

JULY/AUGUST 2018

ENGINEERING DIMENSIONS

DAVID BROWN
ENGINEER, FAMILY MAN,
MAVERICK

ALSO INSIDE:
2019 Council nominations
& elections information



Professional Engineers
Ontario

whatif you're losing your employee group benefits?



Bridge

Guaranteed acceptance if you apply within 60 days of your group plan expiring*.

NEW Professional Retiree

Health & Dental Insurance Plan

Base

Your acceptance is guaranteed*.

Comprehensive

The highest maximum coverage we offer.

If you're retiring, self-employed or starting your own business, Engineers Canada now offers three NEW Professional Retiree Health & Dental coverage options. They can help offset many expected and unexpected out-of-pocket health care costs not normally covered by your public health insurance plan.

See how the Professional Retiree Health & Dental Insurance Plan can help you.

1 877 598-2273 | www.professionalretiree.com/PEO



*No medical exam or questionnaire required when you apply.

Underwritten by The Manufacturers Life Insurance Company. Manulife and the Block Design are trademarks of The Manufacturers Life Insurance Company and are used by it, and by its affiliates under licence. © 2018 The Manufacturers Life Insurance Company. All rights reserved.

The Manufacturers Life Insurance Company

ENGINEERING DIMENSIONS



28



34



WEB EDITION

Read *Engineering Dimensions* from anywhere!

Visit engineeringdimensions.ca for all the latest content in an

easy-to-read website format, plus archived articles, social media buttons, a search function and a text-focused template for those who use text-to-speech readers.

FEATURES

- 28 **PUSHING THE ENVELOPE**
By Marika Bigongiari
- 34 **BEYOND THE BLUE PAGES**
By Michael Mastromatteo

SECTIONS

ASSOCIATION BUSINESS

- 5 Editor's Note
- 6 President's Message
- 18 2019 Order of Honour
Call for Nominations
- 41 2019 Council Elections Call for
Candidates, Voting Procedures
and Election Publicity Procedures
- 51 In Council

NEWS AND COMMENTARY

- 7 2018 AGM celebrates achievement tinged with note of caution; Technological innovation invites new thinking on regulatory control; PEO's 2018 AGM; Leadership development becoming new norm for volunteers; PEO presents S.E. Wolfe and V.G. Smith awards; Order of Honour recipients celebrated at gala; 2018 Sterling award recipient is Michael Burdett; Former PEO president takes on Engineers Canada role; Education conference participants focus on moving full STEAM ahead; Advocacy group urges P.Engs to step up policy-influencing work; Risk assessment has role in measuring effective regulation; Water infrastructure topic of debate at Ottawa sustainability symposium

- 26 Datepad
- 27 Profile: Taking the beauty industry by storm
- 39 Viewpoint: Raising the regulatory bar
- 48 Awards
- 54 Letters

PROFESSIONAL ISSUES

- 24 Professional Practice: Five situations when practitioners should seek early legal advice

ADVERTISING FEATURES

- 52 Professional Directory
- 53 Ad Index

ON THE COVER

- 41 2019 Council nominations and elections information

Cover: David Brown, P.Eng., BDS, C.E.T., is PEO's 2018-2019 president.

PEO CONTACTS

PUBLICATIONS STAFF

Director, communications

David Smith
416-840-1061
dsmith@peo.on.ca

Editor

Nicole Axworthy
416-840-1093
naxworthy@peo.on.ca

Associate editor

Michael Mastromatteo
416-840-1098
mmastromatteo@peo.on.ca

Associate editor

Marika Bigongiari
416-840-1062
mbigongiari@peo.on.ca

Senior graphic designer

Stephanie Katchmar
416-840-1063
skatchmar@peo.on.ca

Graphic designer

Cindy Reichle
416-840-1067
creichle@peo.on.ca

Manager, communications

Duff McCutcheon
416-840-1068
dmccutcheon@peo.on.ca

Digital communications coordinator

Emilia Di Luca
647-259-2271
ediluca@peo.on.ca

ADVERTISING SALES

Manager, sales

Beth Kukkonen
bkukkonen@dvtail.com
Dovetail Communications
30 East Beaver Creek Road
Suite 202
Richmond Hill, ON L4B 1J2
Tel: 905-886-6640
Fax: 905-886-6615

EXECUTIVE

Interim registrar

Johnny Zuccon, P.Eng., FEC
416-840-1102
registrar@peo.on.ca

Senior executive assistant

Becky St. Jean
416-840-1104
bstjean@peo.on.ca

LICENSING AND REGISTRATION

Deputy registrar, licensing and registration

Michael Price, MBA, P.Eng., FEC
416-840-1060
mprice@peo.on.ca

Manager, admissions

Moody Farag, P.Eng.
416-840-1055
mfarag@peo.on.ca

Manager, registration

Faris Georgis, P.Eng.
416-840-1056
fgeorgis@peo.on.ca

Manager, licensure

Pauline Lebel, P.Eng.
416-840-1049
plebel@peo.on.ca

Supervisor, examinations

Anna Carinci Lio
416-840-1095
acarincilio@peo.on.ca

REGULATORY COMPLIANCE

Deputy registrar, regulatory compliance

Linda Latham, P.Eng.
416-840-1076
llatham@peo.on.ca

Manager, enforcement

Cliff Knox, MBA, P.Eng.
416-840-1074
cknox@peo.on.ca

Manager, complaints and investigations

Ken Slack, P.Eng.
416-840-1118
kslack@peo.on.ca

TRIBUNALS AND REGULATORY AFFAIRS

Deputy registrar, tribunals and regulatory affairs

Johnny Zuccon, P.Eng., FEC
416-840-1081
jzuccon@peo.on.ca

Director, policy and professional affairs

Bernard Ennis, P.Eng.
416-840-1079
bennis@peo.on.ca

Manager, tribunals

Salvatore Guerriero, P.Eng., LLM
416-840-1080
sguerriero@peo.on.ca

Manager, policy

Jordan Max
416-840-1065
jmax@peo.on.ca

Manager, standards and practice

José Vera, P.Eng., MEPP
647-259-2268
jvera@peo.on.ca

CORPORATE SERVICES

Chief administrative officer

Scott Clark, B.Comm, LLB, FEC (Hon)
416-840-1126
sclark@peo.on.ca

Manager, government liaison programs

Jeannette Chau, MBA, P.Eng.
647-259-2262
jchau@peo.on.ca

Manager, engineering intern programs

Tracey Caruana, P.Eng.
416-840-1107
tcaruana@peo.on.ca

Director, people development

Fern Gonçalves, CHRL
416-840-1106
fgoncalves@peo.on.ca

Manager, secretariat

Ralph Martin
416-840-1115
rmartin@peo.on.ca

Manager, chapters

Matthew Ng, MBA, P.Eng.
416-840-1117
mng@peo.on.ca

FINANCE

Director, finance

Chetan Mehta, MS, MBA
416-840-1084
cmehta@peo.on.ca

Manager, financial services and procurement

Peter Cowherd, CPA, CMA
416-840-1090
pcowherd@peo.on.ca

INFORMATION TECHNOLOGY

Director, information technology

Michelle Wehrle
416-840-1111
mwehrle@peo.on.ca

Manager, information technology

Doria Manico-Daka
416-840-1109
dmanico-daka@peo.on.ca

Senior IT project manager

Paula Habas
416-840-1108
phabas@peo.on.ca

PEO COUNCIL

Officers

President

David Brown, P.Eng., BDS, C.E.T.,
IntPE, MCSCE
dbrown@peo.on.ca

Past president

Bob Dony, PhD, P.Eng., FIEE, FEC
bdony@peo.on.ca

President-elect

Nancy Hill, P.Eng., LLB, FEC, FCAE
nhill@peo.on.ca

Vice president (elected)

Marisa Sterling, P.Eng., FEC
msterling@peo.on.ca

Vice president (appointed)

Kelly Reid, P.Eng., IACCM CCMP
kreid@peo.on.ca

Executive Members

Michael Chan, P.Eng.
mchan@peo.on.ca
Ishwar Bhatia, MEng, P.Eng.
ibhatia@peo.on.ca

Councillors

Councillors-at-large

Roydon A. Fraser, PhD, P.Eng., FEC
rafraser@uwaterloo.ca

Kelly Reid, P.Eng., IACCM CCMP
kreid@peo.on.ca

Gregory Wowchuk, P.Eng.
gwowchuk@peo.on.ca

Northern Region councillors

Ramesh Subramanian, PhD,
P.Eng., FEC
rsubramanian@peo.on.ca

Serge Robert, P.Eng.
srobert@peo.on.ca

Eastern Region councillors

Ishwar Bhatia, MEng, P.Eng.
ibhatia@peo.on.ca

Guy Boone, P.Eng., FEC
gboone@peo.on.ca

East Central Region councillors

Thomas Chong, MSc, P.Eng., FEC,
PMP, FCAE

thomas.chong3@gmail.com

Keivan Torabi, PhD, P.Eng.

ktorabi@peo.on.ca

Western Region councillors

Lola Mireya Hidalgo, P.Eng., PMP
lhidalgo@peo.on.ca

Gary Houghton, P.Eng., FEC
ghoughton@peo.on.ca

West Central Region councillors

Warren Turnbull, P.Eng.

wturnbull@peo.on.ca

Lisa MacCumber, P.Eng.

lmaccumber@peo.on.ca

Lieutenant governor-in-council appointees

Michael Chan, P.Eng.
mchan@peo.on.ca

Lorne Cutler, MBA, P.Eng.
lcutler@peo.on.ca

Qadira C. Jackson Kouakou,
BA, BSW, LLB

qjackson@peo.on.ca

Tim Kirkby, P.Eng., FEC

tkirkby@peo.on.ca

Lew Lederman, QC

llederman@peo.on.ca

Iretomiwa Olukiyesi, P.Eng.

tolukiyesi@peo.on.ca

Nadine Rush, C.E.T.

nrush@peo.on.ca

Marilyn Spink, P.Eng.

mspink@peo.on.ca

Engineers Canada Directors

Annette Bergeron, P.Eng., FEC
abergeron@peo.on.ca

David Brown, P.Eng., BDS, C.E.T.,

IntPE, MCSCE

dbrown@peo.on.ca

Danny Chui, P.Eng., FEC

dchui@peo.on.ca

Christian Bellini, P.Eng., FEC

cbellini@peo.on.ca

Rakesh K. Shreewastav, P.Eng.,

AVS, FEC

rshreewastav@peo.on.ca

LEARNING THE HARD WAY

By Nicole Axworthy

ENGINEERING DIMENSIONS

Engineering Dimensions (ISSN 0227-5147) is published bimonthly by the Association of Professional Engineers of Ontario and is distributed to all PEO licensed professional engineers.

Engineering Dimensions publishes articles on association business and professional topics of interest to the professional engineer. The magazine's content does not necessarily reflect the opinion or policy of the Council of the association, nor does the association assume any responsibility for unsolicited manuscripts and art. Author's guidelines available on request. All material is copyright. Permission to reprint editorial copy or graphics should be requested from the editor.

Address all communications to The Editor, *Engineering Dimensions*, PEO, 40 Sheppard Avenue West, Suite 101, Toronto, ON M2N 6K9. Tel: 416-840-1093, 800-339-3716.

Engineering Dimensions is a member of Canadian Business Press.

Indexed by the Canadian Business Index and available online in the Canadian Business and Current Affairs Database.

US POSTMASTER: send address changes to *Engineering Dimensions*, P.O. Box 1042, Niagara Falls, NY, 14304.

CANADA POST: send address changes to 40 Sheppard Avenue West, Suite 101, Toronto, ON M2N 6K9. Canada Publications Mail Product Sales Agreement No. 40063309. Printed in Canada by Renaissance Printing Inc.

SUBSCRIPTIONS (Non-members)

Canada (6 issues) \$28.25 incl. HST

Other (6 issues) \$30.00

Students (6 issues) \$14.00 incl. HST

Single copy \$4.50 incl. HST

Contact: Marika Bigongiari, 416-840-1062, mbigongiari@peo.on.ca

Approximately \$5.00 from each membership fee is allocated to *Engineering Dimensions* and is non-deductible.



I'd imagine no other experience would increase the heart rate of an engineer quite like receiving a call from PEO's complaints department.

The good news is few engineers ever get that call, and fewer yet ever come face to face with PEO's Discipline Committee (DIC): Of the 63 complaints officially filed last year, only eight were referred to the DIC. Although the complaints and discipline processes are two of PEO's most important regulatory functions—they go hand in hand with the licensing of members—the ins and outs of these processes remain somewhat of a mystery to most licence holders.

In "Beyond the blue pages" (p. 34), we explore the DIC's role as an independent decision maker that hears and determines matters involving alleged incompetence or professional misconduct of licensees or certificate of authorization holders. In particular, we highlight the DIC's ongoing efforts to streamline its processes, especially as recent media—notably the *Toronto Star's* coverage of the College of Physicians and Surgeons of Ontario's mishandling of some discipline cases—adds pressure to an already sensitive balance between transparency and privacy when handling cases and meting out penalties that are not too lenient and not too harsh.

This issue we also introduce you to David Brown, P.Eng., BDS, C.E.T., PEO's new president for the 2018–2019 Council year and share full coverage of our annual general meeting events, including the business meeting (p. 7), where Brown took the oath of office; the luncheon keynote speaker (p. 8); the Volunteer Leadership Conference (p. 12) and the lavish Order of Honour gala (p. 14).

As you get to know President Brown through his President's Message columns this year (p. 6), you'll notice he isn't taking his new leadership role lightly. In fact, he's got a lot to say, particularly when it comes to his well-reasoned concerns for PEO's future as a self-regulating body. Find out how he plans to steer the organization in "Pushing the envelope" on page 28.

As we look ahead to the 2019 Council elections, everything you need to know to nominate members for next year's Council can be found starting on page 41. Be sure to make note of the important deadlines if you want to get involved.

And, sadly, we say goodbye to long-time Associate Editor Michael Mastromatteo, who retired—conveniently—the day after this issue's writing deadline. As many readers have noticed, Mastromatteo had countless bylines over his 13 years—that's 78 issues—with *Engineering Dimensions*. His journalistic sense and quiet determination will be missed. **e**



THIS ISSUE If self-regulated professions truly are losing the public's confidence, one blueprint for winning it back includes shoring up the justice area of operations. Here, we examine PEO's discipline system and what its volunteers are doing to keep adjudication matters above reproach. We also present insights into the hopes and expectations of new PEO President David Brown, P.Eng., BDS, C.E.T.

ENFORCEMENT HOTLINE Please report any person or company you suspect is practising engineering illegally or illegally using engineering titles. Call the PEO enforcement hotline at 416-840-1444 or 800-339-3716, ext. 1444. Or email enforcement@peo.on.ca.

Through the *Professional Engineers Act*, PEO governs licence and certificate holders and regulates professional engineering in Ontario to protect the public interest.

IS IT TIME TO SELF-DISRUPT?

By David Brown, P.Eng., BDS, C.E.T., IntPE, MCSCE



In May, the *Toronto Star* published “Medical Disorder,” an extensive three-part series investigating the lack of transparency around doctors’ disciplinary histories at several Canadian physicians’ colleges. The investigation looked at doctors licensed to practise in both Canadian and US jurisdictions and found several who, after

being disciplined by a US regulator, were able to establish Canadian practices with no hint of their US disciplinary history showing up in their Canadian licensing body’s practice profiles. While some of these doctors’ offenses were serious—including sexual assault of patients, drug trafficking and serious medical errors—the Canadian regulators’ privacy rules ensured this information was not made public, even though it was available to them.

The articles illuminate a growing distrust by the public in the perceived ability—and will—of Canadian professional regulators to fulfil their primary mandate of protecting the public interest.

Much of the recent attention has been paid to medical regulators—doctors, nurses, pharmacists, chiropractors, etc.—which makes sense given these professions’ up-close-and-personal touchpoints with the public, and the life and death consequences of their mistakes and ethical lapses. But non-medical professions have also received uncomfortable scrutiny from both the public and governments for perceptions that perhaps they’re not taking the privilege of self-regulation as seriously as they should. Consider recent examples:

- A 2014 *Toronto Star* investigation of the Law Society of Upper Canada suggested the regulator often failed to report crimes committed by lawyers who had been sanctioned by the law society for criminal offenses, including fraud, theft and forgery, to the police.
- The Ontario government’s removal of new home warranty corporation Tarion’s regulatory oversight of the province’s home builders.
- And, of course, the Quebec government placing l’Ordre des ingénieurs du Québec—Quebec’s engineering regulator—under trusteeship in 2014 after losing confidence in the body’s capacity to regulate the profession.

While these, and other, regulators have come under fire for different reasons, the questions they raise among the public and governments ultimately boils down to their effectiveness at regulating their own to protect the public.

And they raise questions about all self-regulated professions: Who are they protecting? The public or themselves?

PEO AT THE CROSSROADS

Fortunately, and for now, the engineering profession in Ontario has largely avoided such scrutiny but that does not

mean we are immune to it. The aforementioned example of Quebec’s engineering regulator confirms this.

Our saving grace is that, unlike medical professionals or lawyers, engineers typically don’t have the same kind of public touchpoints that could lead to charges of incompetence or ethical breaches by consumers. An engineer is not exposed to the same kind of risk of being accused of professional misconduct as, say, a doctor carrying out a physical exam on a patient, or a lawyer holding clients’ money in trust.

But after almost 100 years in this role, should we consider measuring our regulatory performance to ensure we’re maintaining our effectiveness in an environment that’s effectively undergoing a technology-based Fourth Industrial Revolution (largely driven by engineers!)? Should we be disrupting ourselves internally, while the heat is off, before we’re disrupted externally like many other regulators have already experienced? I believe we should. We must.

The good news is that we’re on the right track, especially with recent changes to the *Professional Engineers Act* that do much to satisfy the public’s growing demands for greater transparency by regulators. These changes include things like making licence holders’ disciplinary histories public on the PEO website; allowing the public to obtain copies of evidence in proceedings before PEO’s Discipline Committee; allowing the registrar to forward information, where there is a public safety concern, to appropriate regulators for further investigation or actions under that organization’s jurisdiction; and confirming PEO’s continued jurisdiction over suspended, cancelled and revoked licence holders.

Thanks to a member submission at the 2017 Annual General Meeting, PEO now has a Governance Working Group Phase 1 charged with evaluating if our current governance structure effectively serves the public interest, as well as evaluating potential risks of losing our self-regulatory status and relevancy as a licensed profession, among other things.

This is an excellent first step. However, undertaking a thorough regulatory performance review will help us determine if we’re effectively carrying out our primary objects as set out in the *Professional Engineers Act*: regulating the profession by establishing, maintaining and developing standards of knowledge, qualification, practice and ethics. And if we’re falling short in any way, a review will guide us to where we should be channeling resources to ensure we’re meeting and exceeding our regulatory requirements. I believe a review would be even stronger if we sought outside help from a regulatory performance expert who would provide an unbiased appraisal of our processes. We would not be leading the pack on this front, as many regulators in Ontario and Canada have already completed a performance review like this or are in the process of doing so.

We owe it to the public, the profession and future engineers to step back to reflect on our role, measure our effectiveness and make course corrections where necessary. It can only make for a stronger profession and more credible, relevant designations that are trusted and respected by the public. **e**

2018 AGM CELEBRATES ACHIEVEMENT TINGED WITH NOTE OF CAUTION

By Michael Mastromatteo

The Ontario engineering regulator hosted its 96th Annual General Meeting on April 21 at the Westin Harbour Castle Hotel in Toronto. Despite concern by PEO's new leadership about disruption on the horizon, a generally positive spirit pervaded the assembly following the previous evening's Order of Honour Awards gala (see p. 14), and the ideas-nurturing events at the April 20 Volunteer Leadership Conference (see p. 12).

As outgoing President Bob Dony, PhD, P.Eng., FEC, handed over the reigns to new President David Brown, P.Eng., BDS, C.E.T., there was a sense of continuity and shared understanding of the need to prepare the engineering regulator for some challenging constraints.

"When I stood for election two years ago, I ran on the platform of moving forward for a stronger profession to sum up my thinking on how I wanted to focus my efforts as PEO president," Dony said at the outset. "As I reflect on Council's work over the past year, I think we accomplished much to further this goal."

However, despite a past year of relative accomplishment, both Dony and Brown cautioned against PEO complacency. As the incoming president noted: "PEO is on the cusp of being disrupted as the exponential development of technology changes the face of the world we live in, by what is being termed as the Fourth Industrial Revolution."

Brown added that the status quo is no longer acceptable for engineering regulators. "For us to stick our collective heads in the sand and hope for the best is far from a prudent course of action," Brown said. "Engineering, as defined under our act, is being carried out all around us and will continue to expand, yet we are almost powerless to put a rope around it and to regulate it. As time advances, our ability to encapsulate these evolving fields will be limited by the resources available to us and, as such, the fence around our regulatory regime will continue to shrink."

Before Brown took the oath of office, the standard agenda of annual meeting activity held sway. This included the introduction of the 2018-2019 PEO Council, the adoption of the audited financial statements and the salute to retiring Council members. Retiring from Council are George Comrie, P.Eng., FEC, Christian Bellini, P.Eng., FEC, Michael Wesa, P.Eng., FEC, Dan Preley, P.Eng., Noubar Takessian, P.Eng., FEC, and Danny Chui, P.Eng., FEC.

The 2018 annual meeting included three submissions from members at large. The first submission from Juwairia Obaid, P.Eng., and seconded by Hasan Akhter, P.Eng., both from PEO's Etobicoke Chapter, called for a task force to consider a comprehensive leadership development program in support of PEO volunteers and potential leaders.

"For the future of our self-regulated profession, it is essential that PEO volunteers be given the opportunity and tools to develop and enhance the skills required to become PEO's visionary and progressive leaders," Obaid said in support of the submission.

The leadership development motion was approved by a wide margin.

Two complementary submissions came from Ray Linseman, P.Eng., FEC, of the Thousand Islands Chapter, the first calling for PEO chapters to be allowed to advertise local events by email, but in such a way as to avoid anti-spam legislation obstacles. The second Linseman



New PEO President David Brown, P.Eng., BDS, C.E.T., sporting the regulator's chain of office, makes a speech at PEO's annual general meeting in Toronto.

submission called on Council to allow all PEO volunteers the use of webmail accounts to improve member engagement and to facilitate greater communication between volunteers and PEO staff.

Both Linseman submissions were approved with large majorities.

Member submissions are not binding on Council but are brought forward to the Executive Committee for consideration.

In one case, a member submission by now President-elect Nancy Hill, P.Eng., LLB, FEC, at the 2015 Annual General Meeting led to Council's recent embrace of term limits and leadership development protocols. As outgoing President Dony described, "This is what happens: motions from the members can enact regulation changes for the profession."

In addition to the annual meeting member submissions route, Dony outlined other options for members to make their voices heard. These include bringing matters to Council's attention through the chapter executive or Regional Councillors Committee or by direct contact with the president, any member of Council or the registrar.

"You can even request that they be added to the agenda of an upcoming Council meeting by providing notice of the item and any accompanying materials to the corporate secretary three full weeks prior to the meeting," Dony added. "So, I encourage

you not to wait for the AGM to bring matters to Council but instead to do so whenever an issue of concern arises.”

Special guests attending this year’s annual meeting included then Engineers Canada president-elect and former PEO president Annette Bergeron, P.Eng., FEC, who outlined the vital link between provincial regulators and the national association. “PEO is critical to our success and we are there to serve the regulators in promoting and maintaining the interests, honour and integrity of Canadian engineers,” Bergeron said.

Other guests included Engineers Canada CEO Gerard McDonald, P.Eng. (former PEO registrar), Ontario Society of Professional Engineers President Jonathan Hack, P.Eng., and CEO Sandro Perruzza, Consulting Engineers of Ontario head Bruce Matthews, P.Eng., Engineers Without Borders CEO Boris Martin, as well as representatives from provincial engineering regulators.

This year’s annual meeting included a video-recorded greeting from Ontario Attorney General Yasir Naqvi, who praised the work of engineers across Ontario. “Our government is proud to support the important work of engineers and to collaborate with PEO Council to ensure safety, competitiveness and governance within the engineering community,” Naqvi said. “You are trusted leaders who offer sustainable solutions to make Ontario a safe place to play and work. As you know, March 1 marked the first official Professional Engineers Day in Ontario, a great milestone for the industry and the first of its kind in Canada. And while people benefit daily from your work as engineers, each year we can now recognize and truly appreciate your contributions to our communities and the economy.”

Before administering the oath of office to the new president, Dony reflected on highlights of the past year. He cited the regulator’s success in winning key amendments to the *Professional Engineers Act*, which strengthen PEO’s regulatory role and add transparency to certain operations. Dony also mentioned PEO’s endorsement of Engineers Canada’s 30 by 30 diversity campaign, the adoption of term limits for Council members, the 2018-2020 Strategic Plan and the upcoming public information campaign as other significant achievements of the past year.

Dony also saluted the work of former registrar Gerard McDonald, P.Eng., who in February took on the role of CEO at Engineers Canada. McDonald was succeeded by Interim Registrar Johnny Zuccon, P.Eng., FEC (see *Engineering Dimensions*, March/April 2018, p. 8).

“As much as we thank Gerard, we must thank Interim Registrar Johnny Zuccon for stepping in,” Dony said. “He has done a fantastic job so far in keeping the good ship PEO moving forward.”

In his first act as new president, David Brown welcomed new elected and appointed members of the 2018-2019 Council: President-elect Nancy Hill, Vice President (elected) Marisa Sterling, P.Eng., FEC, Councillor-at-Large Gregory Wowchuk, P.Eng., Northern Region Councillors Serge Robert, P.Eng., and Ramesh Subramanian, PhD, P.Eng., Eastern Region Councillor Guy Boone, P.Eng., FEC, East Central Region Councillor Keivan Torabi, PhD, P.Eng., Western Region Councillor Gary Houghton, P.Eng., FEC, and West Central Region Councillor Lisa MacCumber, P.Eng.

Brown later spoke of his grooming for the president’s office and the support derived from colleagues, family and PEO staff members. “I owe much of my gratitude to my mentors, George Comrie and Bob Dony, who have been instrumental in my education of all things PEO,” Brown said. “Some of you will agree with that education, some, perhaps not, but nonetheless it is what it is. As well, I give thanks to the senior management team here at PEO, the incredible staff, who have given of themselves tirelessly over the years. I really appreciate all their help, diligence and tireless efforts. In addition, I’d like to thank all my current and past Council colleagues and, of course, the multitude of volunteers before me that have helped form who I am today.”

TECHNOLOGICAL INNOVATION INVITES NEW THINKING ON REGULATORY CONTROL

By Michael Mastromatteo



Mark Abbott, P.Eng., executive director of the Engineering Change Lab, makes a presentation as the luncheon keynote speaker during PEO’s annual general meeting.

The high rate of technological innovation impels engineers to look for modernized regulatory regimes to ensure the public, and the profession itself, can adapt to new conditions.

Mark Abbott, P.Eng., executive director of Engineering Change Lab, issued the challenge April 21 as keynote speaker at a luncheon immediately following PEO’s annual general meeting.

The Engineering Change Lab is a collaborative forum of individuals and organizations dedicated to examining systemic weaknesses in the engineering profession and proposing ideas to better link technological innovation with the public interest. Operated under the auspices of Engineers Without Borders,

the change lab aims at promoting a global movement to update the purpose of engineering and its overall impact on society.

Abbott was specially selected by PEO President David Brown, P.Eng., BDS, C.E.T., for this year's keynote address due to Brown's concerns about disruption facing the engineering profession and its regulation.

The speaker outlined how technological innovation impacts society—and engineers—by citing the disruptive change inaugurated by the advent of electricity generation in the late 19th century. Although electricity brought obvious benefit to society, it also created opportunities for engineers to adapt the emerging technology for maximum effect. It also ushered in a whole new engineering discipline—electrical engineering—where before the profession consisted primarily of the mining, mechanical and civil disciplines.

"We are now at a point like that at the end of the 1800s, in that there is a fundamental shift happening with technology in society that is creating huge opportunity for us as engineers to step up and continue playing the central and vital role in the most important questions facing the future of society," Abbott said.

But the upheaval and disruption envisioned by the Engineering Change Lab involves more than just the safe utilization of new technologies, according to Abbott. Instead, engineers and other professionals across the social spectrum are being challenged to study new innovations, such as artificial intelligence, big data and the Internet of Things, and predict how they might be regulated and controlled for a greater public good.

"Just like the electricity example of the late 1800s, it's pretty obvious there is something big going on in the relationship between technology and society again," Abbott said. "The technologies seem like magic today because they are so new and so powerful, and it's mostly engineers and people with engineering degrees who are driving a lot of this technology. But as a profession, how are we embracing it all?"

Abbott cited the recent problems with Facebook's mishandling of subscribers' personal data to illustrate how technological innovation often outpaces government's ability to regulate it. In turn, he invited engineers and other custodians of technology to consider proactive regulation that might head off problems associated with exponential technological advance. He even suggested organizations like PEO try to take the lead in developing an innovative regulatory regime that would better protect the public good in an era of disruption.

"A lot of professional engineers are socialized to immunize themselves from the social, human side of their work," Abbott suggested. "But let's face it. All engineering projects have a human, societal dimension. It's up to us as leaders to meet these changing times in a proactive way."

Following Abbott's presentation, PEO President Brown reflected on the importance of the theme. "You will see that it was no accident that I asked Mark Abbott to speak today," Brown said. "What I really want to look at is moving that [regulatory] bar and looking at us as a regulator, what the government is expecting of us, and how that parallels our ability to handle it."

PEO WOULD LIKE TO THANK THE SPONSORS OF ITS 2018 AGM WEEKEND:

Consulting Engineers of Ontario
Manulife Financial
Ontario Power Generation

TD Insurance Meloche Monnex
The Personal

E P I C LEARN. GROW. SUCCEED.

- EPIC courses provide **CEUs/PDHs** and are designed and taught by experienced leading professionals
- **TECHNICAL EXAM** Preparation Courses prepare you for Engineering Exams
- Require Team training? Consider our cost-effective **ON-SITE TRAINING** program
- Earn **PEAK** requirements
- EPIC covers a wide range of disciplines, visit our website to learn more.

FREE WEBINAR
HIGH IMPACT PRESENTATION SKILLS FOR CAREER ADVANCEMENT

EPICTRAINING.CA/SKILLS

1.866.754.3588 // epictraining.ca/ed



PEO's 2018 AGM



PEO members Bilal Sherazi, P.Eng. (left), of the Toronto Humber Chapter and Gil Galang, P.Eng., of the Kingsway Chapter chat during a coffee break at PEO's annual general meeting.



President-elect Nancy Hill, P.Eng., LLB, FEC (left), speaks with AGM luncheon keynote speaker Mark Abbott, P.Eng.



PEO's Interim Registrar Johnny Zuccon, P.Eng., FEC (left), and outgoing President Bob Dony, PhD, P.Eng., FEC (right), present a farewell gift to outgoing Past President George Comrie, P.Eng., FEC.



From left: Murad Hussain, P.Eng., of the Scarborough Chapter, Ravinder Panesar, P.Eng., of the Brampton Chapter, and Juwairia Obaid, P.Eng., of the Etobicoke Chapter catch up during PEO's annual general meeting.



Outgoing President Bob Dony, PhD, P.Eng., FEC (right), poses with his wife, Lisa, at the annual general meeting.



Eastern Region Councillor Ishwar Bhatia, P.Eng., speaks to a member motion during PEO's annual general meeting.



Hari Ahmadzai, P.Eng. (left), of the Chatham-Kent Chapter catches up with Asif Khan, P.Eng., of the Windsor-Essex Chapter during the annual general meeting in Toronto.



West Toronto Chapter members Ammar Nawaz, P.Eng. (left), and Catharine Hancharek, P.Eng. (right), with Ontario Society of Professional Engineers President and Chair Jonathan Hack, P.Eng.



Former PEO president Mary Jane Phillips, P.Eng. (left), sits with Enforcement Committee member Roger Barker, P.Eng., at PEO's annual general meeting.



Len White, P.Eng. (left), CEO and registrar of Engineers Nova Scotia, catches up with Annette Bergeron P.Eng., FEC, Engineers Canada then president-elect.

LEADERSHIP DEVELOPMENT BECOMING NEW NORM FOR VOLUNTEERS

By Michael Mastromatteo

PEO continues to provide opportunities for leadership development not only for its core of volunteers but also for its 82,000 licence holders.

As was evident at the April 20 Volunteer Leadership Conference at the Westin Harbour Castle Hotel in Toronto, Ontario, the engineering regulator is keen to recruit and develop new talent in its day-to-day operations. For the past six years, the conference has become a venue for committee and chapter volunteers to work together and share best practices on how to assist the regulator in fulfilling its mandate. Many PEO Council members take part in the conference to apply some of the learning to their committee or Council work.

The theme for the 2018 conference was “Effective leadership through succession planning,” which reflects one of the nine key objectives captured in PEO’s 2018-2020 Strategic Plan. Strategic objective number 7, under the “advancing PEO’s mission” focus area, calls for PEO-specific leadership values consistently practised by volunteers, and encouraged by way of recruitment, training, mentoring, term limits and succession planning.

The facilitator for the day’s events was leadership advisor David Irvine of Alberta, author of six books on empowering leaders and enhancing corporate culture.

Irvine also presented at the 2017 Volunteer Leadership Conference in Thunder Bay, Ontario, on a “building leadership capacity” theme.

In his welcome remarks, outgoing PEO President Bob Dony, PhD, P.Eng., FEC, reiterated the importance of volunteers to the regulator’s ongoing operations. “PEO cannot function without its volunteers,” Dony said. “Our volunteer base is a vital part of who we are and how we regulate the profession on behalf of the people of Ontario.”

The day-long conference included breakout sessions for participants to draw up individual succession plans and share the highlights with the entire forum. The afternoon portion featured additional small group sessions dedicated to formulating novel succession efforts for PEO and for chapter and committee activity.

In his wide-ranging presentation, Irvine said it’s important for volunteers and association members to get a feel for the corporate culture as they consider volunteering and recruitment efforts. In that way, corporate values are enlivened among current leaders and volunteers and, in turn, passed on to successors.

“Taking care of your corporate culture is like taking care of your health,” Irvine said. “Every so often you have to assess your condition, throw out what isn’t helping and be open to new ideas and practices that encourage others to participate.”

Irvine also suggested transferring personal and corporate values to new leaders is an ideal form of succession planning—something PEO has determined to be a priority going forward.

Other guests at the conference included Ontario Society of Professional Engineers President and Chair Jonathan Hack, P.Eng., who said ongoing networking is a key venue for engineers to better understand their profession and to become more engaged in its regulation and policy-setting.

Later in the day, Warren Turnbull, P.Eng., West Central Region councillor and chair of the Conference Planning Committee, said PEO



Corporate leadership advisor David Irvine was facilitator for the 2018 Volunteer Leadership Conference.

New PEO President David Brown, P.Eng., BDS, C.E.T. (left), took part in a succession-planning exercise at the conference. With him are Saskatchewan engineering regulator Registrar Bob McDonald, P.Eng., FEC, and PEO Interim Registrar Johnny Zuccon, P.Eng., FEC.

is lucky to have a dedicated core of volunteer leaders. Nonetheless, he added, the annual Volunteer Leadership Conference won’t serve its purpose without participants making a commitment to its objectives. “Our facilitator, David Irvine, has empowered us to make our chapters and committees stronger and better managed,” Turnbull said. “And keeping in mind the strategic plan’s emphasis on leadership development and succession planning, volunteers can help our association build a greater legacy.”



PEO President David Brown, P.Eng., BDS, C.E.T., presented this year's S.E. Wolfe Thesis Award to Abner Ocampo, P.Eng., and the V.G. Smith Award to Lawrence William Green, P.Eng.

PEO PRESENTS S.E. WOLFE AND V.G. SMITH AWARDS

The annual general meeting luncheon event is also the venue for the presentation of PEO's annual S.E. Wolfe Thesis Award and V.G. Smith Award. This year's S.E. Wolfe Thesis Award, which is presented to a member who has passed at least one PEO exam and whose thesis has been awarded the highest mark of those presented during the year, went to Abner Ocampo, P.Eng., a mechanical engineer with the St. Lawrence Seaway Management Corporation, for his engineering report *Rehabilitation*

and Design Improvement of Moveable Bridge Buffers and Span Locks. He received a mark of 99 per cent.

The V.G. Smith Award, which is presented to an engineer who has achieved registration during the past year by examination and possesses the highest standing of those completing exams that year, was presented to Lawrence William Green, P.Eng., of Ontario Power Generation. Green successfully completed 10 technical exams with an average of 84 per cent, and his highest scores were 97 per cent, 96 per cent and 93 per cent.

BITS & PIECES



The Avro Arrow, which debuted to much acclaim in 1957, reached a speed of nearly three times the speed of sound at an altitude of 60,000 feet but was cancelled by the Canadian government in 1959 due to budgetary concerns.

Photo: Library and Archives Canada



Prepare for PEO's Professional Practice Exam with OSPE's Examination Skills Preparation Program for International Engineering Graduates (IEG).

Course fee:

\$99 +HST

This excellent value includes:

- Required law textbook and course manual
- Supplementary exam booklet
- Free 1-year OSPE membership (based on eligibility)

The program will be offered September 2018 in the GTA, January 2019 in Ottawa and the GTA, and May 2019 in the GTA. Also stay tuned for a program in Kitchener/Waterloo in the Fall 2019.

To learn more or to apply, please visit: www.ospe.on.ca/ite-exam-prep or email avig@ospe.on.ca

Apply early – space is limited!

Funded by:



ORDER OF HONOUR RECIPIENTS CELEBRATED AT GALA

By Duff McCutcheon



PEO honoured G. Gordon M. Sterling Engineering Intern Award recipient Michael Burdett, EIT (top row, far left), and newly inducted Order of Honour recipients (top row, left to right) Georg Kralik, P.Eng., FEC, Christopher D. Roney, P.Eng., BDS, FEC, David Filer, P.Eng., FEC, Andrew Dowie, P.Eng., FEC, Changiz Sadr, P.Eng., FEC; and (bottom row, left to right) John Bray, P.Eng., FEC, Santosh Gupta, PhD, P.Eng., FEC, Jeannette M. Southwood, P.Eng., FEC, Lisa MacCumber, P.Eng., Rishi Kumar, P.Eng., FEC, and Galal Abdelmessih, P.Eng., FEC. Missing from the photo are Stela Stevandic, P.Eng., and Derek Van Ee, P.Eng., FEC.

Thirteen exceptional engineers and PEO licence holders were invested into PEO's Order of Honour on April 20 during the association's annual general meeting weekend in Toronto. The inductees were recognized by PEO and their peers for their long-time volunteer leadership at both the chapter and association levels and their contributions to the engineering profession.

Christopher D. Roney, P.Eng., BDS, FEC, was inducted as a Companion of the Order, while John Bray, P.Eng., FEC, David Filer, P.Eng., FEC, Santosh Gupta, PhD, P.Eng., FEC, Rishi Kumar, P.Eng., FEC, Changiz Sadr, P.Eng., FEC, and Jeannette M. Southwood, P.Eng., FEC, were invested as Officers. Another six recipients—Galal Abdelmessih, P.Eng., FEC, Andrew Dowie, P.Eng., FEC, Georg Kralik, P.Eng., FEC, Lisa MacCumber, P.Eng., Stela Stevandic, P.Eng., FEC, and Derek Van Ee, P.Eng., FEC—were inducted as Members.

The evening was attended by several special guests, including Annette Bergeron, P.Eng., FEC, then president-elect, and Gerard McDonald, P.Eng., CEO, Engineers Canada; Sandro Perruzza, CEO, Ontario Society of Professional Engineers; Bob McDonald, executive director and registrar, and Stormy Holmes, president-elect, Association of Professional Engineers and Geoscientists of Saskatchewan; Len White, CEO and registrar, and Rosalie Hanlon, director of outreach and partnerships, Engineers Nova Scotia; Andrew Cook, president, Engineering Student Societies' Council of Ontario;

Jane Welsh, president, and Aina Budrevics, executive director, Ontario Association of Landscape Architects; Kathleen Kurtin, senior vice president and treasurer, Ontario Association of Architects; Marisa Sterling, president and chair, Ontario Professional Engineers Foundation for Education; Bruce Matthews, CEO, and Rex Meadley, chair, Consulting Engineers Ontario; Boris Martin, CEO, Engineers Without Borders Canada; and Anna Kavanagh and Colin Harker of Order of Honour gala sponsor TD Insurance.

John Severino, P.Eng., chair of PEO's Awards Committee and himself a Member of the Order of Honour, was emcee for the awards presentations. "Tonight, we celebrate those who, through their voluntary service to Professional Engineers Ontario, have helped shape the association and the engineering profession," he said during his welcome speech. "As we pay tribute to this year's 13 honourees, we recognize those whose selfless work has helped to strengthen our self-regulated profession. Through their diligent efforts, tonight's inductees have made significant impact on engineering in their own communities, throughout our province and across the country. It is this professional attitude and service to the profession that distinguishes each of those we invest into the Professional Engineers Ontario Order of Honour."

The following are selections from the award recipients' acceptance speeches:

"Ladies and gentlemen, from the bottom of my heart, I have to say this is the absolute pinnacle of my volunteer career. To be inducted into the Order of Honour alongside so many other worthy recipients, both tonight and in years past, is a huge honour and has left me speechless—okay you're not getting off that easy!

I would like to thank my friends, colleagues and fellow volunteers who so kindly chose to nominate me. I will never forget that. And I'd like to thank the Awards Committee for selecting me for this great honour.

I have already been so rewarded because I've had the privilege and

honour over these past 20 years to learn so much from so many incredible people, many of whom are in this room tonight.

To have played a part in some monumental events in our profession has been a huge privilege for me. I'm so grateful for PEO to have given me these opportunities. And PEO really is all of us, for we, the members, are PEO.

I would like to extend a special thanks to my father, who is here tonight. He too is an engineer and has been my mentor both in my engineering work and in my volunteerism. He has guided and supported me and continues to do so, and I'm very grateful."

Christopher D. Roney, P.Eng., BDS, FEC (Companion)

"We in this room are privileged to be members of an incredibly complex profession. As engineers, we contribute to society in myriad ways that most people have no idea about and, frankly, take for granted. From the infrastructure needs of an ordered functioning society to the products we buy and the medical devices used to cure us and keep us healthy, engineers usually take a lead role and perform remarkably. I feel safe in saying the society can't live without us. Buckminster Fuller once said that, and I'll paraphrase, 'If we took all of the politicians out to sea on a barge and sunk it, the world would go on much the same as it had. If, on the other hand, we took all the engineers in the world out to sea on a barge and sunk it, the effect on society would be traumatic.'

We perform our duties with little fanfare and it's likely that we aren't adequately rewarded. Nevertheless, we love what we do and most of us couldn't imagine spending our lives doing anything else."

John Bray, P.Eng. (Officer)

"It is a great honour to receive this award for volunteering. Supporting PEO through volunteerism ensures we have a strong engineering voice in Ontario. To support PEO in its mission for high practice standards has been a great experience for me personally and professionally. It has influenced my work and assisted me in my dealing with my clients and the public—and it all happens because of the hard work of the [Complaints] Committee and its members. I have a deep admiration for my fellow committee members and PEO staff. They consistently demonstrate



**Two great universities,
one powerful way
to accelerate your career**





MEng in Design and Manufacturing
To learn more, visit admicanada.ca

commitment to ensure the highest standards of engineering practice are maintained with a clear vision of the committee's purpose. I was deeply honoured when I learned I was selected to be invested in the Order of Honour. I appreciate the nominations and all the work from fellow members. For my small contribution, it is quite humbling to be here tonight in the presence of other recipients.

Finally, I would like to express my gratitude for my colleagues and to my wife, Corinne, and son Jameson, who are here tonight. Thank you."
David Filer, P.Eng., FEC (Officer)

"I am delighted to be inducted into PEO's Order of Honour. I thank PEO for recognizing my 22 years of humble service to the profession. My gratitude and sincere thanks to my nominators: Yoga Rane Mahalingam, Andrew Hrymak, James McConnach, Patrick Quinn and Mohinder Grover. I want all of them to know that I have learned a lot from them over the years and I remain grateful for the ways each of them has influenced my professional and volunteer careers.

I'd like to share with you a harsh reality. In 1970, when I arrived from India with my wife and child, we had two suitcases and \$50. Arriving at the University of Waterloo for my PhD, I had a modest scholarship that was barely enough to keep us going and the time kept running. So, whatever I am today it is because of my profession. This has been the sole motivator for me to give back whatever I can to my profession and I intend to keep doing this through my volunteering services to the profession. Thank you."
Santosh Gupta, PhD, P.Eng., FEC (Officer)

"I would like to thank you for being here and sharing this award with me. I'm very honoured to receive this award for the spirit of volunteerism that is alive in all of us. It is the opportunity to volunteer that makes PEO great. I am sincerely grateful for the recommendation I received today for my work.

Volunteering at PEO and other organizations inspired me to get

involved, to build my skills and make some great friends. Along the way it provided an opportunity for me to learn from others, meet role models and take on leadership opportunities. I have faced several challenges but I turned them into opportunities that made me who I am today—a professional knowing exactly my goals and how to get there. I have deep respect for my colleagues, from whom I derived the strength to meet challenges. In closing, I would like to thank all of you and end with a quote: 'We make a living in what we get, but we make a life by what we give.'"

Rishi Kumar, P.Eng., FEC (Officer)

"Good evening. I am honoured to receive this award. First, I would like to thank my nominators, specifically George Comrie and David Kiguel, and the Awards Committee and PEO Council for recognizing me and giving me this award. Second, I would like to thank my family, my daughters, my sons and my grandchildren for their support. And, last but not least, I would like to thank my best friend for over 42 years, my wife, Jayran. Without her support and her unconditional love, I wouldn't have been able to stand here tonight. Thank you, Jayran. I love you!"
Changiz Sadr, P.Eng., FEC (Officer)

"I'm a first-generation engineer and during my career, I particularly appreciated the welcome when I began to volunteer for the profession, beginning with my local chapter, which was very active and open and welcoming to new ideas and new volunteers. Coincidentally, the chair of my local chapter at the time was Gordon Sterling, after whom the Sterling Award is named.

Thank you very much to PEO for the opportunities to contribute and for this wonderful evening that shines a light on our profession. Thank you to the Awards Committee and to the organizers of this event. And special thanks to the chapters and committees of PEO. Thank you to my colleagues in my work life and volunteer life, including my nominators: Marta Ecsedi, Paul Ballantyne, Catherine Karakatsanis, Ray Linseman and Cam Mirza.

And thank you to my family and friends for their support, encouragement and far-sightedness. As a co-worker, volunteer, family member, friend, I have been influenced by your leadership and vision, and I wouldn't be up here tonight if it wasn't for you."

Jeanette M. Southwood, P.Eng., FEC (Officer)

"Last year I attended the gala as a delegate for the Mississauga Chapter, the chapter to which I belong and where I have served on the Executive Committee since 2008. I really appreciate the opportunity that PEO gives its members to volunteer and be part of governing and shaping our profession. It's a great privilege that we should recognize as a privilege. It is not a right but something that we are lucky to have for our profession. We must act in such a way to make our profession the profession we would like and will be proud to belong to now and in the future. A lot of work is needed. Engineers today are the hope for the world's future. I have enjoyed volunteering at the chapter and PEO levels. At the chapter level I participated with the board and we served the profession as the chapter was designed to do."

Galal Abdelmessih, P.Eng., FEC (Member)

"Good evening everyone and thank you for being here tonight. It is a privilege and honour to be here among so many accomplished and respected engineers. I can't believe I'm here tonight; it's truly a night I never expected to happen. I did some research on other Windsor-Essex Chapter members who have achieved this and there are only about a dozen over the course of my time on Earth who have been named to the Order of Honour and it's a great privilege to be among them. I'm privileged to count many of them as my friends. It's such a great family that we have—especially at the chapter level. The Windsor-Essex Chapter is truly a family to

me and many are here tonight, which I really appreciate. In some ways it's a tough night for me. My father, James Dowie, would have loved to have been here. He considered engineering to be a truly noble profession and many of his friends were engineers, including some Order of Honour inductees. Unfortunately, he passed away late last year, but he would have been so proud to be here today. He always let me know what a noble calling engineering is."

Andrew Dowie, P.Eng., FEC (Member)

"I want to thank the PEO Awards Committee for bestowing me with this prestigious award and all my friends and colleagues who have found me worthy of this nomination. Many have asked me who encouraged me to become an engineer. After all, few of us get rich and we live in relative obscurity until something goes wrong. The most obvious answer is 'my father made me do it.' In the early 1950s, I was about six or seven and my father decided to teach me about thermal expansion on structural members, just by using a simple wooden matchstick. It was a hot summer day, and he provided no explanation—he just let me figure it out for myself. At home, fortunately, I had access to a very extensive technical library and I had always been very curious as a child.

Volunteering at the North Toronto and the West Toronto chapters, I embraced education outreach by guiding kids to discover basic engineering principles for themselves—the way my father taught me. There is nothing more rewarding than watching their eyes light up when they finally understand abstract concepts and can visualize them in everyday situations."

Georg Kralik, P.Eng., FEC (Member)

"I'm very honoured to be here tonight with all the other award-ees. I'd like to thank all the women who nominated me, and the Awards Committee and PEO Council for selecting me as a Member and deeming me worthy of this honour. I'd also like to thank my husband, Chris, for letting me do my own thing and putting up with all my extracurricular activities and taking care of the dog when I'm not around. Also, thanks to my parents, for encouraging me to go into engineering and setting a good example helping with the community. When I was a kid, my father took me on tours of the water plant where he was an operator, to explain how the drinking water was treated. And his friends took me 2500 feet underground at the Inco, now Vale, mines in Sudbury. They showed me that engineering had a practical side and how cross-functional teams and input from operations make for a better design and better engineers.

I hope to continue volunteering as a new member of Council and to continue mentoring and promoting female engineers. "

Lisa MacCumber, P.Eng. (Member)

"Many thanks to London Chapter for nominating me and PEO for selecting me for this prestigious award. In years to come, I would like to join PEO Council, as I feel there are many enhancements we can do to our profession."

Stela Stevandic, P.Eng., FEC (Member)

2018 STERLING AWARD RECIPIENT IS MICHAEL BURDETT



Outgoing President Bob Dony, PhD, P.Eng., FEC (right), presents the 2018 G. Gordon M. Sterling Engineering Intern Award to Michael Burdett, EIT, at this year's Order of Honour Awards gala.

This year's G. Gordon M. Sterling Engineering Intern Award recipient, Michael Burdett, EIT, was honoured for his leadership during PEO's Order of Honour gala on April 20 as part of the association's annual general meeting weekend in Toronto. Burdett was described as an enthusiastic and versatile leader with an ability to inspire and is known for providing a vision of the future and always coming through on deliverables.

Since graduating in 2014, Burdett has already utilized his technical skills to solve problems in his professional work. As a PEO volunteer, he is presently leading or assisting in nearly every project at the Etobicoke Chapter. In addition to his commitment of time and effort, Burdett brings passion to his volunteer work, whether it is organizing Engineering Idol competitions in high schools or dedicating time to the Government Liaison Program.

At work, his dedication to process safety management is a great example of his leadership. Passionate about the cause, Burdett practices a systematic approach to safety in a plant environment and is patient in helping others understand why safety matters. He is continually looking for improvements and, through involvement in many safety organizations, helps effect change in safety policy and culture.

CALL FOR NOMINATIONS

2019 ORDER OF HONOUR



The Order of Honour is an honorary society of Professional Engineers Ontario. Its purpose is to recognize and honour those professional engineers and others who have rendered conspicuous service to the engineering profession in Ontario.

**THE AWARDS COMMITTEE INVITES MEMBERS TO SUBMIT NOMINATIONS BY
OCTOBER 12, 2018, AT 4 P.M.**

For nomination forms and guidelines, visit PEO's website at www.peo.on.ca/index.php/ci_id/2085/la_id/1.htm

New members of the Order will be invested at a special ceremony at PEO's annual general meeting in Toronto next April.

Nominators should supply complete details on their nominee. Individual statements from each nominator must accompany the nomination.

Members and Officers of the Order who have continued serving and leading the engineering profession can be nominated for an upgrade to a more advanced category. A complete list of past recipients is available online at www.peo.on.ca.

FORMER PEO PRESIDENT TAKES ON ENGINEERS CANADA ROLE

By Michael Mastromatteo



Annette Bergeron, P.Eng., FEC, took over as president of Engineers Canada at the association's annual meeting of members on May 26.

The latest president of Engineers Canada has the distinction of being one of only two engineers to have former PEO president and former Ontario Society of Professional Engineers (OSPE) president on their resumé.

Annette Bergeron, P.Eng., FEC, was inducted as the 76th president of Engineers Canada on May 26 following Engineers Canada's annual meeting of members in Saskatoon, Saskatchewan.

Bergeron served as the sixth female president of PEO in 2013-2014. She is also a two-time past president and chair of the advocacy association (2004-2005 and 2009-2010). As well, Bergeron was recognized in 2013 and again in 2014 as among the Top 25 Women of Influence in Canada.

Bergeron is the 14th former PEO president elected to the Engineers Canada presidency. Others since 2002 to hold both roles include Gord Sterling, P.Eng., FEC, Ken McMartin, P.Eng., FEC, and Catherine Karakatsanis,

P.Eng., FEC. Karakatsanis is the only other engineer to have led PEO, OSPE and Engineers Canada.

Bergeron has served as a PEO director on the Engineers Canada board since 2016.

The new Engineers Canada leader said these are "pivotal times" for engineering regulation in Canada. Speaking at PEO's annual general meeting on April 21, Bergeron emphasized the strong links between the national association and the provincial/territorial engineering organizations. "Right now, we are focused on giving more purposeful shape to the work done by Engineers Canada for each of the regulators," she said. "In the area of regulatory excellence, Engineers Canada is here to support [PEO] and the other groups across the country. Together, we can position the engineering profession in Canada as a world leader in innovation and high standards."

In her addresses to other engineering regulators in April and May, Bergeron has emphasized the Engineers Canada role in monitoring best practices across the country and sharing them with smaller regulators who might not have the same resources as Ontario, Quebec, British Columbia and Alberta. She has also cited the national association's work in promoting the engineering profession among government leaders, policy makers and the public.

"Nationwide collaboration is no small accomplishment," Bergeron said, "and I am looking forward to spearheading this initiative from strategy to implementation."

Bergeron takes over from Past President Russ Kinghorn, P.Eng., FEC, principal at Kinghorn Systems Engineering and a former president and senior executive at the Association of Professional Engineers and Geoscientists of British Columbia.

In a May 15 interview with *Engineering Dimensions*, Bergeron said a full agenda lies ahead. "As [Engineers Canada] president, I am excited about our new strategic plan and revamped purposes to better serve our owners, the regulators," she said. "Right away we'll get down to work creating new performance measures, the operational plan, and executing the plan."

Bergeron graduated from Queen's University in Kingston with a bachelor of science degree (metallurgical engineering), and from York University's Schulich School of Business with an MBA in strategic management and entrepreneurship and is currently principal of Bergeron Consulting. She was also a key member of a PEO task force that recently developed the Ontario regulator's Practice Evaluation and Knowledge (PEAK) program.

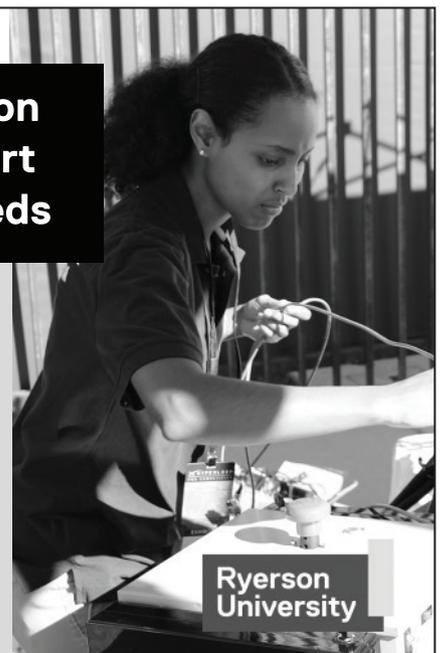
Learn how Ryerson Co-op can support your business needs

Access top Ryerson talent while
engaging with tomorrow's
industry leaders with the
Ryerson Co-op program.

 (416)-979-5068

 ryecoop@ryerson.ca

ryerson.ca/co-op/employers/gettingstarted/



EDUCATION CONFERENCE PARTICIPANTS FOCUS ON MOVING FULL STEAM AHEAD

By Marika Bigongiari



Christina Klein, P.Eng., writes up presentation points during a breakout session at this year's PEO Education Conference, with (from left to right) Annabelle Lee, P.Eng., Chris Tucker, Sarah Majlesi, P.Eng., Matt Minnick, P.Eng., and Vajahat Bandy, P.Eng.

PEO's 2018 Education Conference, which took place on May 25 and 26, offered attendees access to expert science, technology, engineering, arts and math (STEAM) speakers and an opportunity to engage in fun activities and mingle with like-minded individuals. This year's theme, "Full STEAM ahead: Developing bright minds in science, technology, engineering, arts and math," explored the current state of STEAM education, how it fits into the school curriculum now and how it might in the future. The conference opened with welcome remarks from Manoj Shukla, EIT, and Sangeeta Shakrawar, EIT, masters of ceremonies for the evening. After an overview of goals from Education Conference Planning Committee Chair and incoming Education Committee Chair Paymon Sani, P.Eng., who told delegates technology is moving quickly and the best place to start catching up with it is with young minds, it was onto the presentations and passionate guest speakers.

PEO Councillor Iretomiwa Olukiyesi, P.Eng., who is also Council liaison to the Education Commit-

tee, kicked things off with a review of the structure of PEO Council, support for the Education Committee and its programs and how PEO is reaching out to young minds in the community. She explored promoting the value of a licence among students and aligning the Education Committee work plan with PEO's strategic plan.

Philip Sullivan, PhD, P.Eng., professor emeritus, Institute for Aerospace Studies, University of Toronto, gave a spirited talk on mathematics teaching in Ontario schools. Sullivan discussed the political landscape of mathematics teaching in grades 1 to 8, with an emphasis on ways to improve curriculum structure, teacher training and the use of problem-based learning versus direct instruction. Attendees then participated in an interactive musical icebreaker activity to encourage the use of their full STEAM skillset in imagination and design. Groups were asked to build musical instruments that could play a single note and ultimately performed as an ensemble to the amusement of all.

Day two of the conference featured speakers such as Jennifer Arp, Toronto District School Board trustee and vice chair, who shared her experience growing up as a self-described "STEAM-curious" child and a touching anecdote about how the STEAM door had been closed to her in the form of a discouraging word from the teacher of her first chemistry class, who told her, "All dancers take biology." Arp pointed out how STEAM has a key role to play in equity work, outlined how STEAM is incorporated into classrooms and schools and talked about exciting programs within the Toronto District School Board, including how STEAM education can be fostered and supported through a rapidly changing education environment. Using a particularly "STEAM-fabulous" school, John Polanyi Collegiate Institute, as an example, Arp discussed the importance of educational partnerships and how STEAM can be embedded into all aspects of school life. Arp is optimistic there's a better answer to how STEAM is incorporated into curriculum. She asked: "It's not just about tests—how do we build community?" Her answer: engagement.

It was onto an inspiring speech from Dorothy Byers, program manager, The Learning Partnership, and chair, FIRST Robotics Canada. Like Arp, Byers had the STEAM door figuratively shut in her face by a discouraging science teacher. "Kids need doors opened for them, not closed," she said, adding that she makes a point to tell young girls today, "If you see her, you can be her." Byers outlined how FIRST Robotics Canada has grown to engage students from grades 1 to 12 through a full family of programs that begin with building and programming LEGO robots right through to industry standard, full-sized machines in high school. Byers shared the national and international impact of FIRST and described how the program brings STEAM concepts to life and discussed the essential roles mentors and volunteers play in bringing the program to fruition. She stressed the importance of equity, diversity and inclusion and explained how they breed confidence and create opportunities for learning.

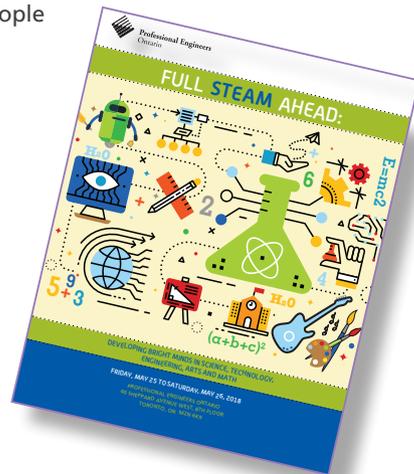
Rebecca White, EIT, operations manager, Engineers of Tomorrow, Engineers Without Borders, schooled the room on the Engineer-in-Residence (EIR) program—the innovative, volunteer-based program

dedicated to inspiring young people in the areas of science, technology, engineering and math. White encouraged engineers to get involved with EIR, pointing out opportunities to encourage students to get involved with STEAM at an early age.

Chris Meyer, vice president, teaching and learning, Ontario Association of Physics Teachers, and a high school physics teacher, gave an impassioned talk on the future of high school physics education. Meyer spoke of the challenges that come with high school physics being a required course for admission to most university engineering programs. He asserted physics—historically, the least popular of the high school sciences, with women and visible minorities noticeably underrepresented—is the barrier to gender parity in STEAM. Meyer shared that physics instruction at both the secondary and post-secondary levels is undergoing a revolution, saying an emerging science of learning is reshaping both how and why we teach physics, and how this holds promise for opening career prospects in engineering and various STEM disciplines to more students. The goal of STEAM education, Meyer said, is to turn novices into experts and to help them learn what real-life scientists and engineers do. He stressed the importance of eliminating fads in education and sticking to what works: scientifically informed pedagogy.

Next up were York Region District School Board curriculum consultants Erin Keyzers and Chris Tucker, who spoke about STEM and the contemporary educational setting. Keyzers and Tucker described the elementary and secondary classroom context by exploring the science and technological education curricula and shared examples of specialized Ministry of Education programs, such as the Specialist High Skills Major program that offers natural connection points between industry and schools, and, they suggested, the perfect place for PEO to land. They also examined the *Building the Workforce of Tomorrow* report to support the collaboration between PEO and schools, led participants through the relevant ministry documents and explored potential connections to their own work. The team suggested chapter events involving, for example, design challenges and mentoring with FIRST Robotics as perfect opportunities to get students involved with STEAM and PEO.

For one of the last activities of the day, and in the spirit of bringing STEAM into the classrooms, the room split into breakout sessions to offer conference delegates a forum to discuss the definition of STEAM and how it can be engaged at the primary, secondary and post-secondary education levels. Participants also had an opportunity to engage in engineering outreach demonstrations and activities, ranging from building using CAD, a robomaze activity and a seismic resistance structure contest.



ADVOCACY GROUP URGES P.ENGs TO STEP UP POLICY-INFLUENCING WORK

By Michael Mastromatteo

Ontario's engineering advocacy group is stepping up efforts to influence public policy and raise public and governmental awareness of the profession's societal benefits.

At its 18th annual general meeting on May 8 in Oakville, Ontario, the Ontario Society of Professional Engineers (OSPE) stressed the need to elevate the profession's profile and enhance community engagement to add value to OSPE membership.

Keynote speaker at the 2018 meeting was Ontario Labour Minister Kevin Flynn, who saluted OSPE for its creative advocacy work and for its efforts to promote diversity and inclusiveness within the profession. He also said OSPE's government relations activity leaves all three of Ontario's main political parties with a better understanding of engineers' contributions.

Later in the meeting, Flynn signed OSPE's new Engineering Ally pledge form, which commits political leaders to acknowledging engineers as trusted, ethical leaders creating solutions for complex social problems. Details of OSPE's Engineering Ally campaign, timed to coincide with the recent Ontario provincial election, formed a major part of information reported to members at the annual meeting.

Other guests at the meeting included PEO President David Brown, P.Eng., BDS, C.E.T., Bruce Matthews, P.Eng., head of Consulting Engineers of Ontario, Annette Bergeron, P.Eng., FEC, Engineers Canada then president-elect, Marisa Sterling, P.Eng., PEO vice president and president of the Ontario Professional Engineers Foundation for Education, and Greg Miller, C.E.T., president of the Ontario Association of Certified Engineering Technicians and Technologists.

OSPE President and Chair Jonathan Hack, P.Eng., said an emphasis on public engagement and policy influencing are key planks in the society's advocacy mandate. "Policy makers from all levels of government are also increasingly recognizing the importance of having engineers and the engineering voice at the policy-making table," Hack said. "After months of proactive outreach in 2017, OSPE gained unanimous consent from all three political parties at Queen's Park for the creation of the first-ever Professional Engineers Day in Ontario on March 1. Professional Engineers Day marks a major win for our members and an impor-



Then-Ontario Labour Minister Kevin Flynn (left) with Ontario Society of Professional Engineers (OSPE) President and Chair Jonathan Hack, P.Eng., at the advocacy association's annual general meeting. During the meeting, the labour minister endorsed OSPE's Engineering Ally program, which pledges MPPs and other political candidates to support Ontario's engineering profession.

tant day for professional engineers from coast to coast as the first day of its kind in Canada."

The annual meeting is the traditional venue to announce election results and introduce new members of OSPE's board of directors. In addition to Hack's reappointment as president and chair, newly elected OSPE directors include Jim Chisholm, P.Eng., Jerome James, P.Eng., Angela Woityla, P.Eng., and Laura Yu, P.Eng.

The 2018 annual meeting included presentation of OSPE's President's Award to recipients Paul Acchione, P.Eng., Valerie Davidson, PhD, P.Eng., and Steven Rose, P.Eng.

Advocacy and public policy-influencing work is becoming increasingly difficult as more stakeholders compete for government attention. As OSPE CEO Sandro Perruzza noted at the annual meeting: "The advocacy space at Queens Park is increasingly crowded as other professions seek support on their key initiatives. OSPE is mobilizing Ontario's engineers to unite to amplify the voice of our profession. We need to ensure the expertise of the engineer is front and centre so each of you is in a position to continue innovating and delivering solutions to society's complex challenges."



The Ontario Society of Professional Engineers 2018-2019 board of directors includes (back row, left to right) Laura Yu, P.Eng., Tibor Turi, P.Eng., Matthew Jelavic, P.Eng., Réjeanne Aimey, P.Eng., Jim Chisholm, P.Eng., and Shelly Deitner, P.Eng.; and (front row, left to right) Christina Visser, P.Eng., Jerome James, P.Eng., Jonathan Hack, P.Eng., and Emily Thorn Corthay, P.Eng. Missing from the photo are Ronald Clifton, P.Eng., and Angela Wojtyla, P.Eng.

RISK ASSESSMENT HAS ROLE IN MEASURING EFFECTIVE REGULATION

By Michael Mastromatteo



Richard Steinecke, LLB, discussed risk as a performance measurement tool at the May 9 CLEAR symposium in Toronto. At left is Lise Betteridge, registrar of the Ontario College of Social Workers and Social Service Workers.

Ontario's self-regulating professions would do well to develop risk identification metrics to measure their overall effectiveness in protecting the public interest.

The call for improved use of risk factors went forth at the Council on Licensure, Enforcement and Regulation (CLEAR) symposium on May 9 in Toronto, Ontario. The event was hosted by the Ontario College of Teachers, one of the largest of Ontario's regulated professions.

The theme of the 2018 Toronto regional symposium was "Measuring and reporting regulatory performance."

PEO President David Brown, P.Eng., BDS, C.E.T., Interim Registrar Johnny Zuccon, P.Eng., FEC, and President-elect Nancy Hill, P.Eng., LLB, FEC, represented PEO at the symposium.

Brown, who has identified threats to self-regulation as a priority for his presidency, suggested resistance to change and intransigent council members could be a stumbling block in regulators' efforts to measure their performance.

Richard Steinecke, LLB, was keynote speaker at the symposium. Steinecke, whose Toronto law firm Steinecke Maciura LeBlanc has developed expertise in self-regulated professions, said it can be difficult to measure effectiveness of self-regulation without an understanding of the risks involved.

Whether it's actual risk to the public or to the association's reputation, there are few tools available to regulators to measure effectiveness, Steinecke said. Other than recording the number and types of complaints received, regulatory associations have only limited ways to analyze how they are doing.

Much of the debate at the CLEAR event focused on recent media reports of medical doctors either lying about their discipline history or being allowed to practise in Ontario under dubious accreditation checks. While these problems are associated with health-related associations such as the College of Physicians and Surgeons of Ontario, Steinecke said there are lessons there for all regulators.

He cited a recently released study by McMaster University Health Forum that examined modernization of oversight of the health workforce in Ontario. While the study focused on the province's 26 health-related regulators, it recommended risk analysis as a key element in measuring regulatory effectiveness.

Others to address the CLEAR group were Lise Betteridge of the Ontario College of Social Workers and Social Service Workers, Claude Balthazard of the Human Resources Professionals Association, David Collie of the Electrical Safety Authority, and Vincent Bowman and Maryan Gemus of the Ontario College of Pharmacists.

CLEAR is a US-based association advancing regulatory excellence across the professions. It hosts several regional conferences throughout North America, leading up to its annual educational conference and an international congress, this year scheduled for August 20 to 22 in Denver, Colorado.

CLEAR officials believe the primary objective of professional regulators is to serve and protect the public interest. Central to the public interest mandate is the mitigation and management of the risks associated with the practice of the profession or occupation. "Standards of qualification and practice are established, processes to deal with entry to practice complaints, discipline and enforcement are put in place, and members and the public are engaged via a range of communication channels," CLEAR leaders say. "But how can the regulator know if it is doing a good job? How can it know if it is mitigating and managing risk to an appropriate level?"

WATER INFRASTRUCTURE TOPIC OF DEBATE AT OTTAWA SUSTAINABILITY SYMPOSIUM

By Stéphane Venne, EIT, and Sucha Mann, P.Eng., FEC

On April 25, PEO's Ottawa Chapter hosted its bi-annual Sustainability Symposium, an event that seeks to gather engineers, facilitate a discussion of existing and emerging environmental sustainability issues and present strategies that can be applied in engineers' daily professional activities.

The April event focussed on water sustainability and included presentations from Roberto M. Narbaitz, PhD, P.Eng., environmental engineering professor, University of Ottawa, who discussed the challenges and benefits of climate resilient solutions in the design of sustainable water infrastructure. There was a special focus on the more frequent occurrences of algal and cyanobacterial blooms and how they impact water quality and treatment. Speaker Robert Dick, P.Eng., CEO, Canadian Lighting Company, presented on the impacts of artificial light at night (ATAN) on water source quality. He said ATAN has an impact on the predator-prey cycle, however, the solutions to its negative impact can be simple, low-cost, and are mostly political in nature.

The symposium sent a clear message that water is an invaluable resource that plays a crucial role in our economic, social and cultural development and has a direct impact on our quality of life. Current unsustainable industrial practices yield potentially toxic cyanobacterial blooms in drinking water sources, such as in Lake Erie.

In an effort to raise awareness about such issues, the Ottawa Chapter Sustainability Symposia are open to the public and consist of expert guest presentations followed by an open question-and-answer style discussion with an expert panel and a period for networking.

The idea for the symposiums came to Sucha Mann, P.Eng., FEC, an executive of the Ottawa Chapter, at PEO's 2006 Annual General Meeting when Phil McNeely, P.Eng., MPP (Ottawa-Orleans), gave a talk on sustainable energy. In his presentation, McNeely discussed how coal lobbies have influenced governments across North America, including Ontario's provincial government, preventing the development and adoption of cleaner and healthier energy options. Mann was fascinated by how McNeely openly challenged his own government ministers to be responsible for protecting the environment.

McNeely supported the sustainability symposium initiative and helped its development. Over the years, numerous individuals from the PEO member community, research institutes, universities, and consulting companies across Canada volunteered their time to present on topics such as Ontario's *Green Energy Act*, solar energy technologies, and Tesla's Model-S electric car and the evolution of battery storage.

Ottawa's Sustainability Committee is interested in working with other PEO chapters to organize more Sustainability Symposia. Contact Ottawa Chapter Sustainability Committee Chair Sucha Mann at sucham@bell.net.

Stéphane Venne, EIT, and Sucha Mann, P.Eng., FEC, are members of PEO's Ottawa Chapter.

FIVE SITUATIONS WHEN PRACTITIONERS SHOULD SEEK EARLY LEGAL ADVICE

By José Vera, P.Eng., MEPP

Consider this scenario: A contractor, CON, wins a municipal contract to upgrade a water-pumping station and build a nearby combined sewer-overflow tank. The municipality, MUN, does not instruct its geotechnical engineering firm, GEO, to investigate the bedrock or groundwater at the site. Shortly after commencing the project, CON discovers an excessive amount of hydrogen sulfide gas emanating from the excavation. The hydrogen sulfide poses a threat to worker safety and can damage equipment. The existence of this gas was not disclosed in GEO's report, in the tender or in any contract document. CON submits various proposals to deal with the gas. To make matters worse, a dewatering subcontractor hired by CON informs them of a black sludge that was not identified in GEO's report. Subsequently, the Ministry of the Environment orders the dewatering shutdown. Consequently, CON sends a Request for Information to the engineering team of MUN seeking direction with respect to these unforeseen conditions. Nonetheless, MUN takes the position that the changed conditions resulted from CON's construction practices. Meanwhile, CON notes that extra work is required at this point and requests the terms of the contract be amended. Instead, MUN claims CON is in default of its contractual obligations and shortly after terminates the contract. A lawsuit ensues, and the judge determines that CON was not in breach of contractual obligations, and furthermore the termination was unlawful. Consequently, MUN is ordered to pay over \$2 million in damages and legal costs to CON.

If this case study sounds familiar, it's because it's inspired by *Kingdom Construction Limited v. Regional Municipality of Niagara, 2018 ONSC 29* (www.canlii.org/en/on/onsc/doc/2018/2018onsc29/2018onsc29.html), a case that teaches us that unlawful termination of a contract can be surprisingly expensive. Seeking legal advice early may help practitioners mitigate—or better yet—avert similar situations. Below are five common situations that require early involvement of their organization's legal counsel due to the legal risks involved.

1. A CLIENT WANTS TO TERMINATE THE CONTRACT FOR A PROJECT

PEO's practice advisory team often receives queries from practitioners regarding their professional obligations when a client wants to terminate a contract for a project. Surprisingly, PEO practice guidelines are silent in this matter because if termination of a contract is unlawful, serious consequences could result. Consequently, if a client notifies a practitioner of their intent to terminate a contract, the practitioner should immediately consult with its organization's legal counsel to ensure contractual obligations are properly observed. But perhaps ideally, the practitioner and legal counsel should discuss any possible steps to keep the client to avoid the complications of a terminated contract.

If, after terminating the contract, the client wants to transfer a project to another practitioner—in this case, another engineering firm—both the original practitioner and the new practitioner should seek advice early from their respective legal counsel to both adequately address intellectual property issues and clearly delineate the different responsibilities of both practitioners.

2. THE PRACTITIONER CONSIDERS HAVING THEIR FIRM WALK AWAY FROM A PROJECT

Often, the practice advisory team receives calls from frustrated practitioners who are considering having their engineering firm walk away from a project. In other words, they want to fire a client due to:

- Perceived unrealistic demands from a client;
- Contractual disputes; and/or
- Non-payment or late payment.

Once again, PEO practice guidelines are unfortunately silent in this matter. Therefore, the practitioner must use professional judgment when proceeding. However, considering that terminating a contract can have serious consequences, practitioners should think twice and consult their firm's legal counsel to review all available options. For example, if non-payment is an issue, it may make better business sense for an engineering firm to finish a project and then seek payment, for walking away could be subject to legal action for unlawful breach of contract.

3. ASSUMING A PROJECT STARTED BY ANOTHER PRACTITIONER IN ANOTHER ENGINEERING FIRM

The PEO guideline *Professional Engineering Practice* (www.peo.on.ca/index.php/ci_id/22127/la_id/1.htm) notes the *Professional Engineers Act* imposes no special obligations exclusively for practitioners taking on projects that were started by a practitioner whose contract had been terminated. However, as previously noted, both the original practitioner and the new practitioner should seek early legal advice to both address copyright issues and agree on a clear delineation of responsibilities with the client before the project is transferred to the new practitioner's engineering firm.

4. SHOULD A PRACTITIONER TAKE ON A PROJECT STARTED BY ANOTHER ENGINEERING FIRM IN THE FIRST PLACE?

Taking on a project that was started by another engineering firm is not a simple task, especially if there is no clear agreement on what parts of the design or engineering work belong to whom and who will be responsible for what. Adding to the complications, PEO practice guidelines are silent on how to effectively transfer an engineering project from one practitioner to another. Consequently,

taking on another engineering firm's project is a clear-cut situation where practitioners should reasonably rely on their legal counsel for advice. If the engineering, business and legal risks are significant, practitioners should consult with their legal counsel to determine whether it is best to refrain from taking on such a project.

5. OBTAINING A LEGAL REVIEW BEFORE ACCEPTING AGREEMENTS

The above-mentioned scenario demonstrates the potentially high costs of a contractual dispute in an engineering project. Therefore, your first step should be to review your agreement with legal counsel to both help identify contractual risks in a project and find ways to mitigate and limit liability. For example, agreements can include provisions to resolve disputes via arbitration or mediation as alternatives to the court system. Once civil liti-

gation has begun, it may be too late to find an amicable negotiated solution. Consequently, the best time to retain legal counsel is before accepting an agreement.

Finally, PEO as a regulator cannot offer legal advice. Nevertheless, the practice advisory team often receives calls from practitioners who need legal advice. Our standard response is for practitioners to contact their organization's legal counsel. However, since some organizations may not have a full-time legal counsel, practitioners should contact the Law Society Referral Service (www.lsuc.on.ca/zlsrs) to obtain professional legal assistance. [e](#)

José Vera, P.Eng., MEPP, is PEO's manager of standards and practice.

ARE YOU AN **ENGINEERING INTERN** THINKING ABOUT **DEVELOPING YOUR LEADERSHIP SKILLS?**

YOU MAY BE A CANDIDATE FOR THE G. GORDON M. STERLING ENGINEERING INTERN AWARD

Introduced in 2010, this award:

- was created to promote, encourage and celebrate the professional leadership of engineering graduates registered in PEO's EIT program
- is named for G. Gordon M. Sterling, P.Eng., PEO president (2001-2002), who believed strongly in the value of leadership development among P.Engs as a means to enhance their careers, and contribute to society and the governance of the profession
- provides up to \$3,500 to offset expenses associated with leadership development pursuits

To apply:

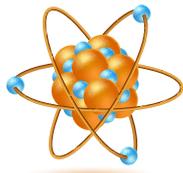
- application guidelines and forms available at www.peo.on.ca
- deadline: Friday, October 12, 2018, at 4 p.m.

For more information:

email sterlingaward@peo.on.ca, call 416-224-1100 or 800-339-3716



July 2018



JULY 22–26
International Conference on Nuclear Engineering, London, England
asme.org/events/icon

JULY 23–25
Unconventional Resources Technology Conference, Houston, TX
urtec.org/2018



JULY 29–AUGUST 1
ASABE Annual International Meeting, Detroit, MI
asabemeetings.org

JULY 29–AUGUST 3
CLEO Pacific Rim: Lasers and Electro Optics, Hong Kong
cleopr2018.org



August 2018



AUGUST 12–15
International Low Impact Development Conference, Nashville, TN
lidconference.org

AUGUST 5–9
IEEE Power & Energy Society General Meeting, Portland, OR
pes-gm.org/2018

AUGUST 20–23
Resilience Week: ICS/SCADA and Cybersecurity Across the Critical Infrastructure, Denver, CO
resilienceweek.com

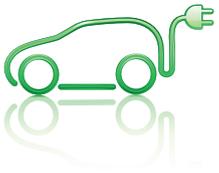
AUGUST 12–17
International Conference and 69th International Executive Council Meeting of the International Commission on Irrigation and Drainage, Saskatoon, SK
icid2018.org



AUGUST 21–24
NanoEngineering for Medicine and Biology, Los Angeles, CA
asme.org/events/nemb

AUGUST 23
McMaster Engineering, Technology, Research & Innovation Conference, Hamilton, ON
egs.mcmaster.ca/events/metric-2018

AUGUST 26–29
International Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Quebec City, QC
asme.org/events/idetccie



AUGUST 27–30
International Technical Conference and Exhibition on Packaging and Integration of Electronic and Photonic Microsystems, San Francisco, CA
asme.org/events/interpack



AUGUST 27–31
Data Science Bootcamp, Toronto, ON
datasciencedojo.com/bootcamp



AUGUST 29–30
The Water Expo, Miami, FL
thewaterexpo.com

September 2018

SEPTEMBER 10–12
Smart Materials, Adaptive Structures and Intelligent Systems, San Antonio, TX
asme.org/events/smasis

SEPTEMBER 10–13
SPIE Remote Sensing, Berlin, Germany
spie.org/conferences-and-exhibitions/remote-sensing



TAKING THE BEAUTY INDUSTRY BY STORM

Parham Aarabi, PhD, LEL, is the founder and CEO of ModiFace Inc., a company filled to the rafters with engineers who are leading a tech revolution in Toronto.

By Marika Bigongiari

When a technology comes onto the scene and revolutionizes an industry, the big players take notice. And that's something ModiFace Inc. Founder and CEO Parham Aarabi, PhD, LEL, knows all about.

ModiFace is a Toronto-based company that uses augmented reality and artificial intelligence to create advanced facial-modelling and facial-simulation software for the beauty and medical industries, offering a technology the world has never seen before. Although the technology was initially created for the medical industry—and the company counts pharmaceutical companies among its core client demographic—ModiFace soon recognized a gap they could fill in the behemoth cosmetics industry. “We realized a long time ago there was a need for augmented reality for the face—making simulations on live video that can change someone’s hair or lip colour or simulate skincare effects on the face,” Aarabi explains. “That’s what ModiFace does.”

Anyone who picks up a smartphone and uses an app that incorporates ModiFace’s technology can look at themselves in real time and apply different makeup looks, like pick alternate shades of lipstick, eyeshadow or blush or even change their hair colour. The technology affords customers the opportunity to virtually try before they buy and is a perfect fit for the world of beauty, offering convenience and reducing waste by preventing erroneous purchases.

The technology works, and the industry took notice. ModiFace, which Aarabi founded 11 years ago, is now used by over 100 cosmetics brands and was recently acquired by cosmetics industry giant L’Oréal. Cosmetics-store chains like Sephora have already incorporated ModiFace’s augmented reality technology into their apps. Others, like MAC Cosmetics, are incorporating the technology into mirrors customers can peer into at MAC stores.

Aarabi sees the L’Oréal acquisition as a huge opportunity for the company to grow considerably and make a significant impact on the Toronto tech scene. “Beauty is one of these large, \$400-billion industries that’s being impacted by technology, and if you look at the epicentre, at a company that’s been making that technology revolution in beauty happen, the answer, often, is ModiFace, right here in downtown Toronto,” Aarabi says. “L’Oréal acquiring us is a testament that ModiFace is a significant player when it comes to beauty technology. The partnership with L’Oréal will only make us stronger. There will be more resources, more energy



Parham Aarabi, PhD, LEL, is founder and CEO of ModiFace Inc., a beauty tech company recently acquired by cosmetics industry giant L’Oréal. Photo: Johnny Guatto

and a lot more excitement to change the entire beauty industry, and, in doing so, make Toronto a centre for that revolution.”

With an already well-established career in tech, Aarabi, who holds a doctorate in electrical engineering from Stanford University and a master’s in computer engineering from the University of Toronto, is no stranger to that world. He is the inventor of numerous patents, author of over 150 peer-reviewed papers and two books, *The Art of Lecturing* and *Phase-Based Speech Processing*; and his work has appeared in *The New York Times* and *Scientific American* and on the Discovery Channel.

Recognized early in his career and frequently decorated, Aarabi is the winner of countless prestigious awards, such as the Premier’s Catalyst Award for Innovation (2008), Canada Research Chair in Internet Video, Audio and Image Search (2007), Ontario Early Researcher Award (2005), MIT’s Technology Review 35 Innovators under 35 (2005), IEEE Mac Van Valkenburg Early Career Teaching Award (2004), and Canada Research Chair in Multi-Sensor Information Systems (2002).

Aarabi is also an associate professor in the department of electrical and computer engineering at the University of Toronto, and ModiFace’s headquarters is located near the university in the downtown core. The company recently invested \$4 million in undergraduate and graduate internships as well as support for University of Toronto engineering research, and with 50 of the company’s 70 engineers coming from the university, there’s a significant connection that’s only likely to grow.

That connection isn’t lost on Aarabi, who expects the company to grow exponentially, and with ModiFace moving forward at breakneck speed, he’s seeking more engineers to join the ranks. On the bevy of local engineering talent and *Engineering Dimensions* readership, he says, “We would love to talk to them about joining ModiFace.” [e](#)



Cole Ingoldsby, P.Eng.,
and David Brown inspect
a project recently completed
for Sigma Stretch Film in
Belleville, Ontario.



PUSHING THE ENVELOPE

PEO's new president, David Brown, P.Eng., BDS, C.E.T., thrives on change, and he's ready to steer the organization through potentially rough waters ahead.

By Marika Bigongiari

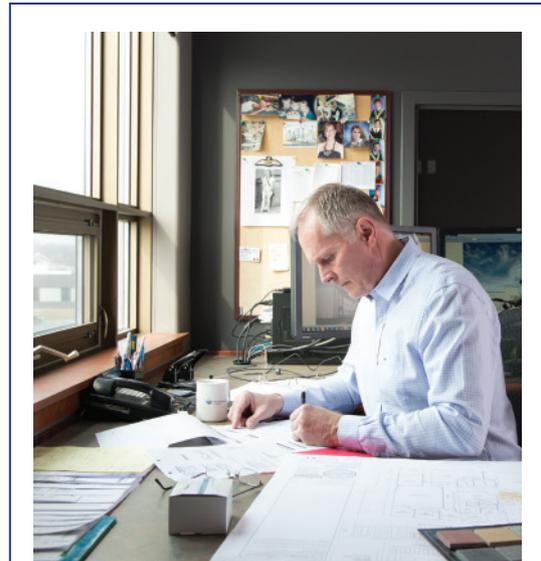
Engineer, family man, maverick—when David Brown, P.Eng., BDS, C.E.T., isn't racing a motorcycle, flying a plane, climbing mountains or spending time with his family, he's running a successful engineering firm. Whatever the task, Brown is pushing the envelope—a quality he brings to his new position as PEO's 99th president. Brown assumed office at PEO's 2018 Annual General Meeting on April 21. Born in Cornwall, Ontario, he comes from a five-generation construction family, and he learned from an early age that to get on in life, you must embrace change.

A LIFETIME OF INFLUENCE

Brown learned to adapt young. His father's work caused the family to move a lot when he was growing up—12 different towns by the time he was 16. Although some might look at that experience and see a bit of hard luck, Brown sees a key element that shaped his personality and primed him for success. It allowed him to not only quickly adapt to new situations but also enjoy new situations—and it is this experience that helped him adapt a very full life to the rigorous demands of volunteering at PEO.

At last March's Council meeting, Brown received his five-year volunteer pin. He concedes that, normally, to become president, a significantly higher amount of volunteer time is involved. This is another area that sets Brown apart. He has spent his professional life immersed in building a business from the ground up—he's a founding partner of design-build firm TaskForce Engineering in Belleville, Ontario, taking it from nothing to what it is today, a thriving firm. He has devoted the remainder of his time to his family: wife, Liza; stepson, Owen; and three children from his first marriage, Kale, Dylan and Rachel.

Brown is no stranger to volunteering. He served PEO as vice president and Eastern Region councillor, as well as on PEO's Elliot Lake Advisory, Finance and Human Resources committees, among others, and represents PEO on the boards of Engineers Canada and the Ontario Association of Certified Engineering Technicians and Technologists. He also served as campaign chair for the United Way and volunteered his time on the boards of colleges and technology advisory committees, although he's had to step away from the latter because of the time commitment inherent to being PEO president-elect and now president. He plans to return to volunteering in the community when his tenure at PEO is up—and it will be up, he points out, due to the term limits he helped champion.



PEO President David Brown works as a structural engineer at the company he co-founded, TaskForce Engineering, in Belleville, Ontario.

The high-level access and considerable number of volunteer hours that come with being president-elect and then president have given Brown a level of knowledge he asserts is "ten-fold" above any other position on Council. "Beyond the Council table, it's about what happens in the building and the issues with the committees and the volunteer base and staff," he says. "You don't get into that stuff until you start getting up into the higher echelons of the organization. You have to have been blessed with strong leadership skills to convince people that you see the bigger picture and you want to do what's best for the organization."

A workaholic, Brown feared his kids would struggle with work-life balance, as he did, saying he missed much of their younger years because he was simply working too much. He worried about it so much that he encouraged his children to find a different path in life: "I looked at them and said, 'What I want you to do is get an education and use it to get a job that allows you to find that balance.'" Finding that balance was so important to him as a father that he only agreed to pay for their education if they didn't go into engineering: "If you go into engineering, you're on your own," he told them.



PEO's new leader enjoyed the full support of his family, who attended his installation as president at the AGM in April. From left to right: Dylan Brown, Kale Brown, David Brown, Liza Brown, Owen Hayes and Rachel Brown.

On the other hand, Brown was greatly influenced by his father's work in the construction industry and his unflappable work ethic, so it wasn't surprising that Brown gravitated toward a similar career. His father had concerns about his son following in his footsteps. "In Grade 8, my father saw I had an interest in construction and was becoming quite a good amateur carpenter and really liked building things, and he started to get a little nervous," Brown says. "So he bought me a drafting table. It was a \$70 drafting table—it was nothing—but that \$70 completely changed my life. I took drafting through high school, which eventually led to studying civil engineering technology in college. Then I went back to university and got my degree, and here I am."

That seemingly small gift from his father when he was 13 shaped not just his education but his life. "It shaped everything," Brown says. "Up until Grade 8, I didn't do very well in school, and it was mostly because I wasn't interested in it." His teachers even spoke to his parents about steering him toward the trades and placed him in the basic stream in high school. "I just resolved myself to thinking, okay, well I guess that's all I can do." In Grade 10, a math teacher took a special interest in him—an event that changed the course of Brown's academic career. "She did an aptitude test on me, and it turned out I had no trouble learning any of this stuff."

Being in the 10th grade basic stream, and another move that year to a new school in a new city, complicated things. But a seed had been planted and, in Grade 12, Brown asked for permission to use a spare period to take Grade 13 physics, which he describes as "the line in the sand to get into engineering." He finished with one of the highest marks in class. Without the mass of OACs needed for university admission, college was the only possible option—but he had proved to himself that he could excel at academics. He enrolled in St. Clair College in Windsor, Ontario, graduated with an almost 4.0 GPA and landed a job. "I worked for four years and thought to myself, you know what? I can't stand engineers—I either have to become one or get out of this business. So that's why I went back to school." And return he did, this time

to study civil engineering at Queen's University. Two years after graduating in 1990, he was licensed as a professional engineer and two years later he co-founded TaskForce Engineering, where he's worked as a structural engineer ever since.

CONCERN FOR THE FUTURE

While his enthusiasm for engineering is undeniable, it's tempered with concern for the future as a self-regulating profession. "Every social grace we've been allowed, every nicety and creature comfort, everything has touched the hand of an engineer," he says, "but what I'm really concerned with as a regulator going forward—because we use such a broad brush to define engineering under our act—is how do you regulate that?" Times are changing rapidly. Technology brings efficiency, and what once took three hours now takes three minutes. "The Fourth Industrial Revolution is expanding exponentially," Brown explains. "The ground underneath our feet is constantly changing, and it's expanding to the point where we need to ask



"THE FOURTH INDUSTRIAL REVOLUTION IS EXPANDING EXPONENTIALLY. THE GROUND UNDERNEATH OUR FEET IS CONSTANTLY CHANGING, AND IT'S EXPANDING TO THE POINT WHERE WE NEED TO ASK OURSELVES, HOW DO WE AS A REGULATOR PUT A ROPE AROUND THAT AND CONTROL IT?"



A meeting of the minds at TaskForce Engineering, from left to right: Evan Burtt, EIT, intern; Hilary Murphy, P.Eng., BDS, director of engineering and business development; David Brown; Ian Wilson, P.Eng., director of construction; Cole Ingoldsby, P.Eng., intern; and Cheryl Vandenburg, administrative operations manager.



“WHEN SOMEONE SAYS THEY’RE GOING TO LOWER FEES AND INCREASE SERVICES, THAT TELLS ME THEY’RE COMPLETELY OUT OF TOUCH WITH WHAT WE DO. THEY DON’T UNDERSTAND WHAT IT MEANS TO BE A REGULATOR.”



Hilary Murphy, P.Eng., BDS, director of engineering and business development at TaskForce Engineering, works alongside Brown at TaskForce headquarters.

ourselves, how do we as a regulator put a rope around that and control it? How do we regulate stuff we don’t even know is happening, even though it completely falls under the definition of engineering in our act?”

Prevailing attitudes within the organization and membership concern him, too. “You need a lot of money to properly regulate, especially when you don’t know what you’re regulating. That’s a problem. And we have some loud voices in our membership that are completely averse to raising fees.”

Brown, a businessman to his core, has trouble wrapping his head around what he sees as the sort of incongruous thinking that flies in the face of any logical business model. “Right now, we have our first deficit budget, and it’s been a long time since we’ve had a deficit budget approved,” he explains. “The first thing we must do is analyze our business model and performance as a regulator and look at the programs we’re running and ask ourselves if any are non-core that we can remove. We’ll have to make those hard choices. But we must make those first before we consider going to a membership asking to raise fees. I would never ask for a fee increase without an evidence-based business plan, properly mapped to our act.”

Brown anticipates the shakeup will happen on his watch. “For us to have [a] farther-reaching ability to regulate [engineering], we need to focus our resources far better than we currently do, because the resources we have right now, I would argue, from a staff point of view, are maxed. Everybody’s running on fumes and trying to do more with less. When I say, ‘Look at cutting programs,’ I don’t mean cutting staff. I mean reorganizing the staff that are doing things that are non-regulatory and getting them to do regulatory tasks—like work at trying to find more people who are doing engineering and saying, ‘How can we get them licensed, and how do we go about doing that?’”

Burning through available reserves is not the answer, he says. He believes in coming to the membership with full transparency and appealing to what he hopes is their sense of reason—and business sense. “We might as well be honest in saying, ‘Here’s the thing, folks, we can’t keep adding programs to this organization and keep taxing staff, making them do more with less, and carry on and not have an increase in the revenue stream,’” Brown explains. “I’ve been a businessman my entire life, and you have two things: you have revenue streams and you have expenses. At PEO, the expenses keep going up and up and up, but the revenue stream has not changed, in terms of membership fees, in a decade.”

The entrenchment in the status quo frustrates Brown, who firmly believes PEO’s disruption is closer than the organization would like: “The train has pulled away from the station, and PEO must decide—right now—do we want to run our butts off down that platform and catch that train, or do we want to wave goodbye? Because that’s where we’re at right now. And if we stand here any longer and watch it moving away—because that’s what we’re doing—it’s going to accelerate to the point where we won’t even be able to get on it, and then we’ll be disrupted from the outside.”

It’s not that PEO is irrelevant as a regulator, Brown says. It’s the scope of what PEO is regulating—and that scope continues to narrow relative to the expanding big picture.

He shares a story about a group of newly graduating engineers who've designed and developed a product that's 100 per cent engineering, and how they're planning to build and sell this on the market—and none of them are licensed. "And there's nothing we can do about it because we don't have the resources," Brown points out. "And that's just one example. There's stuff like that happening at every university in this province. The first thing is we can't even define what it is that's happening, and the second thing is, how the heck are we ever going to have the resources to regulate it in conformance with our act? It's such a daunting task we don't even know where to start. And that's why I say we're on the cusp of being disrupted. Because the Fourth Industrial Revolution isn't going to go away, it's just going to continue expanding."

PEO's ROLE GOING FORWARD

Ultimately, Brown isn't interested in small wins but in the bigger picture of where PEO is headed, and he wants Council to work together and move forward with a mutual recognition of where PEO must go. "What I'd like to see during my tenure is have Council, the volunteer base, staff, everyone come to the realization that we're already at this point where we're looking at the train moving," Brown says. "If we can come to understand that, then we must ask the fundamental question: What is it that we are going to do as a regulator? Are we going to try to do the job the government thinks we're doing under our act—self-regulating engineering in Ontario? Because I'd argue we're not doing that very well right now. Or are we going to only regulate things that fall under demand-side legislation? We should decide that."

Brown doesn't mince words or shrink from making hard choices. He's adamant raising fees is about deciding whether PEO will continue to be in the business of regulating engineering in Ontario or not: "If the answer is yes, that costs more money, end of discussion. You can't argue that. It costs money to regulate. That's what a fee referendum is to me," he asserts. "It's not like \$20 or \$50 is going to break anybody. That's not what it is at all. It's about the membership deciding if we are going to do our job protecting the citizens of this province." Brown finds some attitudes exacerbating. "Some members look at me and say, 'We're self-regulating.' And I say, that doesn't mean we're self-serving; it means we're supposed to regulate."

Brown is not afraid of change, and he's ready to usher PEO forward into a sustainable future. He wants the organization and membership to care as much as he does and get real. "When someone says they're going to lower fees and increase services, that tells me they're completely out of touch with what we do. They don't understand what it means to be a regulator," he exclaims. "I'm at the end of my career. I have EITs working for me, and my youngest licensee just got licensed six months ago. Those are the people who have a future in engineering in this province, and those are the ones I care about," he says. "That's why I'm doing this." **e**



David Brown racing a Kawasaki ZX-6R at Shannonville Motorsport Park in Ontario.

PEO's president at the top of Mount Kilimanjaro in Tanzania, Africa.

The president pilots a Diamond DA40 aircraft to the Grand Hotel on northern Michigan's Mackinac Island, with wife Liza Brown at his side.



BEYOND

the blue pages

by Michael Mastromatteo



As all regulators face increasing scrutiny over the treatment of errant practitioners through their complaints and discipline processes, PEO looks to position its own justice system beyond reproach.

The regulator's complaints investigation and discipline arms are facing new challenges due to transparency and accountability expectations, especially as regulators fall under increased scrutiny to act unfailingly in the public interest. Most recently, the *Toronto Star's* May 2018 series of articles detailing the College of Physicians and Surgeons of Ontario's mishandling of some discipline and accreditation cases has added new pressure for all regulators to pay heed to their complaints and discipline processes.

For PEO, discipline is a hot topic among members, and the Gazette section of *Engineering Dimensions*—otherwise known as the blue pages—remains one of the most highly anticipated sections of the publication.

PEO's Discipline Committee (DIC) was created by statute to act as an independent decision maker and to convene discipline hearings of cases referred by the Complaints Committee (COC), where a PEO licensee or certificate of authorization (C of A) holder is the subject of a complaint alleging incompetence or professional misconduct. PEO staff investigate complaints that are reviewed by the COC—which decides how to handle the complaint—and PEO counsel prosecutes discipline matters that are heard and determined by the Discipline Committee. This work is subject to continuous improvement and more effective operation.

The *Professional Engineers Act* (PEA) sets out the membership requirements for the DIC. Subsection 27(1) of the PEA calls for members to include a lieutenant-governor-appointed (LGA) Council member, a lay (non-engineer) member and at least three P.Engs with at least 10 years of professional engineering practice experience. According to the committee's 2018 human resources plan, the DIC currently consists of five elected Council members, two LGA P.Engs and three LGA lay Council members, three P.Engs and five lawyers approved by the attorney general, and 20 general (non-Council) P.Eng. members.

In recently updated terms of reference, the DIC lists two central objectives: to hear and determine matters fairly and expeditiously, and to develop the adjudication skills of its 38 members. The terms of reference describe ways to measure the committee's success in meeting its key objectives. They include that DIC decisions and reasons are fair (and "manifestly so"), that decisions are rendered within applicable time guidelines (90 per cent target), that decisions, if appealed, are confirmed by the courts (100 per cent target), and that committee members receive training to competently execute their responsibilities. This last measure includes a 100 per cent training success rate for

first-year DIC members and a 75 per cent target for all members in subsequent years. The overriding aim is to have all members complete the training prescribed for their roles within two years.

The extensive training for members and the strenuous effort to achieve and demonstrate fairness in its deliberations underscore the significance of the DIC's adjudication system. "It is a critical committee. Unlike many of the other committees in the association, the role and responsibilities of the Discipline Committee are set out in the *Professional Engineers Act*," says current DIC Chair John Vieth, P.Eng. "The role of the committee chair is quite demanding. I thought I could do a good job and that it was time for me to step up and do it."

A member of PEO Council from 2004 to 2008 and a one-time presidential candidate, Vieth recently retired from full-time engineering practice, offering the opportunity to devote more time to DIC work. He accepted the nomination for vice chair in November 2015, served in that role for two years and was elected chair of the DIC in 2017, succeeding Ravi Gupta, PhD, P.Eng.

The essential role of the chair is to select a panel from among the members of the DIC—within 90 days after a matter is referred to the DIC for hearing and determination—that includes at least one of each of the persons appointed under paragraphs 2, 3 and 4 of section 27(1) and that may include one or more of the persons appointed under paragraph 1 of that subsection; designate one of the members of the panel to chair it; refer the matter to the panel for hearing and determination; and set a date, time and place for the hearing.

It is always a challenge for the chair to get PEO and the licensee or C of A holder, as opposing parties, to agree, within 90 days, to dates when they and their witnesses and a panel of five members of the DIC are available to hear the matter. "A recent change to the PEA that came into effect at the beginning of my term has made this a little easier," Vieth says. "The number of elected councillors on the committee was small and their availability limited. Now it is not necessary to appoint an elected councillor to each panel."

Another challenge for the DIC has stemmed from a few matters that took a seemingly long time to be decided. When Vieth was vice chair, he headed a task force to measure and determine how the committee might reduce these situations. The data was analyzed, root causes identified and

the DIC decided on two new initiatives for improvements. Out of this, the committee task groups are currently implementing new training and evaluation programs.

FORMALIZED TRAINING

One of these task groups is to formalize the training provided to members. This involves going beyond the resources of the committee itself and engaging resources like the Society of Ontario Adjudicators and Regulators (SOAR) to provide additional training modules. Created in 1993, SOAR is a provincial organization offering training programs for newly appointed adjudicators and administrative staff.

"That's not to say the training we had been doing is inadequate or substandard," Vieth says. "But we think we can do better because we can leverage the combined experience of other self-regulated professions through SOAR providing some specific training." Indeed, some committee members have already taken SOAR training.

As the broad brush of public accountability and transparency falls on all self-regulated professions, so too are these associations combining forces to meet the challenge. The DIC, for example, routinely looks to other regulators for best-practice sharing and to learn from others.

The committee has also updated its success indicators to emphasize the objectives of fairness and due diligence of adjudication and expediting hearings.

"The first and foremost item we have in our terms of reference now is that the decision is fair and manifestly so," Vieth says. "How does one quantify fairness? We look to other professions and what they do, and I think you would find similar success criteria to our own and by nature this aspect is always going to be subjective."

The DIC also stepped up its timeframe expectations for issuing notices of hearings and preparation of Decision and Reasons, all aimed at timely administration of professional discipline. "We have taken steps to set the hearing date and issue the notice of hearing within 90 days of receiving the referral. We found that panels were able to issue their written decisions within 60 to 90 days of receiving submissions from the parties but were at times waiting on those submissions. We now focus on better reporting of the deliverables of the panel and the parties. When the matter seems to be taking a long time to conclude, it will be very apparent who was tardy."

SEVERITY OF PENALTIES

Despite the DIC's efforts to streamline its processes, some members still wonder about the deterrent value of perceived lenient penalties. David Baigent, P.Eng., a semi-retired consulting engineer from Burlington, Ontario, has written to the association on a number of occasions with these very concerns.

"I have read every Discipline Committee Decision and Reasons published in *Engineering Dimensions* since 1986 to provide insight into how to avoid professional misconduct in my practice," Baigent says. "For many years, I have been concerned at what I perceive to be frequent lax penalties given out to members who have appeared before the PEO Discipline Committee."



He believes the negative media surrounding other self-regulated professions in Ontario in response to perceived leniency and coddling of errant practitioners does not bode well for PEO.

"If PEO is widely seen by the public as a transparent organization that is vigorously penalizing its members who have exhibited professional misconduct, then there will be an increased likelihood that we will be allowed to remain a self-regulated profession," Baigent says. "Stiffer Discipline Committee penalties will also act as a deterrent for PEO members who might not be sufficiently diligent or otherwise be inclined to cut corners, ignore statutes, regulations, standards and guidelines during the course of their work, thereby increasing the chance of human or environmental harm."

However, Vieth and other members of the DIC believe the committee is achieving its objective of fairness in decisions on the merits as well as on penalty. The suggestion that overly mild sentences are being meted out to engineering wrongdoers seems unjustified. If there is a finding of guilt, the panel receives submissions on penalty from both parties, and these submissions often cite decisions by the courts and other professions as the basis of argument. The panel considers both, and, in most cases, the severity of penalty decided will be between the two.

"One can sit back and read the written decision in the blue pages and wonder, based on what they read, how a panel could have decided that such and such decision is way too lenient or way too harsh," Vieth says. "But I think that [attitude] is undervaluing the effort the parties

and the members of the panel apply to making a fair decision based on real precedents."

Vieth adds that with many of the complaints forwarded to the DIC for possible action, the parties sit down prior to the actual hearing to ascertain all the facts. In many cases, the member agrees to certain facts and, if he or she agrees to enough of these facts, it essentially substantiates the allegation. The Agreed Statement of Facts often precipitates a plea of guilty by the member.

There is always a plea inquiry, where the panel must be satisfied the member is making the plea without being coerced; is of sound mind; and that they are competent to accept the fact they are pleading guilty and will be subject to whatever penalty is applied. The panel then considers the Joint Statement of Penalty that was negotiated and agreed to by the association and the member.

"At that point, the panel has a very limited scope of influence, and so a panel will only reject an agreed joint penalty if the panel believes such penalty would bring the administration of justice into disrepute—meaning the penalty is either way too strict or way too lenient for the circumstances," Vieth says. Outside of this realm, the severity of the penalty is effectively established by what the association and the member have agreed, which is consistent with Canada's highest court as expressed in its decisions on appeals of such matters.

APPEALING DECISIONS

DIC volunteers were flustered recently when PEO's registrar chose to appeal a DIC decision and send it to a higher court. Vieth recalls the situation: "The DIC, as independent adjudicators, does not express any comment on the association appealing the validity of a decision made by the panel. It is not an affront to the integrity of the tribunal. Decisions in the courts are often appealed if one party believes an error was made. If the association believes the panel has made an error, the association is acting within its rights to ask the divisional court to decide whether there was an error or not."

DIC volunteers must also contend with the thorny issue of publishing the names of PEO members guilty of misconduct or meriting official reprimand. The PEA and regulations allow the DIC discretion in the use of names in the blue pages. However, Vieth says it remains up to PEO Council to change the existing regulations governing use of names if there is overwhelming consensus from Council to do so.

"I have to believe the decision—at the discretion of the discipline panel—is in the act for a reason," Vieth says. "A panel will have to decide whether there is a reason to withhold the names when doing the publication, and they would have to deliberate on that to make the decision. It is not taken lightly."

While the DIC seldom publishes its results without use of names, there are some cases where a member's name is withheld for reasons of compassion and ultimate fairness. Vieth cites one example: "The panel considered the facts, the submissions of the parties and the case law provided by the parties and determined to exercise its discretion to order that the summary of the decision be published but without names. In the view of the panel, having regard to the facts and submissions, publication of the member's name would have caused unnecessary and disproportionate anxiety and stress to the member given all of the circumstances, his advanced age and the fact that member had clearly undertaken not to practice professional engineering. It would be have been an unwarranted and disproportionate penalty when considered cumulatively with the balance of the penalties. It was the panel's view that the publication of the summary without names would, in the very specific fact situation herein, be sufficient to meet the requirements of the sentencing regime under the act. The member, the profession and the public may have confidence in the conduct of professional regulation by the publication of the summary. The panel found the particular constellation of facts before it sufficiently compelling to order publication without the name of the member. Do you think this was a fair and compassionate decision?"

LOOKING TO THE FUTURE

Vieth believes the ongoing initiatives of DIC volunteers should yield ever better results in the future and will continually improve their adjudication and leadership abilities. "No chair should have the authority to unilaterally decide what the committee should or should not do," Vieth says. "However, whether it's the committee or PEO Council, the chair is called on to lead. I think for a committee to work well, you need a chair who will take the initiative to get things on the agenda and get the committee to consider the items and make



decisions. A committee must also support succession planning. When you choose the leader of your committee, you have to pick someone who has the capacity to lead." In 2017, the DIC implemented a nomination subcommittee to help bring future leaders forward.

Thoughts of leadership development and empowering committee members to make tough decisions is especially significant to the DIC. Just last fall, the DIC Nominating Committee invited lawyer Stella Ball to stand for election as vice chair. If tradition holds, Ball will likely be elected to the chair position in November 2019 at the end of Vieth's term. If so, it will mark the first time a non-engineer heads up the DIC.

An adjudicator with the Information and Privacy Commissioner of Ontario, Ball has been involved with the DIC since 2013, when she was among a group of lawyers whose appointments were approved by the attorney general to assist the DIC with its adjudication work. In addition to ongoing training sessions at DIC meetings, Ball has received special advanced adjudication training from the Society of Ontario Adjudicators and Regulators and from Osgoode Hall Law School.

"My legal career includes years of adjudication experience as well as years of experience working in the area of professional regulation," Ball told *Engineering Dimensions*. "I am proud to be the first lawyer and first female vice chair of the DIC."

While the prosecutor—PEO—might look to impose harsher penalties for the guilty, members facing discipline would naturally hope for more leniency. The DIC is the independent decision maker that decides what penalty is appropriate considering the evidence presented to it during the hearing and its findings on the allegations made against the member.

Says John Vieth: "Remember, the DIC is the neutral adjudicator in matters. We decide based on what is presented to us by the parties. That is the extent of our powers. In all fairness, if the association wants to get tougher, they need to make their case." **e**

RAISING THE REGULATORY BAR

A veteran volunteer with PEO's Complaints Committee issues a challenge to fellow engineers to consider what it means to be a professional and look for new ways for the profession to maintain public confidence.

By Tony Cecutti, P.Eng., FEC

Tony Cecutti, P.Eng., reflected on his 19 years of experience with PEO's Complaints Committee (COC) in a recent series of talks with *Engineering Dimensions*. A former chair of the COC, Cecutti has since been succeeded by Chris Roney, P.Eng., BDS, FEC, past president of Engineers Canada and long-time PEO volunteer.

The COC, which investigates complaints received against licence and certificate of authorization holders, is mandated by sections 23 and 24 of the *Professional Engineers Act*. Working closely with PEO staff who investigate complaints, COC volunteers consider complaints received and determine if there is need to pass them onto the Discipline Committee for further action.

What follows are Cecutti's concerns and aspirations for the engineering profession, from a COC member's perspective, as PEO seeks to ward off potential threats to self-regulation.

PUBLIC CONFIDENCE

My concerns for the public's loss of confidence in us come from a few key observations. One factor is the number of complaints against members of PEO has not substantially changed in many years. While it is conceivable to see this as a strong vote of confidence in our members, I believe we need to be more concerned.

I have seen the growth of complaints in other regulated professions, and in the public sector in general, and our statistics are inconsistent with the growing expectations of the public.

Another factor is that I have seen the public's tolerance for improper behaviour diminish. The public expects licensed professionals to behave and perform at a higher standard than non-licensed practitioners.

In recent years, I have seen less patience for what the public considers immoral and unethical behaviour. We have allowed non-practising members to represent themselves as professional engineers, and this confuses the public. We have seen numerous complaints related to the public being concerned with the ethical and moral behaviour of non-practising engineers who happen to have a licence and use the title P.Eng. after their names. I fail to understand why our association would allow non-practising members to use the title P.Eng. for any other purpose than engineering work or opinions.

A third factor is that our level of discipline appears to be producing less-than-satisfactory responses from the public. We need to consider that PEO does not regulate unethical behaviour, and we need to compare the response to our members' transgressions in the limited forms of discipline issued to the forms of discipline issued by other regulated professions.

These three factors alone, in my opinion, are leading to a public that views PEO and our regulatory role as somewhat irrelevant. I believe when we stop listening to the public, we lose our understanding of the value an engineering licence should have. If a complaint does not result in serious consequences, and if the association sees it can hand out licences to people who do not even practise engineering, then why should it matter to the public?

FRIVOLOUS COMPLAINTS

The membership should not be concerned with the response from our complaints process to matters some people might categorize as frivolous. That word does not exist in our legislation or our approach to complaints. All complaints are taken seriously, and this is fundamentally and inherently essential in a self-regulatory environment. Members should be confident the right outcome will always prevail.

The COC has modified its processes so complaints founded on inadequate information or not related to the practice of engineering are brought to a point of decision much more efficiently than in the past. We believe a complained-against member has an expectation of fairness and expediency. Similarly, our approach assumes every complainant believes there is merit to their complaint. When a decision goes against the complainant, we believe they have a right to an adequate explanation of the reasons for our decision. A clear and reasonable explanation is extremely important in providing confidence that we take our regulatory role seriously and manage it responsibly.

PRACTISING OUT OF SCOPE

We are seeing substantive evidence our association is relying on other regulatory and legal processes to resolve concerns of professional behaviour. I believe the chief building officials in Ontario, for example, find our complaints and discipline processes ineffective and not timely. In the interest of protecting the public from unsafe buildings, they use tools like third-party reviews and orders to comply, which are appropriate given their role. Unfortunately, they have difficulty relying on our regulatory processes to determine if a licensed practitioner is competent, has exercised an appropriate level of continuing education and if they are, in fact, practising out of scope.

There is little a building official can do to ensure a questionable practitioner is not out in another municipality performing services that are not within their capabilities or experience. Certainly, we have seen many complaints over the years related to practising out of scope. I believe the public expects the association to hold its members to the highest standards expected of professionals, and that we

would not tolerate performance that is reasonably expected of people performing work in unregulated areas, such as technology and construction.

PEO's PEAK PROGRAM

The data available from PEO's Practice Evaluation and Knowledge (PEAK) program could be helpful to our regulatory committee and to the public. It would be helpful to the public if they could reference an engineer's qualifications against the work they are viewing.

The PEAK program affords an opportunity to provide some balance to conflicting opinions that may surface from time to time. From a regulatory perspective, it is possible a PEAK record could assist the COC to alleviate concerns that a member may be practising out of scope. For example, we have reviewed files where our starting point is a record from a university and we observe evidence of a practitioner, after 30 years, performing work in an area that is totally unrelated to their original area of study. It is not beyond reason to learn, through consultation with the member, that they could have completed exhaustive training and professional development to adopt this new area of practice. Having placed this record in a publicly available manner might have avoided the complaint in the first place and certainly could assist a regulator in reviewing a practice question, which may result in more expeditious management of the complaint.

ENHANCING PEO's REGULATORY ROLE

Public expectations are growing regarding the responsibility of all professionals, not just engineers. From the nature of the complaints received, it seems the public is demonstrating a high expectation for ethical standards. We must understand, as professional engineers, what it means to the public when we represent ourselves as professionals. I don't think we are taking our role seriously enough. When I look at some of the other regulated professions and some of the discipline they hand out for similar infractions, it raises concerns for me that we are potentially inviting a loss of confidence.

I have considered these concerns and suggest the following areas require focus, and I invite practising members to reflect on their role as a licensed practitioner with these discussion points:

- We should reflect on the definition of professional misconduct and regularly compare ourselves to other regulated professions and the level of discipline that is appropriate

under similar circumstances. Many professions have stronger connections between ethics and breaches of their act that would constitute professional misconduct and appear to have more significant and serious consequences for acknowledged breaches of their act and regulations;

- We should consider whether voluntary compliance with PEAK is adequate. In the case of building officials lacking confidence in engineers' opinions, they would benefit from the ability to rely on PEO for assurance that members are competent and practising within their scope of training;
- We should consider whether the mandate and financial investment in our volunteers is focused adequately on our core regulatory purpose. The Ontario Society of Professional Engineers (OSPE) was created for member advocacy. Although a strong relationship with OSPE is vital to our mutual success, PEO cannot put member services ahead of our obligation to regulate effectively. It appears a part of PEO is still focused on member services and not regulation. If the consequence is a reluctance to raise rates or a disproportionate allowance for member services, there is a higher probability we will not manage our regulatory duties effectively; and
- Practising engineering through a self-regulating licence is a privilege granted by the province. There is no inherent right to member services through this licence. We retain the privilege of self-regulation only by ensuring public confidence. We should invest more time and energy to ensuring the public recognizes and supports the value of our licence and trusts the members who hold that licence. In my opinion, when we allow members to hold a licence with no intent to practise engineering, we are confusing the public about the purpose of the licence. No other regulated profession that I am aware of would issue a licence or allow a person to continue to hold a licence when they are not practising within that profession. **e**

Tony Cecutti, P.Eng., FEC, is general manager of growth and infrastructure, City of Sudbury, and has been a PEO volunteer since 1992.



**Professional Engineers
Ontario**

2019 COUNCIL ELECTIONS CALL FOR CANDIDATES

All PEO members are invited to become candidates for the positions of **president-elect, vice president, councillor-at-large** and **regional councillor** (one for each of PEO's five regions) on PEO Council.

- Any member may be nominated for election to Council as **president-elect, vice president** or **councillor-at-large**, by at least 15 other members. The nomination must include at least one member resident in each region. [Regulation 941/90, s. 14(1)]
 - The position of **president-elect** is for a one-year term, after which the incumbent will serve a one-year term as president and a one-year term as past president.
 - The position of **vice president** is for a one-year term.
 - The **councillor-at-large** position is for a two-year term.

- Any member residing in a region may be nominated for election to Council as a **regional councillor** for that region by at least 15 other members who reside in the region. [Regulation 941/90, s.14(2) and s. 15.1(2)]
 - The position of **regional councillor** is for a two-year term.

A member nominated for election to Council must complete a nomination acceptance form that states he or she is a Canadian citizen or has the status of a permanent resident of Canada and is a resident in Ontario [section 3(3) of the *Professional Engineers Act*] and consents to the nomination [Regulation 941/90, s. 15]. Nomination petitions for collection of nominators' signatures and nomination acceptance forms may be obtained from the PEO website at www.peo.on.ca, or Ralph Martin, PEO, 40 Sheppard Avenue West, Suite 101, Toronto ON M2N 6K9.

Email: rmartin@peo.on.ca; Tel: 416-840-1115; 800-339-3716, ext. 1115.

Completed nomination petitions and nomination acceptance forms are to be sent only electronically and only to the chief elections officer, elections@peo.on.ca, by 4:00 p.m., November 30, 2018. No personal delivery of forms will be accepted. For further information on becoming a candidate, please refer to the *2019 Council Elections Guide* posted on PEO's website.

2019 VOTING PROCEDURES

The 2019 voting and election publicity procedures were approved by the Council of PEO in June 2018. Candidates are responsible for familiarizing themselves with these procedures. Any deviation could result in a nomination being considered invalid. Candidates are urged to submit nominations and election material well in advance of published deadlines so that irregularities may be corrected before the established deadlines. Nominees' names are made available as received; all other election material is considered confidential until published by PEO.

- The schedule for the elections to the 2019-2020 Council is as follows:

Date nominations open	October 22, 2018
Date nominations close	4:00 p.m., November 30, 2018
Date PEO's membership roster will be closed for the purposes of members eligible to automatically receive election material ¹	January 11, 2019
Date a list of candidates and voting instructions will be sent to members	no later than January 18, 2019
Date voting will commence	on the date that the voting packages are sent to members, no later than January 18, 2019
Date voting closes	4:00 p.m., February 22, 2019

All times noted in these procedures are Eastern Time.

¹Members licensed after this date may call in and request that election information be mailed to them by regular mail or, upon prior written consent by the member for use of his/her email address, via email, or via telephone.

- Candidates' names will be listed in alphabetical sequence by position on the list of candidates sent to members and on PEO's website. However, the order of their names will be randomized when voters sign in to the voting site to vote.
- A person may be nominated for only one position.
- Nomination papers are to be submitted only by email (elections@peo.on.ca) for tracking purposes. Forms will not be accepted in any other format (e.g. fax, personal delivery, courier, regular mail).
- Only nomination acceptance and nomination forms completed in all respects, without amendment in any way whatsoever will be accepted.
- Signatures on nomination forms can be hand signed or electronic.
- Signatures on nomination papers do not serve as confirmation that a member is formally endorsing a candidate.

8. Candidates will be advised when a member of the Central Election and Search Committee has declared a conflict of interest should an issue arise that requires the consideration of the committee.
9. An independent agency has been appointed by Council to receive, control, process and report on all cast ballots. This "official elections agent" will be identified to the members with the voting material.
10. If the official elections agent is notified that an elector has not received a complete election information package, the official elections agent shall verify the identity of the elector and may either provide a complete duplicate election information package to the elector, which is to be marked "duplicate," by regular mail or email or provide the voter's unique control number to the voter and offer assistance via telephone. In order to receive such information via email, the elector must provide prior written consent to the use of his or her email address for this purpose.
11. Council has appointed a Central Election and Search Committee to:
 - encourage members to seek nomination for election to the Council as president-elect, vice president or a councillor-at-large;
 - assist the chief elections officer as may be required by him or her;
 - receive and respond to complaints regarding the procedures for nominating, electing and voting for members to the Council; and
 - conduct an annual review of the elections process and report to the June 2018 Council meeting.
12. Council has appointed a Regional Election and Search Committee for each region to:
 - encourage members residing in each region to seek nomination for election to the Council as a regional councillor.
13. Candidates for PEO Council may submit expense claims. The travel allowance to enable candidates to travel to chapter events during the period from the close of nominations to the close of voting will be based on the distance between chapters and the number of chapters in each region. Such travel expenses are only reimbursed in accordance with PEO's expense policy.
14. Council has appointed an independent chief elections officer to oversee the election process and to ensure that the nomination, election and voting are conducted in accordance with the procedures approved by Council.
15. The chief elections officer will be available to answer questions and complaints regarding the procedures for nominating, electing and voting for members to the Council. Any such complaints or matters that the chief elections officer cannot resolve will be forwarded by the chief elections officer to the Central Election and Search Committee for final resolution. Staff is explicitly prohibited from handling and resolving complaints and questions, other than for administrative purposes (e.g. forwarding a received complaint or question to the chief elections officer).
16. On or before the close of nominations on November 30, 2018, the president will appoint three members or councillors who are not running in the election as returning officers to:
 - approve the final count of ballots;
 - make any investigation and inquiry as they consider necessary or desirable for the purpose of ensuring the integrity of the counting of the vote; and
 - report the results of the vote to the registrar not later than March 10, 2019.
17. Returning officers shall receive a per diem of \$250 plus reasonable expenses to exercise the duties outlined above.
18. Nomination papers are to be submitted only by email for tracking purposes. Forms will not be accepted by any other format (e.g. personal delivery, courier, fax or regular mail). Candidates should allow sufficient time for their emails to go through the system to ensure that the completed papers are, in fact, received by the chief elections officer by 4:00 p.m. on November 30, 2018 deadline. In the event of a dispute as to when the forms were sent vs received, a candidate can provide the chief elections officer with a copy of his/her email to PEO that would indicate the time the nomination forms were sent from his/her computer. A nomination once withdrawn, may not be re-instated.
19. If a candidate withdraws his or her nomination for election to PEO Council prior to the preparation of the voting site, the chief elections officer shall not place the candidate's name on the voting site of the official elections agent or on the list of candidates sent to members and shall communicate to members that the candidate has withdrawn from the election. If the candidate withdraws from the election after the electronic voting site has been prepared, the chief elections officer will instruct the official elections agent to adjust the voting site to reflect the candidate's withdrawal.
20. A newly-completed nomination petition form, in addition to a new acceptance form, when a candidate changes his/her mind on the position sought.
21. In the event a chapter holds an All Candidates Meeting, the chapter must invite all candidates for which voters in that region are eligible to vote to the meeting.
22. Voting will be by electronic means only (Internet and telephone). Voting by electronic means will be open at the same time the electronic election packages are sent out.
23. All voting instructions, a list of candidates and their election publicity material will be sent to members. All voters will be provided with detailed voting instructions on how to vote electronically. Control numbers or other

- access control systems will be sent to members by email after the election package has been sent out. The official elections agent will send out an eblast with the control numbers (PINs) every Monday during the election period. Election material sent to members electronically or by mail will contain information related to the All Candidates Meetings.
24. Verification of eligibility, validity or entitlement of all votes received will be required by the official elections agent. Verification by the official elections agent will be by unique control number to be provided to voters with detailed instructions on how to vote by Internet and by telephone.
 25. The official elections agent shall keep a running total of the electronic ballot count and shall report the unofficial results to the chief elections officer who will provide the candidates with the unofficial results as soon as practically possible.
 26. Voters need not vote in each category to make the vote valid.
 27. There shall be an automatic recount of the ballots for a given candidate category for election to Council or bylaw confirmation where the vote total on any candidate category for election to Council between the candidate receiving the highest number of votes cast and the candidate receiving the next highest number of votes cast is 25 votes or less for that candidate category or where the votes cast between confirming the bylaw and rejecting the bylaw is 25 votes or less.
 28. Reporting of the final vote counts, including ballots cast for candidates that may have withdrawn their candidacy after the opening of voting, to PEO will be done by the returning officers to the registrar, who will advise the candidates and Council in writing at the earliest opportunity.
 29. Certification of all data will be done by the official elections agent.
 30. The official elections agent shall not disclose individual voter preferences.
 31. Upon the direction of the Council following receipt of the election results, the official elections agent will be instructed to remove the electronic voting sites from its records.
 32. Election envelopes that are returned to PEO as undeliverable are to remain unopened and stored in a locked cabinet in the Document Management Centre (DMC) without contacting the member until such time as the election results are finalized and no longer in dispute.
 33. Elections staff shall respond to any requests for new packages as usual (i.e. if the member advises that he/she has moved and has not received a package, the member is to be directed to the appropriate section on the PEO website where the member may update his/her information with DMC).
 34. DMC staff shall advise elections staff when the member information has been updated; only then shall the elections staff request the official elections agent to issue a replacement package with the same control number.
 35. Elections staff are not to have access to, or control of, returned envelopes.
 36. After the election results are finalized and no longer in dispute, the chief elections officer shall authorize the DMC to unlock the cabinet containing the unopened returned ballot envelopes so that it may contact members in an effort to obtain current information.
 37. After the DMC has determined that it has contacted as many members whose envelopes were returned as possible to obtain current information or determine that no further action can be taken to obtain this information, it shall notify the elections staff accordingly and destroy the returned elections envelopes.
 38. Nothing in the foregoing will prevent additions and/or modifications to procedures for a particular election if approved by Council.
 39. The All Candidates Meetings will take place the week of January 7, 2019.
 40. All questions from, and replies to, candidates are to be addressed to the chief elections officer:

By email: elections@peo.on.ca

By letter mail: Chief elections officer
 c/o Professional Engineers Ontario
 101-40 Sheppard Avenue West
 Toronto, ON M2N 6K9

The Election Publicity Procedures form part of these Voting Procedures.

2019 ELECTION PUBLICITY PROCEDURES

IMPORTANT DATES TO REMEMBER

Deadline for receipt of publicity materials for publication in <i>Engineering Dimensions</i> and on the PEO website, including URLs to candidates' own websites	4:00 p.m., December 10, 2018
Deadline for submission of candidate material to eblast to members	January 14, 2019—1st eblast January 28, 2019—2nd eblast February 11, 2019—3rd eblast
Dates of eblasts to members	January 21, 2019 February 4, 2019 February 19, 2019
Date of posting period	January 21, 2019 to February 22, 2019
Dates of voting period	12:00 p.m., January 18, 2019 to 4:00 p.m., February 22, 2019.

Note: All times indicated in these procedures are Eastern Time.

- Names of nominated candidates will be published to PEO's website as soon as their nomination is verified.
- Names of all nominated candidates will be forwarded to members of Council, chapter chairs and committee chairs, and published on PEO's website, by December 3, 2018.
- Candidates will have complete control over the content of all their campaign material, including material for publication in *Engineering Dimensions*, on PEO's website, and on their own websites. Candidate material is readily available to the public and should be in keeping with the dignity of the profession at all times. Material will be published with a disclaimer. The chief elections officer may seek a legal opinion prior to publishing/posting of any material if the chief elections officer believes campaign material could be deemed libelous. The chief elections officer has the authority to reject the campaign material if so advised by legal counsel.
- Candidate material may contain personal endorsements provided there is a clear disclaimer indicating that the endorsements are personal and do not reflect or represent the endorsement of PEO Council, a PEO chapter or committee, or any organization with which an individual providing an endorsement is affiliated.
- Candidates have the option of using one of two templates to present their election material in *Engineering Dimensions*. Both templates are included in Schedule A of these procedures. Option 1: Candidates using the blank template will have discretion over the presentation of their material, including but not limited to, font style, size and effects. The size of the blank template is the equivalent of one-half page, including border, in *Engineering Dimensions* (6.531 inches wide x 4.125 inches in height).
If candidate submissions do not include a border, one will be added, as shown on the template. If submissions exceed the bordered one-half page, they will be mechanically reduced to fit within the border. Option 2: Candidates using the fillable template must provide responses to the questions provided in the allotted space. The presentation of the fillable template is fixed and no modifications will be permitted. The fillable template is the same size as the blank template (6.531 inches wide x 4.125 inches in height).
- Candidates using the blank template will be permitted to include their portrait within the template. Candidates using the fillable template must submit their portrait separately for insertion into the designated location by PEO staff. Only portraits taken within the last five years will be accepted for inclusion in either template.
- All material for publishing on PEO's website and in *Engineering Dimensions* must be submitted to the chief elections officer at elections@peo.on.ca in accordance with Schedule A attached. Candidates shall not use the PEO logo in their election material.
- Candidates' material for publication in *Engineering Dimensions* and on the website, including URLs to candidates' own websites, must be forwarded to the chief elections officer at the association's offices or via email at elections@peo.on.ca no later than December 10, 2018 at 4:00 p.m. and in accordance with Schedule A attached. Candidate material will be considered confidential, and will be restricted to staff members required to arrange for publication, until published on PEO's website. All candidates' material will be published to PEO's website at the same time. In the event of a dispute as to when the forms were sent vs received, a candidate can provide the chief elections officer with a copy of his/her email to PEO that would indicate the time the nomination forms were sent from his/her computer. A nomination once withdrawn, may not be re-instated.
- If campaign material is submitted by a candidate without identifying information, PEO staff are authorized to contact the candidate and ask if he/she wishes to resubmit material. If campaign material is received by the chief elections officer and returned to the candidate for amendment to comply with the Election Publicity Procedures, and the amended material is not returned within the prescribed time, staff will publish the material with a notation explaining any necessary amendments by staff.
- Candidate publicity material will be published as a separate insert in the January/February 2019 issue of *Engineering Dimensions* and to PEO's website in January 2019 and included in any hardcopy mailing to eligible voters with voting instructions. Links to candidate material on PEO's website will be included in any electronic mailing to eligible voters.
- Candidates may publish additional information on PEO's website, provided they email their material to the chief elections officer in the format set out in Schedule A. This

- material must be received by the chief elections officer no later than December 10, 2018.
12. Candidates may submit updates to their material on PEO's website once during the posting period. Any amendments to a candidate's name/designations are to be considered part of the one-time update permitted to their material during the posting period. Candidates may include links to PEO publications, but *not* a URL link to a third party, in their material on PEO's website. Links to PEO publications are not considered to be to a third party. For clarity, besides links to PEO publications, the only URL link that may be included in a candidate's material on PEO's website is a URL link to the candidate's own website.
 13. Candidates may post more comprehensive material on their own websites, which will be linked from PEO's website during the posting period. Candidates may include active links to their social media accounts (Facebook, Twitter, LinkedIn, etc.) in material appearing in *Engineering Dimensions*, published on PEO's election site (i.e. the 1000-word additional information candidates may submit), or included in an eblast of candidate material.
 14. PEO will provide three group email distributions to members of candidate publicity material beyond the material published in *Engineering Dimensions*. Material to be included in an eblast must be submitted to the chief elections officer at elections@peo.on.ca in accordance with Schedule A. In the event of a dispute as to when the forms were sent vs received, they will be accepted only if a candidate can provide the chief elections officer with a copy of his/her email to PEO sent from his/her computer indicating a sent time before the deadline
 15. All material for the eblast messages must be submitted in a Word document only and must not be included as part of the message in the transmission email. Where the email message is received with a font size or style that is different from the specifications but otherwise meets all the requirements, the chief elections officer may authorize staff to change only the size and font of the material so it conforms to specifications. Staff are prohibited from amending material in any way except with the written permission of the candidate.
 16. Candidates are responsible for responding to replies or questions generated by their email message.
 17. The chief elections officer is responsible for ensuring that all candidate material (whether for *Engineering Dimensions*, PEO's website or eblasts) complies with these procedures. Where it is deemed the material does not satisfy these procedures, the chief elections officer will, within three full business days from receipt of the material by the association, notify the candidate or an appointed alternate, who is expected to be available during this period by telephone or email. The candidate or appointed alternate will have a further three full business days to advise the chief elections officer of the amendment. Candidates are responsible for meeting this deadline. Should a candidate fail to re-submit material within the three-business-day period, the candidate's material will be published with a notation explaining any necessary amendments by staff.
 18. PEO will provide candidates the opportunity to participate in All Candidates Meetings, which will be held at PEO offices during the week of January 7, 2019. The All Candidates Meetings will be video recorded for posting on PEO's website. On the day of the first All Candidates Meeting, an eblast will be sent to members announcing that these video recordings will be posted on the PEO website within two business days.
 19. Caution is to be exercised in determining the content of issues of membership publications published during the voting period, including chapter newsletters. Editors are to ensure that no candidate is given additional publicity or opportunities to express viewpoints in issues of membership publications distributed during the voting period from January 18, 2019 until the close of voting on February 22, 2019 beyond his/her candidate material published in the January/February issue of *Engineering Dimensions*, and on the PEO website. This includes photos (with or without captions), references to, or quotes or commentary by, candidates in articles, letters to the editor, and opinion pieces. PEO's communications vehicles should be, and should be seen to be, nonpartisan. The above does not prevent a PEO publication from including photos of candidates taken during normal PEO activities, e.g. licensing ceremonies, school activities, GLP events, etc., provided there is no expression of viewpoints. For greater clarity, no election-specific or election-related articles, including Letters to the Editor and President's Message, are to be included in *Engineering Dimensions* during the voting period. *Engineering Dimensions* or other PEO publications may contain articles on why voting is important.
 20. Chapters may not endorse candidates, or expressly *not* endorse candidates, in print, on their websites or through their list servers, or at their membership meetings or activities during the voting period. Where published material does not comply with these procedures, the chief elections officer will cause the offending material to be removed if agreement cannot be reached with the chapter within the time available.
 21. Councillors may use their positions to encourage candidates to stand for PEO office and members to participate in the election process, but may not endorse candidates for PEO election.
 22. Candidates may attend chapter annual general meetings and network during the informal portion of the meeting. Candidates are permitted to attend chapter functions in their current official capacity but are prohibited from campaigning while operating in their official capacity.
 23. The Central Election and Search Committee is authorized to interpret the voting and election publicity guidelines and procedures, and to rule on candidates' questions and concerns relating to them.

These Election Publicity Procedures form part of the Voting Procedures.

SCHEDULE A: 2019 ELECTION PUBLICITY PROCEDURES SPECIFICATIONS FOR CANDIDATE MATERIALS

PUBLICATION FORMAT (CANDIDATE STATEMENTS IN *ENGINEERING DIMENSIONS* AND PEO WEBSITE)

Option 1: Blank template

Candidates using the blank template to present their material for publication in *Engineering Dimensions* must ensure the content fits in the bordered template provided at the end of these specifications. The template dimensions are 6.531 inches wide and 4.125 inches in height. All submissions will be published with a border. If submissions are received without a border, one will be added as shown on the template. If submissions do not fit within the template, they will be mechanically reduced to fit.

All material for publication must be submitted as a PDF document with images in place for reference, and as a formatted Word file, or in a Word-compatible file, showing where portraits are to be placed. Portraits must also be submitted as specified below.

Candidates shall not use the PEO logo in their election material.

The publications staff needs both a PDF file and Word file of candidate material. This allows them to know how candidates intend their material to look. If there are no difficulties with the material, the PDF file will be used. The Word file is required in case something isn't correct with the submission (just a bit off on measurement, for example), as it will enable publications staff to fix the problem. A hard and/or digital copy of a candidate's portrait is required for the same reason and for use on the PEO election website.

Option 2: Fillable template

Candidates using the fillable template must provide responses to the questions provided in the allotted space. The completed template must be submitted as a PDF document.

Portraits must be submitted separately, as specified in the portraits section below, and will be added to the template by PEO staff.

The presentation of the fillable template is fixed and no modifications will be permitted.

The template dimensions are 6.531 inches wide and 4.125 inches in height.

The profile template will be available on PEO's elections website, www.peovote.ca.

Note: Candidate material may contain personal endorsements provided there is a clear disclaimer indicating that the endorsements are personal and do not reflect or represent the endorsement of PEO Council, a PEO chapter or committee, or any organization with which and individual providing an endorsement is affiliated.

A hard and/or digital copy of a candidate's portrait is also required for use on the PEO elections website.

PHOTOGRAPHS

Photographs must be at least 5" x 7" in size if submitted in hard copy form so that they are suitable for scanning ("snapshots" or passport photographs are not suitable).

Only pictures taken in the last five years will be accepted.

If submitted in digital form, they must be JPEG-format files of at least 300 KB but no more than 2MB.

Candidates can submit a digital photo at the specifications noted, or hard copy as noted, and preferably both. In case the digital file is corrupted or not saved at a sufficiently high resolution, publications staff can rescan the photo (hard copy) to ensure it prints correctly, as indicated on the PDF.

PEO WEBSITE (CANDIDATES' ADDITIONAL INFORMATION)

Candidates may publish additional information on PEO's website by submitting a Word or Word-compatible file of no more than 1000 words, and no more than three non-animated graphics in JPEG or GIF format. Graphics may not contain embedded material.

Candidates may post additional material on their own websites, which will be linked from PEO's website. URLs for candidates' websites must be active by December 10, 2018.

Candidates may include links to PEO publications but *not* a URL link to a third party in their material that is to be posted on PEO's website. Links to PEO publications are not considered to be to a third party. For clarity, the only URL link that may be included in a candidate's material on PEO's website is the URL to the candidate's own website. Candidates may include active links to their social media accounts (Facebook, Twitter, LinkedIn, etc.).
[Update based on Issues Report item 13]

DEADLINE FOR *ENGINEERING DIMENSIONS* AND WEBSITE ADDITIONAL INFORMATION SUBMISSIONS

Candidates' material for publication in *Engineering Dimensions* and on PEO's website must be forwarded to the chief elections officer at (elections@peo.on.ca) by December 10, 2018 at 4:00 p.m.

EBLAST MATERIAL

Candidates are permitted a maximum of 300 words for email messages. Messages are to be provided in 11 pt. Arial font; graphics are not permitted. For clarity, a "graphic" is an image that is either drawn or captured by a camera.

DEADLINE EBLASTS TO MEMBERS

Candidates' material for eblasts to members must be forwarded to the chief elections officer at (elections@peo.on.ca):

By January 14—for eblast on January 21

By January 28—for eblast on February 4

By February 11—for eblast on February 19

HELP

Candidates should contact the chief elections officer (elections@peo.on.ca) if they have questions about requirements for publicity materials.

Option 1: Blank template

Option 2: Fillable template

	<p>Name:</p> <p>Current employer and position:</p> <p>Degree(s), school(s) attended, year(s) of graduation:</p> <p>Employment history:</p> <p>Participation on PEO Council, committee/task forces, chapters:</p> <p>Other professional affiliations and community service:</p> <p>Years of registration in Ontario:</p>	<p>Candidate statement:</p>
--	---	-----------------------------

P.ENGs HONOURED WITH AWARDS ACROSS THE NATION

By Marika Bigongiari

Milica Radisic, PhD, P.Eng., a professor in the University of Toronto's department of chemical engineering and applied chemistry and associate chair and principal investigator, Laboratory for Functional Tissue Engineering, was named a YWCA Toronto Woman of Distinction, a prestigious honour that recognizes the outstanding achievements of those working to improve the lives of women and girls in their community. Radisic was honoured for advocating for gender equality in her field and for mentoring young women to pursue careers in science. Her strong voice for women has also brought changes to the gender podium at the Tissue Engineering and Regenerative Medicine Society. The YWCA Toronto Woman of Distinction award was presented by YWCA Toronto, Canada's largest multi-service women's organization working to break down barriers that prevent women and girls from achieving equality.

The ACEC Manitoba Awards of Excellence were recently celebrated in Winnipeg, Manitoba, where **Doug Stewart, P.Eng.**, was honoured with the Lifetime Achievement Award. The top prize of the evening, the Keystone Award, went to **KGS Group** for the Peter Sutherland Sr. Generating Station project, a 28-megawatt hydroelectric facility in northeastern Ontario that is now producing clean, reliable, low-cost electricity. The following firms and projects were also recognized with awards: **SMS Engineering**, Richardson Centre Heating Plant, Award of Excellence, building engineering category; **KGS Group**, Great West Life Daycare, Award of Merit, building engineering category; **Hatch**, Keeyask Generating Station—Column Extender, Award of Excellence, energy resource development category; **Stantec**, City of Dryden, Design and Construction of Canada's First LEED Silver Sewage Treatment Plant, Award of Excellence, environmental category; **SNC Lavalin**, Koch 101J Compressor Facility, Award of Excellence, industrial category; **Wood**, Dead Horse Creek, Award of Merit, infrastructure category; **KGS Group**, Cockburn Sewer Relief, Award of Excellence, municipal and water technology category; **Tetra Tech**, Pauingassi First Nations, Award of Excellence, municipal and water technology category; **AECOM**, Challenge to Inspect 362 Outfalls, Award of Merit, municipal and water technology category; **Tetra Tech**, Regional Municipality of Wood Buffalo, Award of Merit, small projects category; **AECOM**, **Dillon** and **KGS Group**, PR 304 to Berens—All Season Road, Award of Excellence, transportation category; **AECOM**, Plessis Road Twinning and Grade Separation at CN



Clockwise from top left:
Milica Radisic, PhD, P.Eng., was named a YWCA Toronto Woman of Distinction.

Levente Diosady, PhD, P.Eng., received the Gold Medal at the Engineers Canada Awards.

Hanan Anis, P.Eng., won the Medal for Distinction in Engineering Education at the Engineers Canada Awards.

Max Mantha, P.Eng., won the Young Engineer Achievement Award at the Engineers Canada Awards.

Redditt, Award of Excellence, transportation category; **Stantec**, Rehabilitation Works to the Winnipeg River West Branch Bridge, Award of Merit, transportation category; and **Dillon**, Southwest Transitway's Stadium Station at Investors Group Field, Award of Merit, transportation category.

PEO Councillor **Marilyn Spink, P.Eng.**, was recently recognized as a Distinguished Lecturer by the Canadian Institute of Mining, Metallurgy and Petroleum at an awards gala in Vancouver. Spink was honoured for her dedication to advancing the value of responsible engineering and engineers in the mining industry and for being a voice for the underrepresented. Recipients of the Distinguished Lecturer award are selected based on their accomplishments in scientific, technical, management or educational activities related to the minerals industry.

The Engineers Canada Awards took place in Saskatoon, Saskatchewan, in May. Presented by Engineers Canada, the national organization of Canada's 12 provincial and territorial engineering regulators, the awards recognize the recipients' excellence in engineering, their passion for the profession, outstanding contributions to their communities and to the safety and well-being of Canadians and people around the world. Among the 2018 recipients are **Levente Diosady, PhD, P.Eng.**, an active researcher and professor emeritus in food engineering at the University of Toronto, who received the Gold Medal Award; **Max Mantha, P.Eng.**, who received the Young Engineer Achievement Award; **Hanan Anis, P.Eng.**, who left with the Medal for Distinction in Engineering Education; and **Vanessa Raponi**, a PEO student member who was honoured with the Gold Medal Student Award.

Ryerson University aerospace engineering PhD student **Emily Gleeson** was recently honoured with an Amelia Earhart Fellowship. The \$10,000 fellowship, awarded annually by Zonta International, honours up to 30 women globally with a superior academic record for their doctoral work in aerospace science or aerospace engineering.

The 2018 Ontario Consulting Engineering Awards were recently announced. The awards recognize the knowledge, skills and expertise of consulting engineers in Ontario and highlight their contributions towards the economic, social and environmental well-being of Ontarians. The highest honour, the Willis Chipman Award, went to **McIntosh Perry Consulting Engineers Ltd.** for its work on the Industrial & Mine Area Clean-Up, Phase 3: Deloro Mine site. Awards of Excellence were awarded for the most outstanding project in each of four categories based on number of employees, as follows: **Robinson Consultants Inc.** for their County Road 1 and County Road 2 Roundabout; **C. C. Tatham & Associates Ltd.** for the Stormwater Management Project, City of Barrie; **MTE Consultants Inc.** for the Ottawa Street Double Roundabouts; and **AECOM**, for the McEwen School of



Marilyn Spink, P.Eng. (left), who was recognized as a Distinguished Lecturer by the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), stands with CIM Past President Ken Thomas, PhD, P.Eng.

Vanessa Raponi, a materials engineering student at McMaster University, was honoured with the Gold Medal Student Award at the Engineers Canada Awards.



Architecture at Laurentian University. Awards of Merit were presented to: **WSP** for the Global Centre for Pluralism, in the building engineering and science category; **R.V. Anderson Associates Limited** for the Zone 1 Interconnecting Watermain, in the environment category; **Eramosa Engineering Inc.** for London Health Science Centre: Energy Management, in the industry, energy and resources category; **DST Consulting Engineers Inc.** for Innovative Approach to Selective Deconstruction, 880 Bay Street, Toronto, in the project management category; **Hatch** for Reducing Life Safety Risks in the Kashechewan First Nation Community, in the studies and research category; and **HDR Inc.** for their Reconfiguration of the Six Points Interchange, in the transportation category.

The Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists recently named five individuals for a fellowship designation, including PEO members **J. Paul Guy, P.Eng., FEC**, **Heather E. Hayne, P.Eng., FEC**, and **Sudhir K. Jha, P.Eng., FEC**.

Several University of Windsor engineering students and alumni were honoured by Windsor's Engineering Month Committee at an annual award luncheon to raise the profile of engineering and honour those contributing to the field. **Priscilla Williams, EIT**, a PhD candidate in the civil and environmental engineering department, **Michael Cappucci, P.Eng.**, and **Aaron Blata, P.Eng.**, were named the Top Three Under 30 for demonstrating exceptional leadership and work ethic. **Wanda Juricic, P.Eng.**, received the Windsor-Essex County Engineer of the Year Award to recognize her as a role model and for her dedication to engineering.

The University of Toronto recently honoured its faculty and staff at the 11th annual Celebrating Engineering Excellence event. Among those

AWARDS



Rex Meadley, P.Eng. (far right), presents the Willis Chipman Award to the McIntosh Perry team at the Ontario Consulting Engineering Awards. Left to right: Phil Whelan, P.Eng., Bob Gordanifar, P.Eng., Tomaso Marangoni, EIT, Mark Priddle, Wilson Jiang, Aron Zhao and Michelle Gluck.



Sudhir K. Jha, P.Eng., FEC (right), seen with Russ Kinghorn, P.Eng., FEC, then-president of Engineers Canada, was named a fellow of the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists.

recognized were **Vaughn Betz, P.Eng.**, who received the Early Career Teaching Award; **George Eleftheriades, LEL**, who received the Safwat Zaky Research Leader Award; **Manfredi Maggiore, LEL**, who received the Faculty Teaching Award; **Graeme Norval, P.Eng.**, who received the Sustained Excellence in Teaching Award; and **Ding Yuan, EIT**, who received the McCharles Prize for Early Career Research Distinction.

In March, Hydro One announced the recipients of its Women in Engineering Award. The award, established in 2014 to provide women with opportunities to develop careers in engineering and related fields, represents a financial award and a paid opportunity to work for Hydro One in a student placement. This year's recipients are **Carlee Armstrong, Zoe Fox, Sydney Wilson** and **Ruhmaa Bhatti** of Western University; **Hailey Fielder** and **Toby Ma** of the University of Ontario Institute of Technology; **Jin Li** of Queen's University; **Uranos Wahidi** of Ryerson University; and **Monica Black** and **Hira Nadeem** of McMaster University. [e](#)

FIRST-YEAR PEAK REPORT RECEIVED

By Nicole Axworthy

519TH MEETING, JUNE 22, 2018

At its June meeting, Council received the results of the first year of operation of the Practice Evaluation and Knowledge (PEAK) program. As of April 30, 2018, 27,283 licence holders (33 per cent of all licence renewals) completed at least the first element of the PEAK program, the practice declaration. Approximately 93 per cent of those practitioners completed the practice evaluation questionnaire and received a recommended number of hours of continuing knowledge activity. Of those who received a recommendation, 23 per cent have reported some continuing knowledge activities.

The second year of the program began on April 2, 2018, and the report included improvements and planned activities for the year and recommended planning for the third year begin immediately so the cost of the program operation and improvement can be included in the 2019 budget, which will be reviewed at Council's September meeting. No recommendation was made to move forward with a referendum to make the program mandatory.

2019 BUDGET ASSUMPTIONS APPROVED

Council has approved assumptions to guide development of PEO's 2019 operating and capital budgets. The operating

budget is to be balanced, with no increase in fees for the 10th consecutive year. Net growth for full-fee professional engineers is assumed to be 1 to 1.5 per cent, while retirees and partial fee members are assumed to increase by 3 to 4 per cent. The Financial Credit Program is expected to continue, impacting EIT and P.Eng. application fee revenues. Investment income in 2019 is not predicted over the next 12-month cycle, but, given the expected increase in interest rates in the foreseeable future, returns over 4 per cent are unlikely (the return in 2017 was 4.16 per cent). Salaries are expected to increase by 3.5 per cent, comprising a consumer price index adjustment of 2.5 per cent and a 1 per cent merit pool. Non-labour expenses are assumed to increase at the forecast inflation of 2.5 per cent, and all programs will be subject to evaluation. Chapter spending may vary outside the range of the forecasted inflation rate, depending on a review of chapter business plans, chapter bank balances and regional business demands. Council will have an opportunity at its September meeting to review a draft budget, subject to approval in November. [e](#)

WE'VE GONE DIGITAL!

Our print edition is still available, but to receive it instead of the digital edition, you must change your subscription preference in PEO's online member portal.

GO TO WWW.PEO.ON.CA, log in to the portal (be sure to have your licence number handy) and change the *Engineering Dimensions* delivery method back to the print edition through the *Dimensions* tab.

IN ADDITION, you will be asked to choose your subscription preference as part of the annual renewal process.



SteelBuildingExperts

Using Manufacturer Designed Building Components?

Project Support for Steel Buildings, Cold-formed, Deck, Diaphragm, Composite Cladding, General Review

steelbuildingexperts.ca • 905 617-2729



Earth Engineering and Environmental Services
Geotechnical • GeoEnvironmental • Hydrogeology • Construction QA
 Earthworks, Foundations, Excavations, Slopes, Tunnels, Pavements, Dams, Mines, Drainage
 Site Investigation, Site Assessment, Hazmat Surveys, Risk Assessment, Site Remediation
 Soil, Rock, Groundwater, Contaminants, Aggregates, Concrete, Asphalt, Steel, Roofing

238 Galaxy Blvd., Toronto, Canada M9W 5R8 416 674 1770 www.sarafinchin.com



P&I Technologies Inc. Patrick Van Brunt BSc; P. Eng.
PROTECTION & CONTROL ENGINEERING
 Phone: 705-435-8814 Cell: 416-451-3414
 E-Mail: pvanbrunt@PITechnologies.ca
 WEB: www.pandctraining.com

ISAFE TECHNOLOGY

Electronic Consultants – Intrinsic Safety

Application of Electronics in Explosive Atmospheres:
 Hydrogen, Natural Gas, Propane, Methane, Ethylene

Design Assistance, Preparation for Approval Evaluation or Complete System Design

1 416 221-6216 | isafeconsult@gmail.com



Terraprobe since 1977
 Consulting Geotechnical & Environmental Engineering
 Construction Materials Inspection & Testing

subsurface investigations, foundations, tunnels, erosion, slope stability studies,
 Phase 1 & 2 environmental site assessments, contamination studies,
 ground water availability, hydrogeology, septic tile bed design, pavements,
 soil, asphalt, concrete, steel, roofing, shoring design, retaining wall design

Brampton (905) 796-2650	Barrie (705) 739-8355	Sudbury (705) 670-0460	Stoney Creek (905) 643-7560
-----------------------------------	---------------------------------	----------------------------------	---------------------------------------

www.terraprobe.ca

Sound Analysis
 Sound Experience
 Sound Results
 Sound Solutions to Acoustical Challenges



Consulting Acoustical Engineers
 Architectural and Environmental Acoustics/Vibration

T: 905 764 5223 F: 905 764 6813
 www.valcoustics.com solutions@valcoustics.com

Experts in Measurement, Analysis & Control

ACOUSTICS NOISE VIBRATION



905-826-4546
 answers@hgcengineering.com
 www.hgcengineering.com

Process and Environmental Controls

- Oil-in-water monitors
- Level Controls
- Leak Alarms
- Gas Detection



100% Canadian Designed and Manufactured www.arjayeng.com



The Best Floors Start With Our Finish!

Alocon • Apollo • Bartell • Bekaert • Belmont • Bravo Windsor • Centis
 CPD • Duracon • Diplock • Euclid • Duron Ontario • Duron Services • Metro
 Sika • Slavko • Somero • Tri-Con • Tri-Con Haid • United Floor

Tel: (905) 825-9825
 E-mail: info@concretefloors.ca
 www.concretefloors.ca

K.H. **DAVIS** WE'RE SPECIALISTS IN RESIDENTIAL PROJECTS.

ENGINEERING CONSULTANTS LTD
 structural | houses | small projects

416 489 1228 WWW.KHDAVIS.COM

Accused of Professional Misconduct?



We can help you protect your reputation. James Lane has acted for numerous engineers in defending negligence claims and professional conduct charges.

BERSENAS JACOBSEN CHOUEST THOMSON BLACKBURN
 BARRISTERS, SOLICITORS

416-982-3807
 www.lexcanada.com
 jlane@lexcanada.com

To advertise within the Professional Directory, contact:

Beth Kukkonen
 bkukkonen@dvtail.com
 905.886.6640, ext 306



wh Specialists in
ENGINEERING HVAC & R Sys.
Building Heating, Ventilation, Air Conditioning & Refrigeration Sys.
416 335 0100 www.wheng.ca

Grantec Engineering Consultants Inc
Advanced Engineering Design and Analysis
Manufacturing, Energy, Offshore & Defence Sectors

Pressure Vessels	Fluid Dynamics (CFD)	ANSYS Mechanical FEA
Fitness for Service	Vibration & Dynamics	ANSYS Fluent & CFX CFD
Naval Shock	Offshore Structures	Siemens NX NASTRAN

www.grantecengineering.com (902) 835-6982 info@grantec.ca



Ontario Professional Engineers Foundation for Education
Since 1959

BUILDING FUTURE LEADERS

\$3.1 million
in scholarships

3350
engineering students helped

Funding for engineering students at all Ontario accredited schools, and for professional engineers in financial need.

DONATE TODAY

- Online: engineersfoundation.ca
- Call: 1.800.339.3716, ext. 1222
- PEO fee renewal: online or paper

Charitable Number: 104001573 RR0001

+		AD INDEX	
EPIC epictraining.ca/ed	p. 9	Ryerson University ryerson.ca/co-op/employers/gettingstarted/	p. 19
Manulife www.professionalretiree.com/PEO	p. 2	TD insurance tdinsurance.com/ope	p. 55
Ontario Society of Professional Engineers www.ospe.on.ca/ite-exam-prep	p. 13	University of British Columbia mel.ubc.ca/edon	p. 56
Queen's University admcanada.ca	p. 15		

AD INQUIRIES Your business card here will reach 82,000 professional engineers. Contact: Beth Kukkonen, Dovetail Communications, 905-886-6640, ext. 306, fax: 905-886-6615, bkukkonen@dvetail.com

Deadline for the September/October issue is July 25, 2018. Deadline for the November /December issue is September 19, 2018.

Not a members' club

Bruce G. Matthews, P.Eng.,
CEO, Consulting Engineers of Ontario,
Toronto, ON

I read with interest President David Brown's message in the May/June 2018 issue of *Engineering Dimensions* (p. 6). He has identified the root cause of PEO's failure to thrive and fulfil its mission over the past decades: the strong and persuasive "members' club" mentality within an organization that is, by legislation, solely a regulatory body. Since the creation of OSPE in 2000, the continued club mentality at PEO has hampered its ability to regulate effectively and has adversely impacted OSPE's success. While occasionally talking a good game about serving and protecting the public interest, there are

countless examples over the years where it has been clear that member interests have strongly influenced PEO policy and practices.

It is these self-interest actions that have brought the entire self-regulatory model under attack. President Brown is correct about the coming disruption. PEO was very lucky to escape largely unscathed at the Elliot Lake Inquiry, but that should be viewed as a wake-up call. PEO needs to be focused 100 per cent on regulatory activities and do so in a manner that is unquestionably in the public interest—as is required under its governing legislation. The added costs of doing so will be what they will be. However, some savings can be realized from eliminating the non-regulatory and non-public interest activities currently undertaken by PEO.

Consulting Engineers of Ontario, as the trade association of consulting engineering firms in the province, recognizes and supports the need for a strong and focused engineering regulator. Getting there will require strong resolve on the part of PEO leadership. It must turn a deaf ear to member-interest perspectives and recognize that serving and protecting the public interest will sometimes not be popular amongst the grassroots membership.

Solving the controversy

Gordon Rogers, P.Eng.,
Toronto, ON

Regarding Dave Winlow's excellent letter "No hope of understanding" on the controversial subject of climate change (*Engineering Dimensions*, January/February 2018, p. 58), I noted his use of the expression "fake science."

The original science was based on the amount of CO₂ in geologically dated ice cores and the fact that human CO₂ emissions are increasing. The controversy is whether global warming is solely due to

human emissions. An engineering technique used some years ago by an old colleague, John S. Jones (a Rolls Royce expert, whose work he shared with me but for which he did not achieve public recognition to my knowledge), can provide the answer: Walter Shewhart (1891-1967) developed statistical process control charts to assign probable cause of quality problems and reduce wastage in the manufacture of products. The charts are essentially values of measured information that are analyzed statistically to expose changes (both permanent shifts and temporary aberrations) over time in any process.

If climatologists used this engineering technique to analyze global temperatures before and after the Industrial Revolution (National Oceanic and Atmospheric Administration temperature data is available for many global locations starting in the early 1700s), it would cover the period of zero human emissions then the commencement of human emissions—to solve the controversy scientifically.

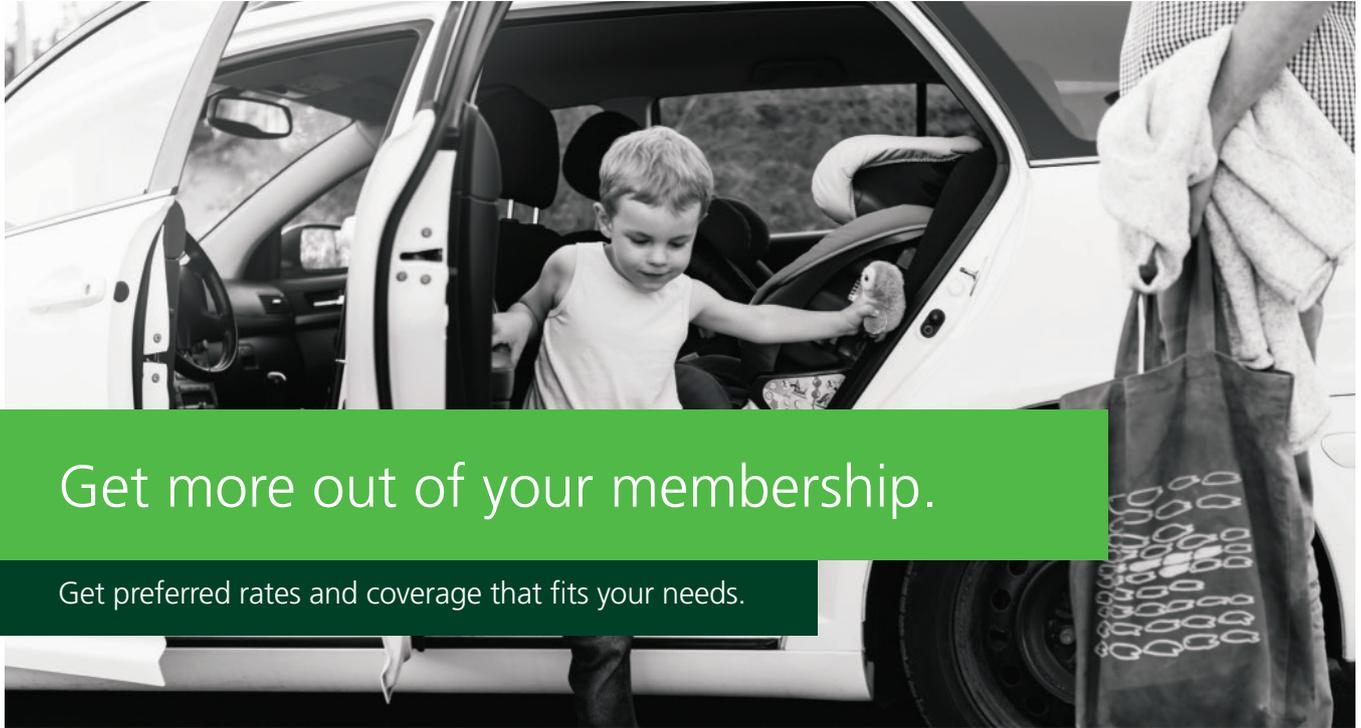
Pay attention to our best science

John Hayles, P.Eng.,
Winnipeg, MB

The May/June 2018 issue of *Engineering Dimensions* contains a letter to the editor on page 74 entitled "So much for green science" that seems to deny anthropogenic climate change and suggests the world's best atmospheric scientists are wrong. Average temperatures are forecast to rise by 3 C to 4 C this century and will cause significant sea level rise, acidification of the ocean, loss of coral reefs and stress on the entire oceanic food chain.

Wildfires, hurricanes, heat waves and droughts with crop failures are all more likely. With such important impacts, let's all pay attention to our best science and try to recognize false or incomplete arguments from non-professionals in climate science.

LETTERS TO THE EDITOR are welcomed, but must be kept to no more than 500 words, and are subject to editing for length, clarity and style. Publication is at the editor's discretion; unsigned letters will not be published. The ideas expressed do not necessarily reflect the opinions and policies of the association, nor does the association assume responsibility for the opinions expressed. Emailed letters should be sent with "Letter to the editor" in the subject line. All letters pertaining to a current PEO issue are also forwarded to the appropriate committee for information. Address letters to naxworthy@peo.on.ca.



Get more out of your membership.

Get preferred rates and coverage that fits your needs.

You could **save big***
when you combine your
member preferred rates
and bundle your home
and car insurance.

Take full advantage of your membership.

As an engineer in Ontario, you have access to the TD Insurance Meloche Monnex program. This means you can get preferred insurance rates on a wide range of home and car coverage that can be customized for your needs.

For over 65 years, TD Insurance has been helping Canadians find quality home and car insurance solutions.

Feel confident your home and car coverage fits your needs.
Get a quote now.

HOME | CAR



Get a quote and see how much you could save!
Call 1-866-269-1371
Or, go to tdinsurance.com/ope





ADVANCED MATERIALS MANUFACTURING



CLEAN ENERGY ENGINEERING

A YEAR *can* CHANGE EVERYTHING



HIGH PERFORMANCE BUILDINGS

MEL
Master of Engineering Leadership



DEPENDABLE SOFTWARE SYSTEMS



INTEGRATED WATER MANAGEMENT



NAVAL ARCHITECTURE & MARINE ENGINEERING



URBAN SYSTEMS

Invest in your career UBC's Master of Engineering Leadership (MEL)

Advance your career with one of these unique masters for engineering, architecture, planning and science professionals: game-changing degrees combining technical, business management and leadership skills. Take your career to the next level in just 12 months!

Start this January! Apply by August 1 or October 1. mel.ubc.ca/edon



THE UNIVERSITY OF BRITISH COLUMBIA



Master of Engineering Leadership

