation for the Pelican Narrows high school Addition and Renovation Project. This was a capital project funded by Indigenous and Northern Affairs Canada (INAC) and it was completed under budget and ahead of schedule.

The project included the construction of a 756-square-metre addition to the existing Opawikosisikan School and an extensive renovation to the interior and exterior of the existing 5204-square-metre facility to meet current codes and standards. Twelve portable classrooms were constructed for use during construction.

The expanded and renovated facility will respond to the educational and cultural needs of the community. It also provides the only space for large community gatherings and functions as an emergency shelter in times of need. These functions are very important as Pelican Narrows is a remote northern community.

The project employed local workers for over 22,500 hours, providing the workers with training and work experience that can help them pursue job opportunities both on and off reserve.

SAL Engineering Ltd. received the 2017 ACEC-SK Brian Eckel Award of Excellence for the Pelican Narrows high school Addition and Renovation Project. They also received the first-ever ACEC-SK PINNACLE Award for the highest achieving project submission across all project categories.

The Team:

SAL's Don Poon, P.Eng. was the project manager with assistance from Doug Pope, P.Eng. and other staff at SAL Engineering Ltd. The prime consultant was Maurice Soulodre Architect Ltd. and subconsultants included Brownlee Beaton Kreke Ltd., Key West Engineering Ltd. and Hall Engineering Company Ltd.



SASKPOWER MAKES PROGRESS ON Renewable Energy Commitment



The Company:

SaskPower is the principal supplier of electricity in Saskatchewan, serving more than 528,000 customers and managing \$11 billion in assets. The company operates three coal-fired power stations, seven hydroelectric stations, six natural gas stations and two wind facilities, and manages purchase agreements with several private sector suppliers.

The Achievement:

Two years ago, SaskPower announced it would reduce emissions by 40 per cent below 2005 levels by 2030, which will involve doubling the percentage of renewable electricity from 25 per cent of overall capacity to as much as 50 per cent.

Since that time, SaskPower has passed numerous landmarks. In 2017 alone, the company:

- Launched the competitive process for Saskatchewan's first 10 megawatt (MW) utility-scale solar project.
- Launched the competitive process to buy up to 200 MW of wind generation, with the successful proponent expected to be named in fall 2018.

- Started construction on the Chinook Power Station in January 2017, to add 350 MW of natural gas generation, which will provide a lower emission power generation foundation to support future integration of intermittent renewable generation sources like wind and solar.
- Signed a power purchase agreement with DEEP Earth Energy Production Corp. in May 2017 that will allow further research into the potential for Saskatchewan's first geothermal power project.
- Added another flare gas power generation project bringing the total to two, which provide a combined 1.75 MW of electricity to Saskatchewan's power grid.
- Saw significant growth in its customer self-generation programs.

The Team:

SaskPower's renewable energy initiatives rely on the contributions of teams drawn from the over 400 Professional Engineers employed at the Crown corporation.



Sasktel Boosts Rural Internet



The Company:

Saskatchewan Telecommunications Holding Corporation (SaskTel) is the leading full service communications provider in Saskatchewan, with \$1.2 billion in annual revenue and over 1.4 million customer connections including over 609,000 wireless accesses, 361,000 wireline network accesses, 279,000 internet accesses and 112,000 maxTV subscribers. SaskTel offers a wide range of communications products and services including competitive voice, data, Internet, entertainment, security monitoring, messaging, cellular, wireless data and directory services. In addition, SaskTel International offers software solutions and project consulting in countries around the world. SaskTel and its wholly owned subsidiaries have a workforce of approximately 4,000 full-time equivalent employees.

The Achievement:

Most people take for granted being able to bank, stream movies and do research online, but for many people in rural Saskatchewan, that has been a luxury.

To address this shortfall, SaskTel has committed to investing over \$300 M in Saskatchewan in 2017/18 and \$1.4

B through 2016-2021. These investments include improvements to Internet services throughout rural parts of our province. These investments will ensure that all Saskatchewan residents will continue to receive some of the best communication and entertainment services in the world.

Over the past year, 17 communities received high speed internet services and 26 more had their high speed internet service upgraded. As well, 25 Indigenous and First Nations communities had their high-speed services enhanced with 22 more expected to have their internet services upgraded in 2018. SaskTel also continued construction of the ultra-high-speed infINET™ fibre optic network in the smaller urban centres of Yorkton, Rosthern, Estevan, Moose Jaw, Prince Albert, Swift Current and Weyburn.

The Team:

More than 20 SaskTel engineers, as well as their teams of Engineers-In-Training and engineering assistants, led the rural Internet initiative, which included contributions from numerous other APEGS members throughout the corporation.



SRC CELEBRATES 70 Years of Success and Innovation



The Institution:

The Saskatchewan Research Council (SRC) is one of Canada's leading providers of applied research, development and demonstration (RD&D) and technology commercialization. With more than 350 employees, over \$70 million in annual revenue and 70 years of RD&D experience, SRC provides products and services to its 1,500 clients in 20 countries around the world.

The Achievement:

In April 1947, the province established SRC with a mandate of undertaking projects that would help in the advancement of the province's industrial development. SRC began from humble beginnings as a granting agency with no permanent staff and a \$20,000 budget reviewed by a board. Since then, SRC has grown to become one of Canada's leading providers of applied research, development and demonstration and technology commercialization with over 350 employees, \$70 million in annual revenue and 1,500 clients in 20 countries around the world.

Throughout its history, SRC's goal has been to create positive value for the province. In the 1970s, SRC was a leader in energy-efficient housing research and its work formed the basis for developing the R-2000 standard for energy-efficient homes.

In the 1980s, SRC played a large role assisting the Saskatchewan energy industry by enabling the implementation of horizontal wells in, and the use of CO₂ for, enhanced oil recovery. Today SRC's Geoanalytical Laboratories operates the world's largest and best geoassay laboratories for uranium, potash and diamonds.

SRC's environmental remediation work in northern Saskatchewan also leads industry with its community engagement and environmental practices. These are just a few examples of how SRC has pioneered initiatives that benefit Saskatchewan.

The Team:

Over the course of 70 years, SRC has drawn on the talents of hundreds of highly skilled engineers and geoscientists. It currently employs about 50 engineers and geoscientists.





LORADO REMEDIATION PROJECT RECEIVES Project of the Year Award



The Institution:

The Saskatchewan Research Council (SRC) is one of Canada's leading providers of applied research, development and demonstration (RD&D) and technology commercialization. With more than 350 employees, over \$70 million in annual revenue and 70 years of RD&D experience, SRC provides products and services to its 1,500 clients in 20 countries around the world.

The Achievement:

The Lorado Remediation Project has been selected as the Project of the Year by the North Saskatchewan Chapter of the Project Management Institute (PMI).

The award recognizes a project that demonstrated leadership, delivered significant value and return on investment for the client and provided organizational and societal benefits beyond the stated scope of the project.

The Lorado Mill Site is one of 37 abandoned uranium mine and mill sites in northern Saskatchewan that are being remediated as part of Project CLEANS, a multi-year project managed by SRC. The overall objective of Project CLEANS is to use sustainable remediation to reduce the risks these sites pose to people, wildlife and aquatic life. The Lorado Remediation Project involved burying infrastructure and debris at the site, treating Nero Lake to reduce downstream impacts, and revegetation of the land as well as maximizing local sustainable development opportunities.

The Team:

Approximately eight engineers and geoscientists work with SRC's Environmental Remediation Group. Other professional employees from across SRC contribute to the project regularly.

Member Profile



This month *The Professional Edge* chats with **Allison Larsen, P.Eng.**, an environmental engineer with AMEC Foster Wheeler Environment and Infrastructure in Saskatoon.

Tell us about your personal background. Where were you born? Where did you go to school?

I'm from Saskatoon, born and raised

Why did you choose to go into engineering?

Like most engineers, I was good at math and science in high school so I was interested in something in the sciences but had no idea what. My grandpa, Brock Burwell, was an engineer and a professor at the College of Engineering. I had a talk with him and he arranged for a tour of the campus. He introduced me to some of the professors and students. They made it all seem very exciting.

Did it turn out to be exciting?

(Ha,ha). Not exactly, not always. But it's a good job. But it's a good job and I enjoy it.

What was your first job after college?

I moved to Kamloops and worked for EBA Engineering doing a similar job to what I do now. I liked working out there a lot. The job took me all over the province. I particularly liked Nelson, BC. It's in a beautiful natural setting but also a tourist area so it attracts a unique mix of people – artists, chefs, nature lovers and so forth – and, because of that diversity, it also has good restaurants and interesting shops. It's a good blend of city with nature.

What are your interests outside of work?

Outdoor activities mostly. My husband and I are both big into cross-country skiing. Our six-year-old just learned to ski so that's becoming more and more of a family activity. I also enjoy hiking, yoga, biking – anything active.

What is your favourite vacation spot?

Any place with mountains. Last place we visited was Canmore.

Who has had the greatest influence on your life and career?

In Kamloops, a colleague of mine who worked in a different field took me under his wing and taught me the importance of work-life balance. As a young professional, you always want to be ambitious and do whatever is necessary to please your employers, but my colleague taught me that engineering doesn't have to control every part of your life. It's okay to look outside for support or interests. He taught me that work-life balance is not only very important, it's also possible. I think that was a very valuable lesson for me to learn early on.

I also had a professor to whom I often went for advice. He saw potential in me and encouraged me to go to grad school.

Of course, for my life in general, my family and my kids are important in helping me keep perspective and maintain that work-life balance that's so important.

But I would be remiss if I didn't mention my grandpa. I was the first grandchild to become an engineer so, for a long time, that was a special bond between the two of us. When I was in school, he used to pass on his copies of *The Professional Edge* to me. After I graduated, I got my iron ring from him. I think, because I was a girl, it was a surprise to him – a good surprise – when I became the first grandchild to go into engineering. It's a special memory for me that I was able to make him proud of me in that way.



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Hugo Julien, P. Eng., graduated from l'Ecole Polytechnique de Montréal (1997) in Mechanical Engineering, specializing in Manufacturing. An active ASME member, he is also a certified API 510, API 570, API 571, and CSA W178.2 Level II (CSA B31.3, ASME W47.1/W59, CSA Z662 and API 650) inspector. He has been training technical personnel all over the world for several years.

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Notes from APEGS Council

The APEGS Council met November 30 and December 1, 2017 in Regina. 17 of 19 Councillors were present. Council will meet next on February 1 and 2, 2018 in Saskatoon.

Council received the following presentations and information items:

- Activity updates were provided from the constituent society liaisons, the ACEC-SK liaison, the Sponsorship Task Group liaison, the 30 by 30 Task Group liaison.
- The APEGS Directors to Engineers Canada and Geoscientists Canada reported on activities at the national organizations.
- The Executive Director and Registrar led Council through a presentation on the APEGS registration process, requirements and historical application statistics. The presentation provided a backdrop for the significant registration related policy changes that Council will need to consider.
- The APEGS Director of Registration reported on the Continuing Professional Development Implementation Plan Progress Report and the “conceptual” bylaw changes that have been forwarded to a legislative drafter for review and finalization. The official bylaw revisions will be coming to Council for approval at the February 2018 meeting.
- The APEGS Communications Manager reported on the development of a strategic communications plan. The plan is currently still in the discovery stage and staff are reviewing the alignment of external vs internal communications. A working group of staff are discussing potential needs/uses for social media. APEGS has registered on a variety of social media platforms to reserve names.
- The Executive Director and Registrar reported that three new administrative assistants have been added to staff to backfill for resignations/promotions and to assist with current workloads related to international applicant volumes. Council was informed of some realignment of staff responsibilities.
- Approving a move to the proposed competency based assessment system and that APEGS adopt the Engineers & Geoscientists BC online competency-based assessment system.
- Endorsing the conceptual changes to Regulatory Bylaw Appendix 3 (Components of Acceptable Engineering Work Experience).
- Adopting the Competency Assessment Guide for Applicants, Validators and Assessors and the Competency-Based Assessment Value Analysis for APEGS.
- Requiring at least one regulatory agency be named in the Significance of Regulatory Agencies section in any one of the engineering or geoscience experience reports, and that it is acceptable for APEGS to be the one named.
- That Ggeoscientists-In-Training may submit an NCEES Record in order to assess geoscience work experience.
- Approving changes to the Academic Review policy documents AR1.0 General, AR3.0 Engineering, and AR4.0 Geoscientists.
- Life Membership for the following members:
Gill, Gurdev (Dave), P.Eng.
Ketchen, Klinton D., P.Eng.
- Providing sponsorship in the amount of \$10,000 for the Geoscience for Society project.
- Appointing Stormy Holmes, P.Eng., FEC as Chair and Andrew Lockwood, P.Eng., FEC, Tara Zrymiak, P.Eng., FEC, Tami Wall, P.Eng. and Anastassia Manuilova, P.Eng. as members of the Audit Committee.
- Approving changes to the Nominating Committee terms of reference.

Council noted and received the following reports:

- Registrar’s reports for September and October 2017.
- The report on compliance activities for September to November 2017 and the 2016 Continuing Professional Development reporting statistics.
- The unaudited financial statements for October 2017.
- Executive Committee minutes, 30 by 30 Task Group minutes, Sponsorship Task Group minutes, board minutes, and reports from the committees.

Council passed motions as follows:

- Approving the proposed Continuing Professional Development Program Document.

88th

Annual Meeting and Professional Development Conference

May 3-5, 2018

Delta Bessborough
Saskatoon SK

PROFICIENCY

COMPETENCY

REVITALIZATION

Thursday May 3

Evening Welcome Event

Friday May 4

Breakfast Keynote
Professional Development Streams
Professional Development Luncheon
Luncheon Keynote
Past Presidents' Dinner
President's Reception

Saturday May 5

Business Meeting
Partners Program
Kids Program
Youth Science Day
Volunteer Luncheon
Awards Banquet

Registration February 2018

apegs.ca

Professional Misconduct



A Professional Engineer member of the Association of Professional Engineers and Geoscientists of Saskatchewan pleaded guilty to two counts of professional misconduct before a hearing panel of the Discipline Committee on October 30, 2017.

Counsel for the Investigation Committee and for the member filed an Agreed Statement of Conduct with the panel, which was accepted as an admission of professional misconduct by the member.

The joint submission contained the following admissions:

- that the member misinformed a regulatory agency as alleged and further admits that such conduct constitutes professional misconduct; and
- that the member admitted that he advised representatives of his client to not talk to the government during the regulatory agency's investigation.

The panel determined that these actions by the member were in breach of sections 20(2)(a), (b) and (e) of *The Regulatory Bylaws* and that this breach constituted professional misconduct as defined in subsections 30(a), (b) and (c) of *The Engineering and Geoscience Professions Act*.

Counsel for the Investigation Committee and for the member also filed a Joint Submission as to Disposition.

On arriving at its decision, the panel considered the following factors:

- gravity of the offence;
- risk to public safety;
- specific deterrence of the member from engaging in further misconduct;
- general deterrence of other members of the profession;
- rehabilitation of the offender;
- denunciation by society of the conduct; and
- range of sentences in other cases.

The hearing panel also considered the following mitigating circumstances:

- member's experience;
- member's intentions to retire immediately and to not practise in the future;
- history of the member's professional conduct;
- member's acknowledgement of responsibility;
- previous service history of the member; and
- member's good character.

Having taken into account all of the above, the hearing panel ordered as follows:

1. That the member's licence be suspended for one year from the date of the Discipline Hearing (October 30, 2017).
2. That the member shall successfully complete the Law and Ethics seminar and pass the Saskatchewan Professional Practice Exam (PPE).
3. That the Decision and Order of the hearing panel be published on the APEGS website, in *The Professional Edge* and *e-Edge*, without names.
4. That the member be assessed costs to a maximum of \$25,000, of which 50 per cent shall be paid by the member.

Once all of the above orders are met, the member would be eligible to apply for reinstatement.



CALL FOR APEGS

Council Nominations

Nominating Committee

The Nominating Committee is soliciting names for the Council positions described below. You may contact staff support to the Nominating Committee, Shawna Argue, at sargue@apegs.ca to propose names of potential candidates. Shawna may also be reached through the APEGS office in Regina by phone at 306-525-9547 (toll free 1-800-500-9547 North America), or facsimile 306-525-0851.

The Bylaws require the Nominating Committee to nominate, whenever possible, the person holding the office of President-Elect for President, and one person for the position of President-Elect (typically the person holding the office of Vice-President). Stormy Holmes, P.Eng., FEC is the current President-Elect and Terry Fonstad, P.Eng., FEC is the current Vice-President. The Nominating Committee is also required to nominate, whenever possible, at least two persons for Vice-President and at least two persons for each vacancy on the Council.

Submissions of Nominations

Any five members may nominate over their signatures an eligible nominee for any elective office, except that of President. Such nominations shall be in the hands of the Registrar at least forty-five days before the election is to take place. To meet this requirement, the nominations must be in the APEGS office no later than 5 p.m., Thursday, March 15, 2018, as the election will take place when ballots are counted on Monday, April 30, 2018, the “polling day.”

2018 Vacancies & Terms of Office

Officers

- President-Elect – one-year term
- Vice-President – one-year term

Group and Electoral District Councillors to serve a three-year term

- Group II (Mechanical and Industrial)
- Group V (Agriculture and Forestry)
- Members-in-Training
- South-East District
- Geoscience South District

Terms of Office

Only members in good standing are eligible for nomination.

A person elected to Council may only hold office while a resident of Saskatchewan.

A person nominated for President-Elect must have served at least one full year (i.e. from the close of business at one Annual Meeting to the close of business at the next Annual Meeting) as a member of APEGS Council prior to the date on which they would assume office as President-Elect.

A person nominated as a representative of an electoral group must be classified with the Association in that electoral group. The Councillor representing Members-in-Training can complete the term of office after obtaining his or her P.Eng. or P.Geo. status.

www.apegs.ca/Portal/Pages/council-elections

Member Benefits and Affinity Programs

As an APEGS member you are eligible to participate in the member benefit and affinity programs.

Corporate Discounts

APEGS partners with selected suppliers to offer discounts to members on various products and services.

APEGS Travel Insurance Program



This program is available to members, employees of members, and staff of the association.

It has been specifically designed to deliver the most comprehensive and cost-effective travel health and accident insurance available.

APEGS Travel Discount Program



APEGS is pleased to offer an exclusive worldwide travel discount service to our members.

Savings average 10-20 per cent below-market on all hotels and car rental suppliers around the world. Save time

and money. Let Local Hospitality Inc. negotiate the best deals and comparison price for you. Any hotel, any car, anywhere, any time, other discount programs, home insurance, rentals and health & fitness.

Engineers Canada Affinity Programs

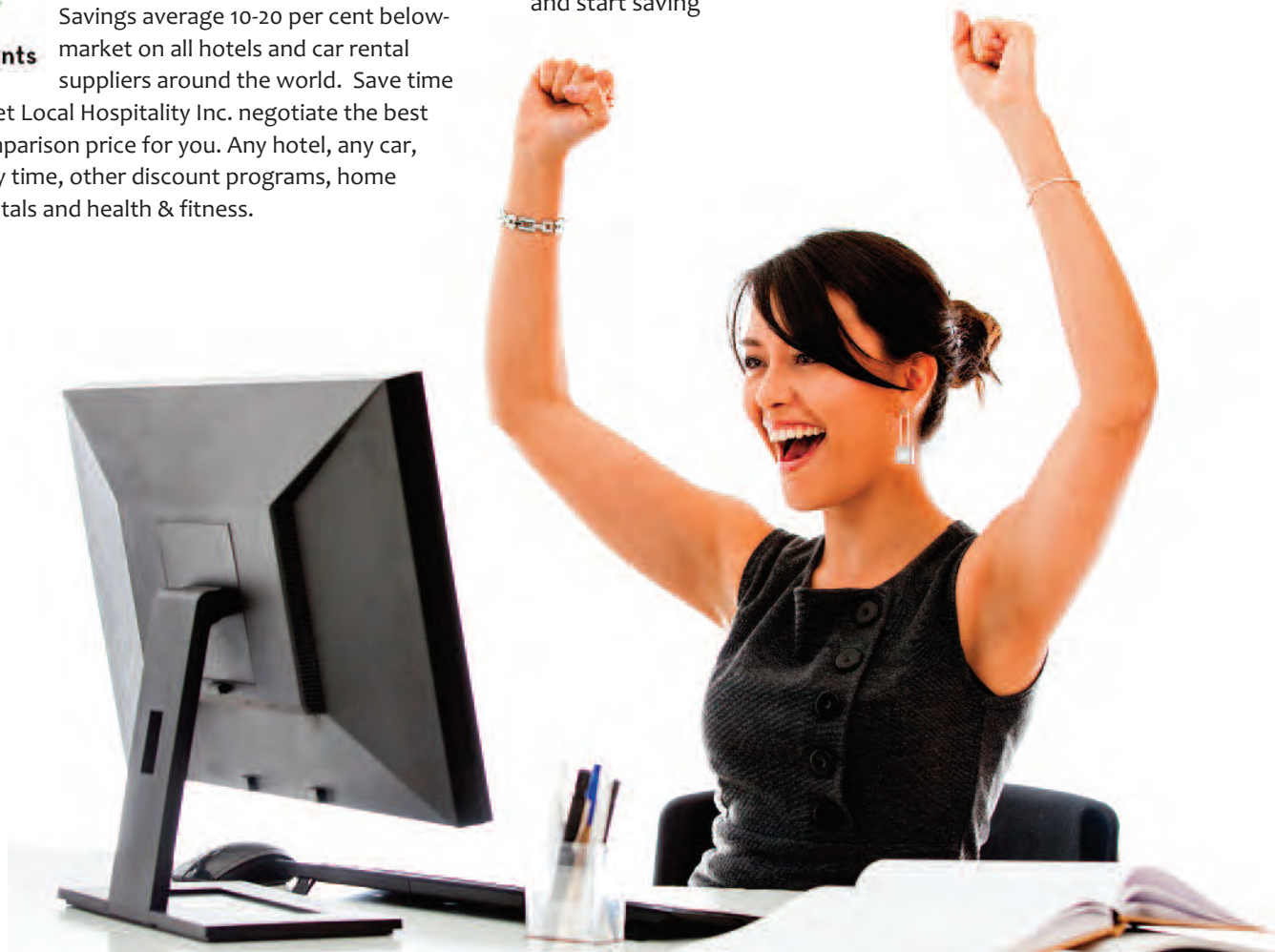
All APEGS members and their families can take advantage of the insurance plans, financial and other services through Engineers Canada's sponsored initiatives.

APEGS Services

Numerous services are available and many costs are included in the APEGS membership fee.

- Subscription to *The Professional Edge*
- Professional Development
- University Access
- Volunteer Opportunities
- Local Constituent Societies
- Engineers Canada Affinity Programs

Visit apegs.ca/Portal/Pages/member-benefits today and start saving





SK Design Week 2017

BY CARLEEN BARTEL, P.ENG. PRINCIPAL DESIGN ENGINEER,
PROJECT MANAGER, CATTERALL & WRIGHT CONSULTING
ENGINEERS

SK Design Week was held September 23-29, 2017 with events in both Saskatoon and Regina. The events were organized by the Saskatchewan Design Council, the collective voice of six provincial associations representing design professionals working in architecture, engineering, geoscience, graphic design, interior design, landscape architecture and planning. The council's mandate is to promote public awareness of great design completed by members of our local professional associations and to provide educational opportunities to the public.

We had a great lineup of speakers including: Omar Gandhi, recognized as one of the world's top 20 young architects by *Wallpaper* magazine; Jason Kasper, founder and principal of IDEATE Design Consulting; and Robin Mazumder, a Vanier Scholar and doctoral candidate in cognitive neuroscience, studying the psychological impacts of urban design. In addition to speakers, there was a movie night on graphic design and two lunch-and-learns with tours of Saskatoon Makerspace and the Canadian Light Source Synchrotron.

The week finished with an awards reception celebrating the work of Saskatchewan designers at the Premier's Awards of Excellence in Design. There were categories for each professional association and an integrated category for projects involving three or more disciplines, and a People's Choice award. A jury of one representative from each member association as well as invited guest jury members from the Speaker Series evaluated entries.

Engineering and Geoscience category winners included:

Awards of Excellence



Wilson's Lifestyle Centre Retail Building

FIRM/DESIGNER: ISL Engineering and Land Services



Mosaic Stadium at Evraz Place

FIRM/DESIGNER: JC Kenyon Engineering

Award of Merit

FIRM/DESIGNER: Catterall & Wright

PROJECT: Osler Multi-Purpose Storm Pond and Soccer Facility

The integrated category included professional engineers working with other organizations:

Awards of Excellence

FIRM/DESIGNER: aodbt architecture + interior design, Key West Engineering Ltd., and PWA Engineering Ltd.

PROJECT: LutherCare Village

Award of Merit

FIRM/DESIGNER: Oxbow Architecture, JC Kenyon Engineering, Daniels Wingerak Engineering, Catterall & Wright, Ritenburg and Associates, and D-Code Engineering
PROJECT: Health + Light: Avenue P Medical Office Building

Honourable Mention

FIRM/DESIGNER: Group2 Architecture Interior Design Ltd., Crosby Hanna & Associates, Entuitive, ISL Engineering and Land Services Ltd.

PROJECT: Saskatchewan Joint-Use Schools Project
Technical Advisory Services

The People's Choice winning submission was the **Health + Light: Avenue P Medical Office Building** which included a Saskatoon architecture firm along with Professional Engineers from five Saskatchewan firms: Oxbow Architecture, JC Kenyon Engineering, Daniels Wingerak Engineering, Catterall & Wright, Ritenburg and Associates, and D-Code Engineering.

The next Design Week will be held in 2019. Be sure to submit entries for the prestigious Premier's Awards of Excellence in Design.

Report on the Professional Practice Exam - 2017

SUBMITTED BY SHAWNA L. ARGUE, P.ENG., MBA, FEC, FCSSE, FGC(HON) – APEGS DIRECTOR OF REGISTRATION

In 2017, 357 candidates wrote The Professional Practice Exam, an increase of 13 candidates over 2016.

EXAM DATE	MAY 27	NOVEMBER 4
# of Candidates	185	165
Highest Mark (%)	96.5%	94%
Average Mark (%)	82.5%	78.4%
# Failures *	1	2

* The grade required to pass the exam is 65%.

2018 Registration, Seminar and Exam Dates

March 16, 2018 - Registration deadline for spring exam and seminar AND deadline for submission of post-bachelors work experience report (if none submitted previously). The application form is in the related documents. Note that Temporary Licensees who are writing the PPE do not have to submit any experience reports.

March 16, 2018 - Last day to postpone or cancel seminar and/or exam (re-application would be required in the future if you don't notify us by this date that you wish to postpone or cancel)

April 20 & 21, 2018 - Law and Ethics Seminar (Saskatoon)

May 26, 2018, 9:00 am - Professional Practice Exam (Regina and Saskatoon)

Fall 2018 Exam

August 10, 2018 - Registration deadline for spring exam and seminar AND deadline for submission of post-bachelors work experience report (if none submitted previously). The application form is in the related documents. Note that Temporary Licensees who are writing the PPE do not have to submit any experience reports.

August 10, 2018 - Last day to postpone or cancel seminar and/or exam (re-application would be required in the future if you don't notify us by this date that you wish to postpone or cancel)

September 14 & 15, 2018 - Law and Ethics Seminar (Regina)

November 3, 2018, 9:00 am - Professional Practice Exam (Regina and Saskatoon)

Seminar

The seminar runs from 8:00 a.m. to 6:30 p.m. on Friday and 8:00 a.m. to approximately 4:30 pm on Saturday. Complete exam information, including the application form and how to order textbooks, can be found at apegs.ca under “Apply, Professional Practice Exam”.



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your
career

Apply for 1 of 3

\$12,500 scholarships

from Engineers Canada and Manulife

Who's eligible?

Professional engineers
returning to university
for further study in an
engineering field.

For Scholarship details
and applications visit:

[engineerscanada.ca/
scholarships](http://engineerscanada.ca/scholarships)

Deadline: **March 1, 2017**



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Manulife, P.O. Box 670, Stn Waterloo, Waterloo, Ontario N2J 4B8

Online Competency-Based Assessment

BY TINA MAKI, P.ENG., FEC, FGC(HON.), DIRECTOR OF SPECIAL PROJECTS

Introduction

Prior to being granted a licence, an engineering applicant must demonstrate his or her ability to practise engineering. The onus is on applicants to provide evidence that they possess, through experience, a satisfactory capability to practise engineering at a professional level.

Many of Canada's engineering regulators have implemented or are moving toward competency-based assessment of engineering experience. To this end, a multi-year, pan-Canadian competency-based assessment project has been undertaken with participation from engineering regulators in several provinces. In the current phase of this project, the online competency assessment system developed by Engineers & Geoscientists BC is being adapted for use by other regulators in Canada.

APEGS Council proposes to adopt this new experience assessment system, effective January 1, 2019. It will apply to Professional Engineer applicants to APEGS (i.e. Engineers-In-Training). All requirements remain the same, including four years of experience, at least one year of experience in a Canadian or equivalent-to-Canadian environment, and the possibility to count up to one year of pre-grad experience for eligible applicants, as well as the others that are currently in place.

Note that competency-based assessment for geoscience experience is under development in a separate project and its implementation is being planned for the future.

Benefits of Competency-Based Assessment

Competencies are observable and measurable skills, knowledge, abilities, motivations or traits required for professional registration that are demonstrated through the actions and behaviours of the applicant. The competency-based assessment system permits a more quantitative assessment of applicants, using a more precise measuring system than the current APEGS experience review guidelines. It is a more explicitly described and defined measurement tool to assess readiness for licensure. What constitutes acceptable engineering experience is not changing; we are better defining it. It makes the assessment more objective, transparent and consistent and increases the confidence of all who participate in the process including applicants, validators, employers and assessors on the Experience Review Committee.

Description of the Competency-Based Assessment Framework

The competency assessment framework makes use of seven Competency Categories, which are groupings of a total of 34 competencies or skills:

- Technical competence [10 competencies]
- Communication [three competencies]
- Project and financial management [five competencies]
- Team effectiveness [two competencies]
- Professional accountability [six competencies]
- Social, economic, environmental and sustainability [five competencies]
- Personal continuing professional development (CPD) [three competencies]

The seven categories represent the areas in which Professional Engineers of all disciplines must be competent to ensure effective practice and public safety. Each Competency Category contains a list of the key competencies required in that area. The complete details are posted to the APEGS website under Members, Competency-Based Assessment.

Achievement of each category is measured through a Competency Rating Scale that outlines six different levels of competence (0-5). A successful candidate must meet each of the competencies in each category at a minimum level of 1 on the Competency Rating Scale, while achieving the required minimum category average "entry to practice" rating level of 2 or 3, depending on the category.

Online Submission

The use of an online competency assessment process enables applicants to easily report and their validators to validate their engineering experience from anywhere in the world (keeping in mind that a minimum of one year of Canadian or equivalent-to-Canadian experience is still required). Applicants, validators and assessors are provided with a personal login and once an applicant has completed his or her competency entries, the applicable validators are automatically notified when the competencies that pertain to them are ready to validate.

For a complete description of the online submission process, refer to the APEGS website under Members, Competency-Based Assessment.

Timeline and Next Steps

February 2, 2018: Council will finalize the competency-based assessment written material:

- The necessary revisions to the Bylaws to accommodate these changes
- Competency Assessment Guide for Applicants, Validators and Assessors
- Competency-Based Assessment Value Analysis

The bylaw change details will be provided to the membership with the Annual Meeting notice package. As well, the current draft of these documents is posted on the APEGS website under Members, Competency-Based Assessment.

May 5, 2018: At the Annual Meeting, APEGS membership ratifies Council's recommendation to switch to competency-based assessment.

September 2018 (approximately): Ministerial approval of bylaw changes.

January 1, 2019: Competency-based assessment of engineering experience comes into effect.

Transition from the Current Experience Reporting System

Current Engineers-In-Training who have submitted one or more experience reports by January 1, 2019 using the current system can continue in the current system if they wish. However, they are encouraged and invited to switch to the online competency assessment system when it comes into effect.

Current Engineers-In-Training who have not submitted any experience reports by January 1, 2019 as well as newly approved Engineers-In-Training as of January 1, 2019 will use the new online competency-based assessment system.

Questions and Feedback Requested

More details on these proposed changes are posted to the APEGS website under Members, Competency-Based Assessment.

Starting in January 2018, APEGS staff will be touring the province and facilitating Town Hall meetings at a variety of locations to present and discuss these changes with the membership (as well as the proposed changes to CPD reporting). To register, please refer to the APEGS website, www.apegs.ca, for details on locations and times.

Your feedback and questions are requested. You may do so by attending one of the Town Hall meetings or by contacting Tina Maki, P.Eng., Director of Special Projects, at 306-525-9547 or toll free North America 1-800-500-9547 or tmaki@apegs.ca.

ANNOUNCING APEGS



Town Hall Meetings

APEGS Council has approved proposed changes to the Continuing Professional Development Program (see page 28 for more) and to the Engineer-In-Training experience reporting process to online competency-based assessment. These enhancements require changes to the *Regulatory Bylaws* that must be ratified by the members present at the 2018 Annual Business Meeting. Come out and learn more about the proposed changes and what they mean to you!

- Jan. 22 (evening) – Yorkton
- Jan. 24 (evening) – Moose Jaw
- Feb. 12 (evening) – Humboldt
- Feb. 13 (lunch) – Saskatoon
- Feb. 13 (evening) – Saskatoon
- Feb. 14 (lunch) – Kindersley
- Mar. 5 (evening) – Swift Current
- Mar. 6 (lunch) – Coronach
- Mar. 6 (evening) – Estevan
- Mar. 7 (lunch) – Weyburn
- Mar. 13 (lunch) - Regina
- Mar. 13 (evening) – Regina
- Mar. 19 (evening) – Prince Albert
- Mar. 20 (evening) – Lloydminster
- Mar. 21 (lunch) – North Battleford

A light meal will be provided at all meetings. To register, log on to your online profile on the APEGS website and select the Town Hall you wish to attend under the **“Meetings”** tab. Details on the times and locations can be found on the APEGS website.

More Members Are Renewing Online!



For the fifth year, APEGS held a draw for an iPad to encourage members to renew their registration online and update their information.

Congratulations to this year's winner (who wishes to remain anonymous) and thank you to the 68 per cent of members who renewed online for 2018, an increase over 2017.

As more and more members can attest, using their online profile is a convenient way to:

1. Pay annual fees*
2. Update contact information*
3. Renew Permission to Consult
4. Report Continuing Professional Development (CPD) credits
5. Volunteer for committees, one-time events and other activities
6. Select mail and email exclusions, including constituent societies
7. View application status
8. Register for APEGS events and meetings

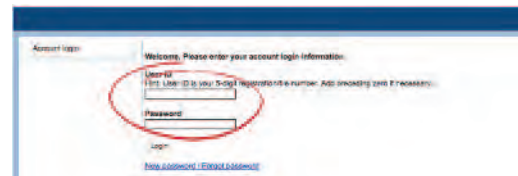
** Also available online for official representatives and authorized signing officers of Certificates of Authorization.*

It's quick and easy to access your online profile:

1. Go to www.apegs.ca and click “Login”, which will take you to the login page.



2. Once at the login page, enter your user ID and password.



- User ID is your 5-digit registration number found on your annual dues notice, APEGS registration certificate, membership card or seal. (Use a preceding zero if it is a 4-digit number.)
- If this is your first time logging in or you have forgotten your password, click on “**New password/Forgot password**” and complete the requested information. An automated email will be sent to you with a temporary password that you should use to log in and change as soon as possible.

For more information or for assistance, contact APEGS at apegs@apegs.ca call 306-525-9547 or call toll-free at 1-800-500-9547.

When Canada hosts the world to discuss resources, the future and sustainability

BY JOHN THOMPSON, P.GEO., RFG2018 CONFERENCE CHAIR AND OLIVER BONHAM, P.GEO., CEO, GEOSCIENTISTS CANADA.

Earth's growing population requires resources for the basics of life and increasing standards of living. Energy from many sources, numerous minerals and water are critical for human existence and are increasingly linked in the context of sustainability. For future generations, resources must be discovered and cleanly exploited, even as efforts to improve efficiency and increase recycling continue. To succeed, we must fully understand the Earth, from the critical processes that concentrate resources to the surficial and atmospheric conditions that must be conserved. Simultaneously, we must engage broadly with people to fully understand needs and concerns, inform effective policy and provide the knowledge to support future generations.

Between June 16 and 21, Vancouver will host the first international conference dedicated to the availability of resources needed to sustain future generations. The geoscience profession is heavily involved and both Geoscientists Canada and Engineers & Geoscientists BC - as national and provincial hosts, respectively - are assisting and supporting the event as technical partners.

The conference is relevant to all geoscientists and many engineers – those directly involved in the three resources sectors – minerals, energy and water, those who provide vital underlying Earth science and environmental knowledge and those who interface with society and communities around resources, policies and key decision making.

This is a first-of-a-kind conference developed through the International Union of Geological Sciences (IUGS) and will be delivered by local Canadian hosts – the Canadian Federation of Earth Sciences (CFES), the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), the Geological Association of Canada (GAC) and the Mineralogical Association of Canada (MAC). The IUGS is geoscience's global body with 121 member countries. RFG2018 is the first IUGS event to be held between quadrennial IUGS International Geological Congresses and the first focused on a specific topic, a topic that is of major interest to Canada.

The conference will examine the critical natural resources that led to the development of the human race over the

last 10,000 years and which remain fundamental to our existence – energy, minerals and water. These themes will be looked at from the perspective of the Earth and the knowledge that underpins the future availability and responsible use of resources. Sessions will focus on the interplay among earth science, human ingenuity, new technologies and environmental and human challenges, in the context of a world that is changing dramatically and unpredictably. This is a unique opportunity to participate in a conference with implications for a sustainable future.

The call for abstracts is under way. You are invited to become involved and submit an abstract for a talk or poster, or more than one! Bring your expertise into the discussion on the many opportunities and challenges related to resources. There are over 200 different technical sessions to choose from, divided among the key themes – the Earth, Energy, Minerals, Water, Resources and Society and Education. In addition, there will be plenary, debate and keynote sessions where invited speakers will discuss some of the major challenges that are important to all themes.

We expect to attract 4,000-5,000 attendees, focused broadly on resource issues representing earth science and engineering research and practice, industry, governments and civil society and First Nations and Indigenous people. In addition to technical and non-technical sessions, the conference will include 15 field trips and 25 short courses, educational workshops, roundtable discussions and the usual list of social and local tourist events.

Vancouver is a magnificent city in which to host the world for such an important future-looking event. As professional communities, Canada's geoscientists and engineers are integral to this country's reputation for international leadership in all aspects of the three resources sectors – so it is important that we are well represented. We also especially welcome young professionals, researchers and students and will have dedicated events for them - the Future Generation.

Please plan to attend and help us host the world for a truly successful event in BC this June. Full conference information, including registration details here at www.rfg2018.org.

CONTINUING PROFESSIONAL DEVELOPMENT

The Ongoing Evolution

The Professional Development Committee has recommended changes to the Continuing Professional Development (CPD) Program, including making it a requirement for all members to participate and report.

Council has approved these recommendations, the adoption of which requires revisions to the *Regulatory Bylaws*. These revisions must be approved by the membership at the 2018 Annual Meeting. The following table summarizes the proposed changes with a comparison to the existing program.

	Current Program	New Program
Annual Credit Requirements	Licensed members need 80 CPD credits a year or 240 CPD credits over a 3-year period	Licensed members need 80 CPD credits a year
	Waiver holders need 30 CPD credits a year or 90 CPD credits over a 3-year period	Waiver holders need 30 CPD credits a year
	Excess credits can be carried over for up to 2 years	Excess credits can be banked for up to 2 years
Annual Category Requirements	Licensed members need credits in 3 of the 6 CPD categories	Licensed members need credits in 3 of the 6 categories plus verifiable ethics training, which can be counted as Formal Activity
	Waiver holders need credits in 2 of the 6 CPD categories	Waiver holders need credits in 2 of the 6 categories plus verifiable ethics training, which can be counted as Formal Activity
Online Reporting	Voluntary online reporting on the APEGS website	Required online reporting on the APEGS website
Variation Requests	None	Any APEGS member (i.e. waiver holders and licensed members) with extenuating circumstances can apply on an annual basis

The proposed program will also include a Compliance Review Program. For more details, please refer to the proposed CPD Program document package that will arrive with your Notice of the Annual Meeting.

Have more questions about the proposed program?

Contact APEGS to speak with Shawna Argue, P.Eng., MBA, FEC, FCSSE, FGC (Hon.) – Director of Registration or Jolene Arthur, Compliance Coordinator, or attend one of the Town Hall meetings – see page 25 for meeting dates and locations and visit apegs.ca to register.

Importance of Continuing Professional Development



Peter Jackson, P.Eng., FEC, FGC(Hon)

The importance of Continuing Professional Development (CPD) has increased in recent years from the perspective of both the public and self-regulating professions. The engineering and geoscience associations across Canada have made CPD programs a priority, and APEGS is no different.

The proposed changes to APEGS' CPD Program will be presented for approval by the membership at the 2018 annual meeting. APEGS took the opportunity to meet with Peter Jackson, P.Eng., FEC, FGC(Hon.), senior vice-president, Mosaic operations (and an APEGS Past President), to discuss the importance of CPD for the professions as well as what industry can do to support CPD.

"As a self-regulated profession, APEGS has been given the responsibility to ensure that our members are competent to practise in their chosen professions and maintain that competency for the duration of their careers," said Jackson.

"This is no different than any other profession such as doctors and lawyers."

APEGS also has an obligation to safeguard the public and to ensure that members practise their professions with the public's interest held paramount.

"The addition of the requirement for an annual ethics refresher is a positive move," said Jackson. "I am a current member of the APEGS Investigation Committee, and most of the complaints that we receive relate to professional conduct, which ultimately comes back to ethical behaviour."

Engineering and geoscience associations across Canada have implemented, or will be implementing, a similar requirement.

"Mosaic has always emphasized the need for our employees to continually enhance their skills," said Jackson.

"We support our employees in a number of ways. First, we align our engineering/geoscience progressions in time scale and requirements with those of the professions' Member-In-Training program. Once they complete our program, their training and experience should allow them to meet the requirements to become professionals. We also provide various leadership development programs which include formal training, coaching and evaluation. Assignment of specific technical courses is also a big part of our employee development. In addition, some of our managers have already built in a requirement for their engineers and geoscientists to comply with the APEGS CPD Program as part of their annual appraisal."

"All professionals undertake professional development activities, almost every day," said Jackson. "Reporting these activities to APEGS is a small ask to be able to support our professions in providing the public with the assurance that we continue to be competent to protect their safety."

APEGS is holding Town Hall meetings throughout the province to raise awareness about the changes to the CPD Program. Additional information about the proposed changes and the schedule of the Town Hall meetings can be found on page 25 of this issue of *The Professional Edge*. Register for a Town Hall meeting at apegs.ca.

Continuing Professional Development Reporting for 2017

A draw was held to encourage members to report their 2017 CPD credits through their online profile by December 31. Thank you to the 27 per cent of members who reported and congratulations to the following winners of the draw:

Neil Struthers, P.Eng.

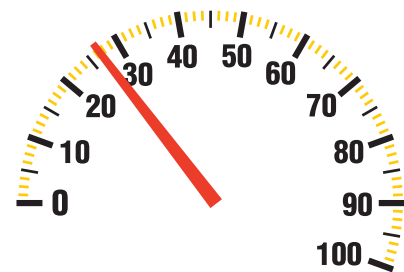
\$200 Saskatchewan Roughrider gift card

William Lee, P.Eng.

\$100 Visa gift card

Cory Belyk, P.Geo.

Gift certificate for a free day at an APEGS Professional Development event



Let's Speed Up Our Reporting!

Twenty-seven per cent of APEGS members reported their 2017 continuing professional development credits by December 31, 2017. Have you reported yet? If not, do your part to demonstrate your accountability to remaining competent as a professional. Report your 2017 credits by January 31, 2018, and let's see if we can move the needle from 27 to 100! To report, log into your online profile at apegs.ca and go to the "My Details" tab.



WORKERS' COMPENSATION: YOUR SYSTEM – YOUR WAY

Sask. WCB to Host Annual Compensation Institute this Spring

Interact with more than 11 local and national safety experts this spring at the Saskatchewan Workers' Compensation Board's (WCB) interactive learning conference, Compensation Institute.

The 2018 educational event will take place March 19-20 at Queensbury Centre in Regina. Free and open to the public, the conference will provide tools and tips on how to prevent and manage workplace injuries.

"Here at the WCB, we are always working to improve open and transparent communication with our customers and one way to do that is to host Compensation Institute," said Peter Federko, CEO of the WCB.

Compensation Institute also provides plenty of opportunities to network with other employers, safety professionals and with WCB staff on claims management and employer services.

"This event opens up a dialogue with workers and employers on how we can improve our services and how workers and employers can create injury-free workplaces," said Phil Germain, Vice-President of Prevention and Employer Services at the WCB.

Germain added that the WCB always takes attendee feedback and uses that to improve Compensation Institute year after year.

Vicki Radons, safety and human resources consultant at Partner Technologies Incorporated, first attended Compensation Institute approximately three years ago. Now she makes sure that she, or another representative from her company, attends the event annually.

She added that she learns something every year on new trends she may or may not know about. For instance, the last few years there have been speakers on medical marijuana and mental health, areas that are becoming "much more prevalent in the workplace," she said.

"The insights that I get from the sessions are helpful in establishing new policies for our company. It also helps us handle our claims situations better and to support our employees," said Radons.

Providing useful information is exactly what the WCB aims to provide at Compensation Institute.

"It's important for us to provide timely information that our customers want," said Germain. "That way, they can walk away with practical information and we can also better understand their needs. We look forward to meeting with our customers every year at this event."

The Saskatchewan WCB 2018 Compensation Institute is an interactive learning conference that will take place March 19-20 in Regina.

The Saskatchewan WCB Compensation Institute conference will provide tools and tips on how to prevent and manage workplace injuries. Registration opens February 12.

This year's speaker list includes:

- **Meghan McCreary, MLT Aikens - Is your workplace prepared for legalized marijuana?**
Meghan can help you get your workplace prepared for legalized marijuana.
- **Dr. Todd Conklin – Beyond behaviour: Learn new principles in safety management**
Dr. Conklin says simple acts can revitalize your workplace.
- **Paul Krismer – How happiness can create a positive safety culture**
Paul says leveraging positive psychology increases workplace wellness.
- **Michael Melnik – How to generate energy and drive safe behaviours in the workplace**
Michael says an energized approach can create a safe, healthy and productive workplace.
- **Stuart Ellis-Myers (a.k.a. Twitchy) – Mental Health: Addressing the unsafe mind, change your thoughts, change your life**
Stuart shares tips on how to spot mental health safety issues.
- **Lionel Laroche – Effectively communicating with culturally different people**
Lionel believes cultural differences can turn into a source of creativity and innovation.

Registration for 2018 Compensation Institute opens Feb. 12. For more information, visit www.wcbask.com/compensation-institute-2018.



MLA Reception

APEGS held its 17th annual MLA Reception on Wednesday November 22, 2017 in Regina. The reception APEGS held its 17th annual MLA Reception on Thursday, November 30, 2017 in Regina.

The reception provides an opportunity for all MLAs to meet with members of the Association including Council, past presidents and committee chairs. A variety of issues related to the engineering and geoscience professions were discussed in an informal setting.

APEGS President Ernie Barber, P.Ag, P.Eng., presided over a short program which included greetings from the



LEFT: Nicole Sarauer, New Democrat MLA for Regina Douglas Park and Interim Leader of the Official Opposition.



RIGHT: The Honourable David Marit, Minister of Highways and Infrastructure and Responsible for *The Engineering and Geoscience Professions Act*.

Honourable David Marit, Minister of Highways and Infrastructure and Minister Responsible for *The Engineering and Geoscience Professions Act*, and Nicole Sarauer NDP Interim Leader of the Official Opposition. APEGS would like to thank the MLAs for attending this event and the volunteers for helping to make the event a success.



2018 Spring Professional Development Days

March 1 & 2, 2018

DoubleTree Hotel, Regina, SK

Registration Now Open!

Topics to Include:

- Get to the Point! A Practical Writing Course
- Ethical Dilemmas Workshop
- Environment & Sustainability Workshop
- Conversations that Motivate & Engage
- Watch out for Unconscious Biases



A P E G S

*Association of Professional Engineers
& Geoscientists of Saskatchewan*

News Beyond Our Borders



Calgary geophysicist works to find water for refugees

CBC News - A Calgary geophysicist is working with a team of experts to find underground water for thousands of Rohingya Muslims from Myanmar who fled to overcrowded camps in Bangladesh.

Nearly 600,000 members of the minority group have fled from Myanmar's western Rakhine state to Bangladesh since August, a UN Refugee Agency report says. The people are trying to escape a military offensive that the United Nations says amounts to ethnic cleansing.

The most recent influx of people is expected to quickly exhaust the existing water supply at makeshift refugee camps in Cox's Bazar, near Teknaf, Bangladesh. That's where Paul Bauman, P.Eng., P.Geoph., a geophysicist with WorleyParsons Ltd. and his four colleagues are focusing their search.

Bauman and his team are using a technique called electrical resistivity tomography, which produces images of subsurface structures, in their search for aquifers.

"Think of like seismic survey, where we're laying lots of cable out through the streets, through the market, between villages and imaging what's in the subsurface," he said.

The need for more water wells is getting urgent as the dry season sets in and the few existing reservoirs evaporate, Bauman said.

Bauman said conditions at the camps are desperately bad, with flimsy shelters constructed out of bamboo and plastic sheets.

OIQ requests changes to anti-corruption bill

OIQ - The Ordre des ingénieurs du Québec (OIQ) hopes that adjustments will be made to Bill 107 so that the various organizations concerned can more effectively fight corruption.

The OIQ is in favour of improving the protection granted to co-operating witnesses, in particular by allowing prosecutors to stop a disciplinary proceeding. However, it believes that this extraordinary power should be used with care and that a better balance must be struck between this power and the operations of the disciplinary justice system, such as by:

- a. Specifying that the notice given by the Directeur des poursuites criminelles et pénales (DPCP) may not concern a complaint about compliance with trade practices and the quality of professional activities, which are elements related to the very purpose of the professional system: protection of the public.
- b. Providing for a form of collaboration between the DPCP and the syndics of professional orders, in accordance with the laws and each party's operational requirements. This collaboration could be used to convince a remorseful witness to co-operate with a syndic's inquiry in exchange for disciplinary immunity, but also to avoid dedicating substantial resources to a disciplinary inquiry that has no chance of leading to a conviction.
- c. Publicly announcing the DPCP's notice of terminating disciplinary complaint proceedings, so as not to jeopardize the public's trust in professional orders and the disciplinary system.

Engineer named Canada's head of state

Engineering Dimensions - On October 2, 2017, Julie Payette, ing., a graduate of McGill University and University of Toronto engineering programs, assumed office as Canada's 29th Governor General.

Payette completed a Bachelor of Engineering degree in electrical engineering in at McGill in 1986, after which she completed a Master of Applied Science degree in computer engineering at the University of Toronto.

Payette's previous career accomplishments include serving as CEO of the Montreal Science Centre, working as a systems engineer for IBM Canada's science engineering division and the IBM Zurich Research Laboratory in Switzerland and performing research with the Speech Research Group of Bell-Northern Research in Montreal. She also worked for several years with the Canadian Space Agency and NASA.

Kathy Baig, ing., president of the Ordre des Ingénieurs de Québec, says the appointment of Payette as Governor General is a boost to the engineering profession in Quebec and across Canada.

“The appointment of an engineer from Quebec to the prestigious position of Governor General of Canada is a source of pride for the entire profession,” Baig said. “Julie Payette has always been a great ambassador for engineering. Her outstanding career and accomplishments are a great source of inspiration for young people in science and technology, especially for women. As the new Governor General of Canada, she will be able to continue her work to promote science and technology to Canadians.”

TECH CORNER

First totally solar train launches in Australia

Inhabitat.com - The world's first 100 per cent solar-powered train is now gliding down tracks in Byron Bay, Australia. The Byron Bay Railroad Company refurbished a three-kilometre stretch of tracks and restored a heritage train, outfitting it with a 6.5 kilowatt (kW) solar array with flexible solar panels. A limited service launched over last fall, with full service set to commence in January.

Byron Bay Railroad Company restored tracks and a bridge between the town of Byron Bay and the Elements of Byron Bay resort to provide affordable public transportation for locals and visitors. One hundred seated passengers and other standing passengers can ride the solar train and there's room for luggage, bikes and surfboards.

The flexible SunMan solar panels lining the carriage roofs produce energy that is stored in a 77 kilowatt-hour (kWh) battery system, which can also charge up between trips via a 30 kW solar array at the main station. The battery bank has around the same capacity as a Tesla Model S and can make 12 to 15 runs off one charge as it only takes the solar train around four kWh for each leg of the trip. A regenerative braking system “recovers around 25 per cent of the spent energy each time the brakes are applied,” according to the Byron Bay Railroad Company website. The train's lighting, traction power, control circuits and air compressors are all battery powered.

Sodium based solid state battery is safer, more reliable

New Electronics - Researchers from Swiss materials research lab Empa and the University of Geneva have devised a new battery prototype. Said to be all solid state, the sodium-based battery is claimed to store more energy while maintaining high safety and reliability levels.

The researchers discovered that sodium, combined with other chemicals, created an electrical storage system that was non-toxic, chemically and thermally stable and that would allow the sodium to move easily between the anode and the cathode. As well, since the battery uses an

inorganic conductor, it removes the risk of the battery catching fire while recharging.

Said to withstand three volts, the battery was tested for more than 250 charge and discharge cycles, after which it retained 85 per cent of its original energy capacity. However, the research team says further work needs to be done in order to commercialize the battery.

The future of hurricane-proof electricity

Quartz - The US electricity grid is built to deal with rain, snow, winds and lightning. But it couldn't handle Hurricane Sandy in 2012. Across the northeastern coast, more than eight million homes lost electricity at some point during the storm. In Connecticut, more than one in five residents lost power.

A hurricane-proof way to make sure the lights never go out is to use backup microgrid energy. Instead of the typical long, overground cables (which can snap under the weight of a fallen tree) connected to large power plants, a microgrid has short cables (often buried underground) connected to small power generators that operate independent of any given region's power grid.

In Bridgeport, the largest city in Connecticut, a company is starting to prove it has a technology that could be the future of hurricane-proof electricity and may even make a dent in reducing the greenhouse gas emissions driving climate change. FuelCell Energy sells fuel cells, similar to those in hydrogen-powered cars but, instead of hydrogen, FuelCell's products burn natural gas without the harmful emissions.

Fuel cells run the same chemical reaction as a conventional natural gas plant but in a more controlled fashion. Because there aren't multiple steps involved—no fire, no steam, no turbines—a lot more energy from the fossil fuel is converted to electricity. FuelCell Energy generators can reach 66 per cent efficiency.

These characteristics make fuel cells an ideal choice for space missions. Since the 1990s, fuel cells have been used terrestrially to power large buildings such as hospitals and universities. FuelCell's power plants have already eliminated sulphur and nitrogen emissions. Now its technology has advanced so that it also captures carbon dioxide—all at a cost that makes it financially feasible.

Crucially, FuelCell's plant would also act as a microgrid in emergencies. When Hurricane Sandy hit, University of Bridgeport students had to go days without power. If the campus is hit with another storm, FuelCell's microgrid is ready to power some dorms and an auditorium—enough to let people charge their phones, stay warm indoors and get hot water.

News From The Field



Farming Reimagined @SeedDotRun

SeedMaster masters robot farmers

Regina Leader-Post - DOT looks like something out of a science fiction movie, a sleek silvery robot rolling through a snowy field east of Regina. But, hooked to a bright yellow SeedMaster seeder, it's the farm equipment of the near future. The driverless tractor is produced by DOT Technology Corp., a subsidiary of Saskatchewan-based equipment manufacturer Seedmaster.

A lot of farming equipment is already autonomous, said Cory Beaujot, the marketing manager of SeedMaster.

"A lot of farmers' time on tractors is occupied by Twitter and social media," said Beaujot. The goal with DOT is to allow farmers to focus on other work, without being in a driver's seat.

There are other robotic farming implements in existence, but DOT is unique in that it is a base for multiple pieces. With no cab or steering wheel, the U-shaped DOT is a diesel-powered platform that hooks to other things — so far, a seeder, a land roller, a sprayer and a harvest cart.

SeedMaster is working on partnerships with other implement manufacturers; more than 100 farming implements could be made "DOT ready."

After testing at SeedMaster's research farm near Langbank, plans are to expand DOT to several other farms for further testing next season.

DOT can help address labour shortages on farms. It could also attract new people to farming — those who see it as more of a technological or business opportunity. Since DOT doesn't tow or trail equipment, it makes for safer farming. It's lighter weight than traditional equipment and can turn easily, thus burning less fuel.

Census 2016: Gender pay gap tighter in engineering

The Globe and Mail - Canada's gender wage gap could be reduced if more women studying in university pursued science and engineering degrees, Statistics Canada data on the educational outcomes of recent graduates show.

The smallest gender pay gaps and highest salaries were found in nursing and engineering fields, where women between the ages of 25 and 34 earned more than 96 per cent of men's wages.

Median engineering salaries for all graduates were above \$77,000.

Not all science or technology fields have outcomes that are as positive or equitable as those in engineering or nursing, others cautioned.

Graduates in physical or biological sciences, for example, have earnings between \$53,000 and \$61,000 and a gender pay gap of 14 per cent and 7 per cent, respectively.

Professions in which a graduate's education and the skills needed in the job are well-matched, such as nursing or engineering, tend to have a smaller wage gap and good remuneration.

In spite of the benefits of an engineering career, less than 15 per cent of positions in the profession are held by women. Universities, colleges and companies are now working intensely to recruit more young women.

"What really attracted me to my current company is that I don't have to worry about being a woman to get equal opportunity," said Rowa Abachi, a solution engineer at Salesforce, a North American cloud-computing company. "They are openly talking about the gender gap and the salary gap, and it's empowering and a welcoming message for women."

As with other female engineers who spoke to *The Globe and Mail*, she pursued engineering because she had family role models and strong math and physics skills in high school.

"The value of an engineering degree is in problem-solving," she said. "In any meeting, I can point out who has done a technical degree based on their logic and how they process information."

Multimillion-dollar distillery under construction in Regina

CBC News - Moni Minhas owned liquor stores in Calgary 25 years ago. Now he's working to build the biggest distillery in the history of Saskatchewan.

By the end of February, he said he'll have products on the shelf that were made in the province.

The distillery will produce gin, vodka, whiskey, wine, cream liquor and ready-to-drink cocktails.

According to Minhas, the business will create 20 jobs for food scientists, mechanics, distillers and others in the region. All the architects, engineers, contractors and suppliers behind the construction of the facility are also Regina based.

Once up and running, Minhas said he plans to use as many Saskatchewan-made ingredients as possible. The products will then be exported to other provinces and countries.

Minhas said he's always had a love affair with Saskatchewan. A former petroleum engineer and creator of two publicly owned oil and gas companies, Minhas came out of retirement to build the distillery.

OIL AND GAS

Crescent Point scales back

Estevan Mercury - When the largest oil company in the province, and typically the most active driller in the country, shuts down most of its rigs, it has a substantial impact on the active drilling rig count.

That's exactly what happened in November, as Crescent Point Energy pulled in its horns and dropped its rig numbers from around a dozen to just four rigs in the province, two in southeast Saskatchewan and two in west-central Saskatchewan.

Throughout much of the downturn, Crescent Point had led the entire country in drilling rigs employed, having at times as many as 27 active rigs at once, more than the number two and three drillers combined.

Drilling in southwest Saskatchewan, typically dominated by Crescent Point, has all but come to a stop. Whereas Crescent Point often employs three to four rigs in the area.

POWER

SK. US states sign CCS MOU

NGI Shale Daily - Montana, North Dakota, Wyoming and Saskatchewan signed an agreement to combine their efforts in carbon capture, utilization and storage (CCS) research that is critical to their individual oil and natural gas producing jurisdictions.

The leaders of the four jurisdictions signed a memorandum of understanding (MOU) at the Western Governors' Association meeting in Arizona, articulating a mutual desire to reduce greenhouse gas emissions while aiming to

improve "strategic and diverse energy production." The states and province are to share knowledge, policy and regulatory expertise, according to the MOU.

In 2015, Wyoming Gov. Matt Mead and Montana Gov. Steve Bullock stepped up a joint federal and state push for more CCS to enhance carbon dioxide (CO₂)-driven enhanced oil recovery (EOR) in the fossil fuel producing regions.

A 14-state effort co-convened by Mead and Bullock identified "several opportunities" to increase CO₂ capture and use in EOR. CO₂ capture efforts applied to the EOR process are seen as key to providing a long-term, low-carbon path to the production of fossil energy resources, according to a report issued in late 2016.

In signing the MOU, the officials stressed the global importance of finding key CCS technologies with an estimated 1,600 coal-fired power plants planned or under construction in 62 nations.

Solar power's popularity on the rise in Saskatchewan



Revolt Energy

Regina Leader-Post - In Regina, about 100 people packed the Artful Dodger for the Regina Solar Co-op's first meeting in late October. The Regina co-op's plan is to use group buying power to bring down solar panel installation costs before Saskatchewan's net metering rebate program expires next fall.

The co-op sees an economic benefit to solar power.

"This is not a fanciful kind of far-off tree-hugger thing. This is being driven by some real clear economic imperatives and this is happening all over the world," said Stephen Hall, a leader of the Regina co-op.

When the Saskatoon version of the co-op began in December 2014, it pitched a "financially viable solar power co-operative."

"It's, I guess, a first for here, even though it's been happening around the world and other provinces for quite a while," said Jason Praski, P.Eng., one of the Saskatchewan Environmental Society's Solar Co-op's 168 members and a volunteer director of the board.

Now working as a clean energy consultant, Praski says the “timing is right” to employ green energy.

Five years ago, he and wife Sheri Praski, P.Eng., shareholders in the Saskatoon co-op, installed 14 solar panels on their home on an acreage east of Saskatoon.

The Saskatoon co-op uses local businesses’ rooftops as mini solar farms. Its first project was installed on the roof of the Two Twenty building last June. The second, a partnership with the city landfill gas generation station, was unveiled in April. The third, at Montgomery Agencies’ building at 615 Haskamp St., is a work in progress.

The main goal of Regina’s co-op is to have solar panels installed on individual homes, using group buying power to negotiate a lower price with a solar energy company. It plans to create a request for proposals soon, then have its first installations under way by April, with a second phase of installations organized prior to November.

Between SaskPower and the cities of Saskatoon and Swift Current, which have their own power companies, there are about 1,000 customers producing their own renewable energy, about 800 of those from solar.

ENVIRONMENT



University of Saskatchewan

Made-in-SK climate change plan

CJME - Saskatchewan has released its climate change plan — and it doesn’t include a carbon price or tax.

The province has long argued with the federal government that a price on carbon will disproportionately affect key Saskatchewan industries such as mining and agriculture.

The Prairie Resilience: A Made-in-Saskatchewan Climate Change Strategy sets out specific actions in a number of areas including natural systems, physical infrastructure, economic sustainability, community preparedness and measuring, monitoring and reporting.

The climate change strategy includes developing and implementing sector-specific, output-based performance

standards on large emitting facilities such as those in oil and gas and mining.

The province will use what it’s calling “best performance credits” for regulated facilities trying to cut down emissions.

These standards will be developed in consultation with industry throughout 2018 and will recognize actions already taken by industry to reduce emissions.

Flexible compliance options for industry will be developed that will include:

- Making improvements at facilities to reduce emissions intensity;
- Purchasing a carbon offset, representing a reduction in GHG emissions;
- Using best performance credits;
- Using a market mechanism outlined in the Paris Accord, such as an internationally transferred mitigation outcome; and
- Paying into a technology fund.

The offset system will create additional value for actions that result in carbon sequestration or reduced emissions, especially from agricultural soils, wetlands and forests. While agricultural producers will not be covered under any standard, they will benefit from being eligible to participate in the new offset program.

The strategy also reaffirms SaskPower’s commitment to achieve a 50 per cent electricity capacity from renewable resources and reduce overall GHG emissions by 40 per cent by 2030.

RESEARCH AND UNIVERSITY

U of R studying oil sands fluids

JW Energy - A University of Regina postdoctoral fellow has solved one of the biggest challenges in the enhanced oil sands recovery process: how to accurately model the flow instability and control the contact area between the oil and solvent/water being injected into the reservoir.

Qingwang Yuan P.Eng.’s computer model, developed with a team from the university and the Saskatchewan Research Council (SRC), essentially allows producers to “see” what’s taking place underground.

SRC and the University of Regina have been collaborating for years to bring potential solutions to problems associated with the heavy oil industry. The idea of developing a computer model to understand the frontal instabilities in heavy oil recovery processes is one of the many collaborative works between the two organizations.

Working with Fanhua Zeng, a professor at the University of

Regina and Yuan's supervisor, and other team members, the SRC plans to integrate this model into commercially available software, enabling oil companies to perform more accurate large-scale simulations of entire oil fields.

A commercial product should be available in the next one to two years, Yuan said in an interview.

"None of the simulators currently commercially available are able to accurately capture the instability that occurs when the oil comes in contact with the fluids being injected, whether it's water, solvent or steam," Yuan said.

"Using our models, oil companies can study the displacement process, test different scenarios and ultimately optimize their processes to obtain the highest oil recovery possible."

The work earned Yuan the Mitacs Award for Outstanding Innovation – Postdoctoral, awarded by Mitacs, a national not-for-profit organization that partners companies, government and academia to promote Canadian research and training.

Modified cars help mobility-challenged kids



<http://leaderpost.com>

Regina Leader-Post - Khyla Buium has limited movement because of cerebral palsy, but when the smiling two-year-old is strapped into a modified ride-on car with special controls, she's in control.

By pushing a red button on her orange car, the tiny tot zips forward. She hangs a right by pushing the yellow button and turns left by pressing the pink button.

"We really enjoy the zoom cars," Khyla's mother said. "I think the reason why she loves them so much is because it gives her a real sense of independence."

She hopes the University of Regina's Faculty of Engineering and Applied Science will continue to modify ride-on cars for children attending programs at Wascana Rehabilitation Centre (WRC).

About 18 months ago, Kim Schaan, an occupational therapist in the children's program at WRC, approached Raman Paranjape, P.Eng., a professor of electronic

systems engineering with the Faculty of Engineering and Applied Science at the U of R, about modifying ride-on cars for the children's program.

He and several graduate students have adapted two cars that can change according to an individual's abilities — some children reach the buttons with their hands, others use their heads or knees.

"We're so pleased to see the technology working," Paranjape said. "We really feel that we're making an impact."

The students remove the controls from cars purchased by WRC and add their own system, mini computers and sensors. The toy cars are adapted to speed up gradually to avoid creating a sudden jerk that might frighten the children.

The cars are equipped with sonar to avoid collisions and to stop them from pitching forward on steps.

Paranjape and his students want to modify more cars, but they lack funding. A \$30,000 donation would cover parts and allow a graduate student to work part-time on the project.

"We're really happy about the opportunity we have to affect the kids' lives in a positive way," Paranjape said.

"And on top of that, it's great for the grad students because they get the chance to build something that makes a difference — it's not just a math problem."

Remote robotic radiology researched

Saskatoon StarPhoenix - Patients in remote communities are a step closer to getting ultrasound imaging without having to travel long distances.

University of Saskatchewan researchers have proven that MELODY telerobotic sonography, a French-developed system that allows doctors to do long-distance ultrasound imaging, is feasible for abdominal and prenatal imaging. This is the first research team to test this technology in North America.

In two preliminary studies, one involving 18 patients and the other 30 pregnant women, researchers found the telerobotic system is reliable for visualizing organs and matches results and examination times obtained with conventional ultrasound.

The results have been published in the *Canadian Association of Radiologists Journal* and recently presented at an international radiology conference in the United States.

Bought with a \$300,000 gift from the Leslie and Irene Dubé Foundation, the MELODY system consists of three parts: the ultrasound probe and robotic arm, placed in a community clinic, that can be manoeuvred on a patient's body by an assistant with no prior experience using ultrasound; a control room at the U of S where radiologists or sonographers robotically control the probe and adjust

the ultrasound settings; and video conferencing software. The new technology could make a difference for small towns and remote Indigenous communities in Saskatchewan. Without the need to transfer patients long distances for medical assessments, the health care system could save millions of dollars.

INFRASTRUCTURE



First Nations project nearly 40 years in the making becomes reality

PANOW.com - The Beardy's and Okemasis Cree Nation is no stranger to flooding; their woes began in 1904.

In 1907 a culvert was constructed to help combat the flood waters in the community. However, it didn't hold up over the years. In response, community leaders started in 1980 to devise plans to upgrade the culvert to get more water to flow and create sufficient drainage.

In early January, after 41 renditions and some 37 years later, the band's plans were launched.

Plans are in the works to direct water to the South Saskatchewan River and Chante Lake. The current ditch connected two low-land areas north of the reserve and flowed naturally to the Saskatchewan River. Residents said the way the culverts upstream were constructed and the amount of water flowing through the ancient ditch was like trying to get a river to flow into a garden hose.

According to project engineer Don Poon, P.Eng. from SAL Engineering, flooding had also limited emergency service access to the community. The upgrade will look to quell these concerns, according to Poon, who made note the upgrade work will be monitored by engineers following construction.

"This is a great improvement, but not the end of all things because we don't know the flooding [patterns] or what the weather will be like," Poon said. "We will continue working with the band to evaluate whether this is going to perform as intended, or if we need to make further improvements if there's more moisture coming in."

Poon said 80 to 90 per cent of the project's employees will be residents of the Cree Nation.

Construction is expected to be complete in time for the melt in March.

URANIUM AND NUCLEAR



Cameco cuts production

The Northern Miner - Cameco is suspending operations in northern Saskatchewan at its world-class McArthur River uranium mine and Key Lake mill that processes McArthur River ore. Key Lake is the world's largest high-grade uranium mill.

Operations will be suspended at the two facilities in January 2018 and stay suspended for at least 10 months.

The workforce at the two operations will drop temporarily by 845 workers (560 employees and 285 contractors) while 210 workers (160 employees and 50 contractors) will maintain the idled facilities at a cost of around \$7 million per month. There could be more layoffs in the Saskatoon head office in positions that support the suspended operations.

"With the continued state of oversupply in the uranium market and no expectation of change on the immediate horizon, it does not make economic sense for us to continue producing at McArthur River and Key Lake when we are holding a large inventory, or paying dividends out of proportion with our earnings," Cameco's president and CEO Tim Gitzel said.

Uranium prices have fallen 70 per cent since the Fukushima nuclear disaster in Japan in 2011 that shut down the country's entire nuclear power system, which has only returned at a few power plant sites all these years later. This demand drop was compounded by the German government's Fukushima-inspired decision to phase out nuclear power.

Calendar Of Events



Restoration for Resilience: Ecological Restoration in the 21st Century
February 13, 2018, Vancouver, BC
www.serwc2

Regina Construction Association Breakfast Café Series: Best Value Construction Procurement
February 20, 2018, Regina, SK
www.rcaonline.ca/education/breakfast-cafe-series/

Regina Construction Association: The Art of Leadership
February 22-23, 2018, Regina, SK
www.rcaonline.ca/core-course-leadership-description

The Complete Professional: Elevate Your Own Brand
February 23, 2018, Vancouver, BC
www.egbc.ca

International Conference on Water Management Modeling
February 28 - March 01, 2018
Brampton, ON
www.icwmm.org

APEGS Spring 2018 Professional Development Days
March 1-2, 2018, Regina, SK
www.apegs.ca

Production, Transportation, Placement, and Quality Control for Asphalt Concrete Pavements
March 05, 2018, Vancouver, BC
www.egbc.ca

Iron Ring Ceremony, Kipling Camp #2
March 10, 2018, Regina, SK
www.uregina.ca/engineering/events/index.html

Canadian Water Resources Association SK Branch: Balancing Act: Multipurpose Water Management and Species at Risk
March 13, 2018, Webinar
cwrskbranch.wixsite.com/webinars

GLOBE Forum 2018
March 14, 2018, Vancouver, BC
www.globeseries.com/forum

Iron Ring Ceremony, Kipling Camp #4
March 17, 2018, Saskatoon, SK
www.engineering.usask.ca/alumni-and-friends/

2018 SustainTech Conference
March 28, 2018, Saskatoon, SK
www.seima.sk.ca/event-2682616

Saskatoon Construction Association Members Gala
April 20, 2018, Saskatoon, SK
www.saskatoonconstruction.ca/education-events

88th APEGS Annual Meeting
May 03, 2018, Saskatoon, SK
www.apegs.ca

2018 CCWESTT Biennial Conference
May 31, 2018, Edmonton, AB
ccwestt2018.com

RFG 2018 Conference - Energy, Minerals, Water, Earth
June 16, 2018 Vancouver, BC
rfg2018.org