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[4] Canadian Cancer Society, "Cancer Statistics at a Glance," 2023.
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THE VOICE
OF ONTARIO'S ENGINEERS

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Dear Members,

One of the great values of OSPE is that we get to sit in the nexus of the engineering community. We engage as much with employers as we do with employees; students as much as graduates; and licensed professionals as much as those plying their expertise in other markets. No organization is as connected to what is really going on in our rapidly changing environment as we are.

That connectivity fosters meaningful connections across a myriad of stakeholders and it is in our best interests to engage directly when we are trying to figure out where the profession and industry is going. What new factors are in play today and how they will change tomorrow?

With that in mind OSPE convened a series of breakfast roundtables with leaders in industry and academia in the Spring of 2024. These were important "sensing" events and opportunities to remind all sectors of our engineering community that OSPE is a critical partner in understanding our current environment and coordinating action. We've also conducted numerous interviews and focus groups with members of our community in preparation for the creation of our new Strategic Plan.

Here is a shortlist of some of the things we heard and how they might stimulate future action by OSPE on behalf of our members and the engineering community.

Impact of Immigration on Academia and Licencing

For generations, immigration has been a critical component to the growth story of Canada. Today, immigration is more complicated than ever, and recent changes have made it more difficult for those looking to study at our academic institutions. The short term effect is a significant revenue loss for colleges and universities, during a time when governments cut tuition fees without supplementing that loss with additional funding. The long term effect - will there be a shortage in qualified professionals going into engineering?

Additionally, according to PEO licensing data, over 80% of those licensed over the past 12 months were internationally trained engineers. Which begs the question… Why aren't Canadian Trained Engineering Graduates getting licensed? More on that later.

Perhaps OSPE needs to more overtly campaign for changes to government policies.

A Need for Experience & The Need to Give It

As OSPE has engaged leaders at some of Canada's largest engineering firms, we heard a familiar refrain – "we need more engineers". At the same time, we are hearing from members across all sectors, that they are having difficulty finding meaningful engineering employment. Even from those with significant experience. Of course, matching talent with employment is often a 1:1 process, but there also seems to be a disconnect right now of seeking only perfect experiential and profile matches for available roles. That is limiting for both sides of the equation and we seem to as an industry be losing the confidence to train employees for success. At a macro level, engineering is often about building resilience into "systems", which in this current economy could mean hiring potential rather than waiting for perfection.

Last year OSPE helped launch Engineers4Hire, an organization that understands the true needs of engineering firms and one that can help bridge the gaps in their HR practices. We are actively encouraging firms of all scale to make sure their talent needs are not holding them back.

The P.Eng. is No Longer the "Thing"

It is probably only a modest exaggeration that previous cohorts of engineering graduates thought engineering career and P.Eng. licence first before examining other career options. The goal was to get licensed and then go from there. Now, there are so many opportunities for the best and brightest engineering graduates that most are not even considering licensure, unless it is absolutely required by the employer. This is not to imply that

they are not maximizing their engineering education and talents, but it is a concerning trend when juxtaposed to the growing need for engineers in spaces like infrastructure renewal and climate change mitigation. OSPE knows that the licensure process has its faults, and we have advocated in favour of streamlining it and making it more equitable. As we do, we also need to work together as an industry, demanding fair value for engineering expertise so the allure of other applications is not so great. Why are firms not requiring engineering graduates obtain their P.Eng. designation? Why are firms not seeing value in the licence?

OSPE is actively encouraging engineering firms to be firmer on the value of their services. Meaning increased revenues, salaries and profitability. We also believe that engineering licensing regulators need to focus on building the core value of a licence… as a mark of quality assurance and professional qualification. PEO, and other engineering regulators, need to continue to build programs to ensure that the P.Eng. designation reflects a professional licence, and not simply a 'membership club'.

Those three matters are just some of the many areas of concern that your Board of Directors is looking closely at as we develop our new strategic plan. In fact, on that last point, the Board is looking even further down the road than that, considering where we might be as an organization, and as an engineering community, 20 years from now.

That far down the road might be hard to envision in a world where artificial intelligence is creating upheaval in so many industries (including ours), and the world sometimes feels like it is moving from one geopolitical or natural disaster to the next.

Thankfully, our engineering community has the ability to both adapt and prosper. If we can all work together and continue to honestly share our challenges, there is no doubt we can turn them into opportunities.

We have no choice.

Sandro Perruzza
Chief Executive Officer
Ontario Society of Professional Engineers

Want to see your work published in an upcoming issue of the Voice?

We do too, which is why we are sharing some information on what we are looking for and how you can best share your research and perspective with the engineering community.

Article Length: 800-1500 words

Anything longer probably is best published as a white paper (although an executive summary could be in the magazine to promote it).

Subject Matter: Something Newsworthy

Submissions should emanate from research and or technical work that is engaging and interesting to an engineering audience. Common aspects to look at are the economic, social, and or regulatory impacts of particular areas of practice.

Audience: Engineering +

Our magazine is distributed directly to all our members and another 30,000+ members of the engineering community. That is a broad audience, and we encourage submissions to be written in a way such that all can access the content. Subject matter expertise is demonstrated as much by an ability to educate, as it is to demonstrate depth of knowledge.

We invite all members to submit their interest in having work published by sending a brief message to marketing@ospe.on.ca. Please be sure to include your name, brief bio, and an overview of the work you wish to submit.

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NEWS FROM THE FRONT

Since the last update, OSPE staff and volunteers have met with key stakeholders to discuss the housing crisis, bridging programs, and collaboration with Indigenous communities.

The team has also established connections with new public officials and advocated for the correct use of the protected title of engineer in the media.

May 29 to June 19 – Ontario Business Advisory Council Meetings

OSPE staff attended four meetings at **the Ontario Chamber of Commerce** to participate in their **Ontario Business Advisory Council.**

Staff met with **MPP Marit Stiles**, **the Hon. Vijay Thanigasalam (Associate Minister of Transportation)**, **the Hon. Jill Dunlop (Minister of Colleges and Universities)**, and **Paul Calandra (Minister of Housing and Municipal Affairs)**.

These meetings gave OSPE the chance to converse with ministers about its Engineering Smart Communities Working Group's recommendations. The Minister of Housing and Municipal Affairs, Paul Calandra, was interested to hear more about the recommendations and their potential to improve the current housing crisis.

Some key recommendations put forward are:

Improving energy efficiency and renewable energy integration in Ontario, adopting green building materials and technologies, integrating innovative green technologies and implementing strategies to enhance building resilience to climate change.

OSPE public affairs manager, Paola Cetares and Minister of Housing and Municipal Affairs, Paul Calandra at the Ontario Chamber of Commerce to participate in the Ontario Business Advisory Council meeting on June 19, 2024.

July 30 – Meeting with Ontario Bridge Training Program, Ministry of Labour, Immigration, Training and Skills Development

OSPE staff, including OSPE CEO Sandro Perruzza, met with **Kelly Sung & Vivian Ng** from the **Ontario Bridge Training Program** to present and discuss the creation of a bridging program led by OSPE to help international engineering graduates better understand licensure and integrate themselves in the Ontario engineering landscape.

This program would include professional skills development, technical skills enhancement, licensure

support, mentorship and coaching, practical experience, and job placement. This session was informational in nature and helped us better understand how Ontario's bridge training program operates and how OSPE can enhance the program.

August 12 – Roundtable on Building Infrastructure and Advancing Community Economic Development

OSPE attended the **Roundtable on Building Infrastructure and Advancing Community Economic Development**, hosted by **the Ontario Chamber of Commerce**. The discussion focused on Indigenous engagement in infrastructure and engineering projects, and explored how we can better collaborate with Indigenous communities when planning and implementing engineering initiatives.

OSPE public affairs manager, Paola Cetares at the Roundtable on Building Infrastructure and Advancing Community Economic Development, hosted by the Ontario Chamber of Commerce on August 12, 2024.

Letters and Submissions

June 11 – New Minister of Energy and Electrification, Stephen Lecce

Stephen Lecce was appointed as the new **Minister of Energy and Electrification**. We sent a letter to congratulate him on his new appointment and establish a line of communication. Similar to his predecessor, we hope the new Minister will work closely with our subject matter experts from the Energy Task Force to advance energy policy solutions.

July 3 – Editor-in-Chief of the Globe and Mail

In an opinion article published by the **Globe and Mail**, the author misused the term engineer. To ensure that the term is used properly and according to regulations, OSPE sent a letter to the editor-in-chief to advocate for the proper use of the legally protected term. OSPE's advocacy team want to make sure the title "engineer" in Canada is protected and signifies only individuals who have completed a rigorous education, additional professional experience and licensure requirements, culminating in the Professional Engineer (P.Eng.) licence.

Learn more in the OSPE Society Notes Blog

June 11 – New Minister of Energy and Electrification, July 9 – New Chair of the Ontario Energy Board (OEB) Mark White

Mark White was elected as the new chair of the **Ontario Energy Board** in July. We hope to work closely with Mark White and the OEB to advance smart engineering solutions in Ontario's energy sector, our main point of discussion will be surrounding thermal and electrical networks via our Energy Task Force subject matter experts.

Learn About OSPE's Advocacy Wins

ospe.on.ca/advocacy/advocacy-achievements

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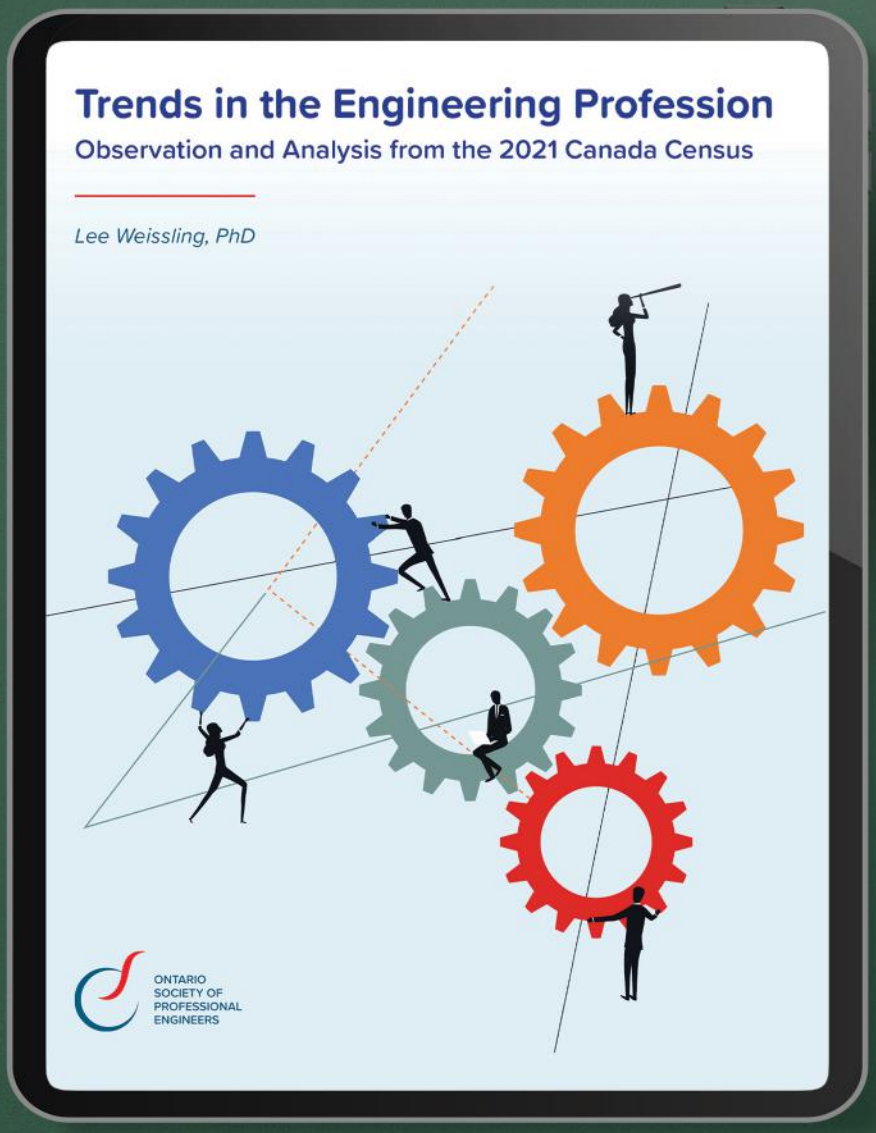

Learn more: go.ospe.on.ca/research-reports

Announcing the Artificial Intelligence in Engineering Working Group: Pioneering Ethical AI Practices for the Engineering Sector

As artificial intelligence (AI) reshapes industries worldwide, the engineering profession is at a pivotal moment. Recognizing the transformative power of AI, the **Ontario Society of Professional Engineers (OSPE)** launched the **Artificial Intelligence in Engineering Working Group**. This initiative is designed to lead the engineering community toward responsible and ethical AI use, ensuring that engineers are equipped with the tools to integrate AI effectively while mitigating potential risks.

By focusing on ethical use, education, and practical applications, the group aims to ensure that AI enhances the engineering profession in meaningful ways.

The key objectives include:

- Facilitating understanding of AI's potential benefits and risks within engineering.
- Developing best practices for AI integration in engineering projects, with a focus on safety, efficiency, and ethics.
- Offering recommendations on cost implications, ethical considerations, and leadership strategies.
- Producing educational resources to help engineers learn about and apply AI responsibly.
- Advocating for industry-wide education and the promotion of responsible AI usage.

The working group's primary outcome will be a well-defined framework for the ethical use of AI in engineering, alongside practical resources to guide professionals in implementing these standards.

Follow us on social media for updates as the working group progresses in its mission to influence the future of engineering with AI.

OSPE Endorses Ontario School Safety's Air Quality Investigation Guide

A critical component of OSPE's mandate is helping engineers take action when the health and safety of the community is at risk.

This is what prompted significant outputs during the pandemic from our **Indoor Air Quality Working Group**, including a set of recommendations for places where it is common for groups to congregate, such as educational institutions, long term care homes and more.

With that aim in mind, OSPE proudly endorses **Ontario School Safety (OSS)'s Air Quality Investigation Guide**. OSPE loaned our internal expertise to review the guide that Ontario School Safety designed to help protect children attending school in Ontario, an important and vulnerable group.

OSS's Air Quality Investigation Guide provides the tools needed to understand a school's air quality, so that our communities can have meaningful conversations that lead to improvements.

In this guide, you will learn:

- The questions to ask to gather air quality information and request improvements.
- The difference between natural, partial, hybrid and mechanical ventilation.
- Proven tools and strategies to improve air quality in classrooms.
- Guidance to schools from the Ontario Ministry of Education.
- Recommendations from ASHRAE 62.1 and 241.

OSPE encourages members to download the Guide and help their communities take action.

Let's all work together to demand better for our kids and educators. Share it with your principal, trustee, custodian, school board officials, teacher, and parent council.

For more resources, visit the School Advocacy Resources page.

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Call for Engineering to Embrace Indigenous Perspectives

As we observe **National Day for Truth and Reconciliation** on **September 30th**, it is important we reflect and commit to understanding the historical and ongoing impacts of the colonization on Indigenous peoples. The day is not only about acknowledging the past, but also about shaping a future where reconciliation is central to our actions and decisions. For the engineering community, this calls for a deeper connection with Indigenous perspectives, particularly when it comes to projects that involve land and water.

Engineering projects, especially those involving infrastructure, resource extraction, or urban development, are deeply intertwined with the lands we all inhabit. For Indigenous peoples, land and water are not merely resources; they are sacred and hold profound cultural, spiritual, and ecological significance. Therefore, fostering meaningful relationships with Indigenous communities is not just a legal obligation; it is a moral imperative.

When we engage with Indigenous peoples in the planning and execution of engineering projects, we gain access to traditional knowledge that has been passed down through generations. This knowledge often offers valuable insights into sustainable practices, environmental stewardship, and holistic approaches to land use that can greatly enhance the outcomes of our projects.

Integrating Indigenous Perspectives

The inclusion of Indigenous perspectives in engineering goes beyond consultation; it requires a shift in how we view our role as engineers. Traditionally, engineering has been rooted in a mindset of the control and conquering of nature, a legacy of colonization that continues to shape our practices today. However, by embracing Indigenous worldviews, which emphasize balance, respect, and reciprocity with the natural world, we can begin to decolonize our approaches to engineering. This means considering the long-term impacts of our projects on the environment, and the communities that depend on it. It means prioritizing the protection of water sources, recognizing that water represents life, a belief that many Indigenous cultures have long held. It means respecting the land as more than just a commodity, but as a living entity that sustains us all.

Acknowledging Our Role on Colonized Lands

As engineers, we must also acknowledge that much of our work takes place on colonized lands—lands that were taken from Indigenous peoples through processes of displacement, dispossession, and violence. This history is not something we can ignore; it is a reality that continues to affect Indigenous communities today.

In recognizing this history, we are called to engage in practices that promote healing and justice. This involves advocating for the return of land to Indigenous peoples, supporting Indigenous-led initiatives, and ensuring that our projects do not perpetuate the harms of colonization. It also involves a commitment to ongoing education and reflection on our roles in this process.

Moving Forward with Reconciliation in Engineering

Honouring the National Day for Truth and Reconciliation in the engineering sector is about more than just words; it is about actions that reflect a commitment to real change. It is about building relationships with Indigenous peoples based on mutual respect, understanding, and collaboration. It is about integrating Indigenous knowledge and perspectives into our projects in ways that honour their significance and ensure the well-being of future generations.

As we move forward, let us embrace the opportunity to be part of a profession that builds bridges—bridges of understanding, respect, and reconciliation. By doing so, we can contribute to a more just and equitable future for all.

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Empowering Women in Engineering: Insights from GHD Engineers Across Canada

Professional services firm **GHD** celebrates the work and achievements of its rich and diverse team of female engineers in Canada, highlighting their outstanding contributions to the engineering industry's growth.

In an informal Q&A session moderated by GHD, six engineers from the company's offices across Canada shared their thoughts on what it means to be a woman in a predominantly male-oriented field, how they see their future in the profession, and the message they would like to convey to young women considering a career in engineering.

About the Engineers:

Shannon Richardson, P.Eng., Contamination Assessment & Remediation (CAR) Technical Director (St. Catharines, ON)

Shannon Richardson has 24+ years of experience managing environmental and multi-disciplinary engineering projects across Canada and the United States. In addition to her extensive expertise, Shannon is also a regional co-lead for our Women in GHD employee resource group.

Jennifer Son, P.Eng., Canadian Environment Market Lead (Waterloo, ON)

Jennifer has 24+ years of professional experience managing and directing large global portfolios/programs for environmental and multidisciplinary engineering projects.

Catherine Dang, Digital Strategy and Transformation Consultant & Americas Young Professionals Co-Chair (Waterloo, ON)

A new engineering graduate, Catherine Dang is experienced in helping organizations establish their strategic vision and north star for growth and transformation, enabling these through digital technology and value-based roadmaps.

Anne-Marie Lemieux, Technical Director for Highways Roads & Bridges - Electrical (Montreal, QC)

Anne-Marie Lemieux has 24+ years of engineering experience in illumination for roadways, bridges, tunnels, parking, and pedestrian and cycling facilities as well as experience with power supply and distribution for ITS systems, fiber optic networks, CCTV cameras, DMS signs, and traffic signal design for mid-block and intersection detection and interconnection.

Michelle Uyeda, CSAP, P.Eng., Technical Director and Senior Environmental Engineer, Contamination Assessment & Remediation (CAR) (Vancouver, BC)

Michelle Uyeda is a Contaminated Sites Approved Professional (CSAP) and Professional Engineer with 30+ years of technical expertise on contaminated sites, waste management, hydrogeology, and environmental projects.

Rihem Jaidi, Project Manager for Environment Contamination Assessment & Remediation (CAR) (Québec City, QC)

Rihem Jaidi holds a master's degree in mineral engineering and specializes in environmental site assessments, soil and groundwater characterization, and rehabilitating contaminated sites. Known for her work on several high-impact remediation projects, Rihem is dedicated to advancing sustainable environmental practices and improving ecological outcomes.

Q1: What does it mean to be a woman in a predominantly male-oriented field?

Jennifer Son: While there may be many challenges in working in a male-oriented field, there are many opportunities for women to bring a unique viewpoint and creativity [to their work] and inspire and pave the way for future generations by overcoming challenges which [exemplify] determination and resilience.

Shannon Richardson: I have a responsibility to hold myself and others accountable to ensure that diverse voices have a seat at the table. I need to be honest about the challenges I have faced as a woman in a male-dominated industry and be a part of the change that I would like to see. It means that I have an opportunity to be a role model to other women and try to manage the challenges with grace, courage, determination, and humility.

Catherine Dang: Being a woman in a predominantly male-oriented field is both challenging and empowering. It means advocating for an underrepresented voice that is key to ensuring we are one step closer to truly hearing the needs of the community as we engineer solutions that will permanently change it.

Anne-Marie Lemieux: Things have evolved over time. There were very few women in engineering when I started my degree over 30 years ago. The biases and negative attitudes have largely given way to respect as women have excelled and shown themselves to be exceptional leaders in the field, based on merit regardless of gender. Society has also evolved with new generations distributing family responsibilities more evenly, including parental leave, which has led to a more equitable perspective across the board that benefits both men and women alike.

Michelle Uyeda: I have been in the profession long enough that I now don't think about my gender in this field. Perhaps that in itself speaks volumes of the strides that women have made in the field of engineering. [In my personal experience I went] from being one of the less than 5% of women in my 1992 graduating class to working with a growing number of amazing women and new grads here at GHD. However, I do recognize that after 30 years in my profession, I have the responsibility to be a female role model to those starting out in engineering. I think that young women now have equal opportunities to undertake whatever they want to, but there needs to be more work in promoting and educating women on what engineering is and how rewarding it is, and to encourage them to apply and become one!

Rihem Jaidi: It can be challenging sometimes. Especially when disproving some stereotypes of male-oriented roles such as field work, field sampling, or handling equipment. Despite these challenges, I have support from my team and female colleagues to excel in these roles.

Q2: What excites you about the future of your engineering career?

Son: The innovations that will shape the future, multidisciplinary and global collaboration on large projects, continuous learning, and the chance to mentor future generations.

Richardson: I'm excited to lead multi-disciplinary mega projects geared towards future energy, water, and communities. I'm passionate about the chance to execute engineering projects with teams of professionals from around the world to tackle global problems like water insecurity and climate change.

Dang: Something I learned about at [the University of Guelph] through the Engineering Change Lab group was the idea of technological stewardship. The idea is to advocate for moving beyond only being technicians of technology. Demonstrating technical expertise and excellence is required, but no longer sufficient. To be a good steward, we need to exemplify responsible management, development, and use of technology in a way that considers the broader social, ethical, and environmental impacts. This is exciting to me because I think the industry is evolving to place greater emphasis on stewardship, and I see this as the stronger way forward to make a lasting community impact.

Lemieux: Innovation and new technology have always been a key element to engineering success in my mind. Emerging technologies such as Artificial Intelligence (AI) are now available in the transportation engineering field, and I am excited by the opportunity I had to use some of these new tools in my recent work. I look forward to many more interesting projects that will positively impact the infrastructure we design and build to improve the communities that we serve.

Also, the way GHD empowers women to grow and seek leadership roles is not something I experienced before I joined the company. I am thrilled to have the opportunity to grow in my role and have the support of the leadership team at GHD through their mentoring, to pursue a road that suits me, whether it be technical or in management. I am looking forward to where my next role will take me.

Uyeda: Mentoring and succession planning excite me the most. There are also many opportunities to work for the growth of British Columbia and to be involved in the associated capital infrastructure projects here in Western Canada, so there couldn't be a better time to be an engineer. The other thing that excites me is the diversity of projects that I work on and expanding that diversity to keep growing the business and the team of engineers and scientists in the region.

Jaidi: Environmental engineering is interesting for addressing various challenges related to environmental protection, water pollution, and sustainable energies. There are many related tasks like environmental impact assessment, soil remediation, climate change, and safe disposal of wastes. Besides, there's always more to learn about, especially since the world is developing several renewable energy systems and eco-friendly materials. So, I still see a long path of knowledge that is waiting for me. It's very exciting for me to be part of that!

Q3: What message would you like to convey to young women considering a career in engineering?

Son: Women provide a unique perspective and creativity, and we do have value to add. I would also recommend building a network of strong women who can provide mentorship, guidance and continuous learning, and always support and uplift other women.

Richardson: It is an exciting time to be an engineer with the opportunity to be involved in solving some of the world's most pressing problems and learning through rapidly changing technologies. With many companies focused on diversity and inclusion, we are moving the needle, and teams are becoming more diverse, but it will be up to future generations to continue to demand equity and equality. Being a woman in a male-dominated industry will only be one of the challenges faced by young women who are considering a career in engineering, so work hard, advocate for yourself, take ownership of your career aspirations, and help others along the way, regardless of the path you choose.

Dang: Pursuing a career in engineering is a rewarding yet challenging journey, and every individual's path will be unique. I want to share my personal experience and offer some insight to fellow young women considering this field. When I decided to pursue engineering, my family reacted with concern rather than pride. In many Eastern cultures, there is a perception that well-educated women, especially in STEM fields, may have diminished marriage prospects. This cultural expectation created an additional layer of difficulty for me, and I know many young women with similar backgrounds face the same challenge.

It's crucial to acknowledge that women from diverse backgrounds encounter different obstacles. Our experiences are shaped by our intersectional identities, and the barriers we face can vary widely. This diversity of experiences means we need tailored support systems.

My message to young women is to never doubt how important it is to speak up about the challenges you encounter. By sharing our unique stories and struggles, we can build a supportive community that advocates for the needs of all women in engineering.

Lemieux: Work hard, pursue excellence, and follow your passion!

Uyeda: Go for it. There are so many new types of engineering now and varied opportunities within each, that if you have a curious mind and like problem-solving, designing, and both math and science, then engineering is for you! Ask for informational interviews from women in engineering to learn about why they chose the career and what they do. And for those women starting their profession in engineering, be curious about the "why?" of what you are doing and get as much 'hands-on' experience as you can at the start of your career.

Jaidi: There's no limit to what you can achieve. It could be challenging sometimes but when we are passionate about what we can do, we go forward and pursue our interests.

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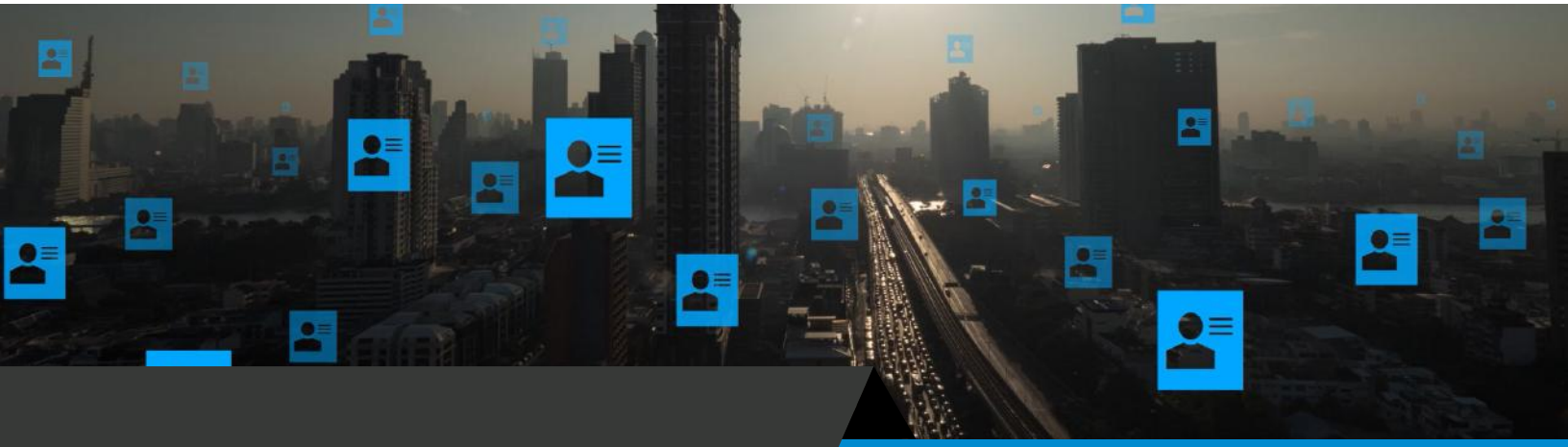

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Where Are All the Queer Engineers?

When we talk about equity, diversity, inclusivity, and accessibility in engineering, it's crucial to discuss the experiences of **2SLGBTQI+** individuals in the engineering and broader STEM communities.

Most major universities boast chapters of 2SLGBTQI+ student organizations, such as **EngiQueers**, **oSTEM** (Out in Science, Technology, Engineering, and Mathematics), and **Queer Sphere**. These groups provide a sense of belonging, fostering an environment of acceptance and camaraderie among queer students in the STEM fields. These student organizations are often supported by faculty, who may run their own positive space committees or other initiatives to foster welcoming environments for queer students, staff and faculty.

However, the presence of these organizations and initiatives does not necessarily guarantee that university campuses and engineering schools are safe spaces for 2SLGBTQI+ students. Moreover, the transition from the relatively protected campus environment to the professional world can be stark and challenging, often characterized by a noticeable decline in the level of support available to queer individuals.

Workplace Challenges: Where are the Queer Engineers?

Even for 2SLGBTQI+ engineers who experience strong support and vibrant communities during their university years, the transition to the workforce can be jarring. The sense of belonging cultivated through student groups like EngiQueers and oSTEM often fades, replaced by workplaces that lack the same level of inclusivity. Many organizations post broad statements of support during Pride Month, but do not take steps to foster an inclusive workplace. This can lead employees to feel uncomfortable expressing their true selves at work and sets a disturbing trend. New employees enter the workplace, see the lack of inclusivity, and remain closeted. A recent study on systemic inequalities for LGBTQ professionals in STEM published in Science Advances paints an alarming picture of this reality: queer engineers often feel isolated due to the absence of a dedicated community or visible role models, and are sometimes afraid to come out at work for fear of bias or discrimination.

A Comparative Perspective: U.K. vs. Canada

While nations like the U.K. have established organizations such as **InterEngineering** to support 2SLGBTQI+ STEM professionals, Canada falls noticeably short in this regard. This absence raises questions about the inclusivity and representation of queer professionals within the Canadian STEM community.

Tracking 2SLGBTQI+ inclusion in specific regions, such as Ontario, proves challenging due to a lack of comprehensive data. The pervasive reluctance within the industry to even discuss something as basic as pronouns underscores the ineffectiveness of current initiatives aimed at creating inclusive workplaces. Moreover, the frequent and troubling absence of explicit targets for 2SLGBTQI+ representation and the failure to collect meaningful data reveal a broader, systemic disregard for inclusivity. Without addressing these critical issues head-on, Canada's STEM fields will continue to lag far behind in creating truly inclusive environments for queer professionals.

Role Models and Representation: Isolation and Exclusion

It is no secret that thousands of 2SLGBTQI+ individuals died in Canada and the United States during the AIDS epidemic in the 1980s and 1990s. Many of the older 2SLGBTQI+ engineers who survived the AIDS crisis may choose to remain closeted at work due to fears of homophobia and discrimination affecting their work life and careers. Between the 1950s and 1990s, suspected 2SLGBTQI+ individuals were not only removed from their jobs in the Canadian Armed Forces and the federal public service, but they were also subjected to intense interrogations, blackmailed, and coerced into revealing the identities of friends and family members who might be queer. They were often followed and surveyed by the government, creating a climate of fear and suspicion. While these policies may have been limited to the government, they are indicative of the environment and the culture that many of today's engineers grew up or started their careers in, one in which it was dangerous to be out at work. While the Canada of today is more accepting than the one of 30 years ago, these policies and environments have left a lasting impression on many individuals, making them reluctant to come out even in today's work environment.

As a result, there are very few role models for the next generation of queer engineers. A dearth of 2SLGBTQI+ role models in STEM can lead to feelings of isolation and exclusion among queer engineers, undermining their professional growth and mental well-being. Role models serve as aspirational figures and tangible proof that success is achievable, regardless of one's sexual orientation or gender identity. Their absence perpetuates a cycle of invisibility, leaving many 2SLGBTQI+ engineers feeling isolated. This isolation is one of the contributing factors leading to higher rates of mental health issues of young adults within the 2SLGBTQI+ community.

Moving Forward

As we work towards EDIA outcomes in engineering, we must commit to tackling these challenges head-on. The path to inclusivity requires building robust support systems, fostering open dialogues about pronouns and identities, and emphasizing data collection to inform future diversity efforts.

Most importantly, we must create a culture in which engineers feel safe being their true selves and in which we celebrate 2SLGBTQI+ role models who do come out to relieve the damaging effects of isolation and exclusion. By doing so, we can create a STEM industry where diversity is not merely an afterthought, but a cornerstone of innovation and progress.

One student group is leading the charge in actively bridging the gap between safe spaces in schools and in engineering workplaces. EngiQueers Canada runs the **Canadian Advisory Network of Engineers who identify as Queer and/or Trans** (CANEQT) a program where engineering students can be connected to engineering professionals, dedicated to creating safe spaces for members of the 2SLGBTQI+ community in the engineering space and queer-friendly workplaces.

By offering this platform students will benefit from mentorship opportunities and build the confidence to step into certain workplaces with the comfort of knowing that they have a support system and that their identity is going to be respected.

For more information on supporting queer engineers and building inclusive workplaces, we suggest Pride at Work Canada's reports, guides, and toolkits.

By Shivani Nathoo, she/her/elle, P.Eng., Chair of OSPE's EDIA Task Force, and Kimberley Paradis, she/her/elle, PhD Student, University of Edinburgh

Shivani and Kimberley are members of OSPE's EDIA Task Force. To learn more about OSPE's task forces and advocacy initiatives, contact advocacy@ospe.on.ca.

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ONTARIO SOCIETY OF PROFESSIONAL ENGINEERS

Mind the Gap: Learn How Emily Pepper, P.Eng. Bridges Heritage and Contemporary Engineering

From an early passion for art, Emily Pepper, P.Eng. has found her true calling in structural engineering, where she now fuses her artistic creativity with engineering expertise.

But as someone who grew up with an engineer father, Emily had misgivings about ever becoming one herself. “You always have these stereotypes and visions of what an engineer is and is not,” she recalls. “I was like, ‘I’m never gonna go into engineering. I don’t want to wear a hard hat all my life.”

That all changed when Emily realized her passion for art and math could be combined as a structural engineer. “When it actually came time to figure out what I did want to do, I thought, how can I combine my two passions? Initially, I thought I could become an architect, but then I realized engineering had the mathematical challenge I craved.”

After graduating Summa Cum Laude with her BASc in Civil Engineering from the University of Ottawa, Emily’s first internship was with Public Works Canada and ended up being an important turning point in her career.

“My first site experience was working on historic buildings and heritage projects,” she says. “It was awesome. I was potentially working on buildings that I studied in my art history class and coordinating with the masons and carpenters.”

In the years since, Emily’s work has increasingly focused on sustainability; particularly in the use of historic materials

and concrete. “Sustainability in engineering is not just about new technologies, but also about learning from the past,” she explains. “Historic materials can teach us a lot.”

Emily further explains that historic materials can help greatly reduce our environmental impact, and that they deliver a win-win scenario for both the environment and the bottom line.

“Communicating sustainability in a tangible way is essential,” she explains. “If we can salvage materials, it may involve more engineering but can save on construction. This approach resonates with clients and architects.”

Emily’s experience with historic buildings is also informed by her time in London, UK where she earned a Master of Science in Advanced Structural Engineering from Imperial College London, graduating with distinction.

“My time at Imperial College London was transformative,” she notes. “The advanced structural engineering program emphasized innovative solutions and sustainability, shaping my approach to engineering.”

Emily’s continued involvement with the Ontario Society of Professional Engineers (OSPE) has also been instrumental in her professional growth. “OSPE has provided incredible networking and upskilling opportunities,” she says. “Through OSPE, I learned about sustainability codes and initiatives, which has shaped my career.”

Emily further highlights the importance of professional organizations like OSPE in supporting engineers. “Professional bodies like OSPE are great for getting your name out there and putting you in situations where you can learn from others,” she says. “It’s reassuring to know that you’re not alone in your struggles. OSPE is great for building confidence and getting a shoe in the door with your ideas.”

One of Emily’s most noteworthy ideas involved analyzing unreinforced masonry tunnels. “I spent two years analyzing masonry arches of various geometries by hand,” she explains, noting that the main challenge was accounting for the

soil pressure around the tunnel and getting the analysis to work all the way around the structure.

“It took months of research and collaboration with colleagues to develop a new methodology. I ended up writing a paper about it and won second place in the regional Civil Engineers Research Awards.”

Now as a Heritage Engineer with WSP, Emily finds value in sharing her ideas with multiple mentors and appreciates the diverse perspectives they each bring.

“Having multiple mentors is better because each has their own career progression and biases,” she says. “OSPE has helped me connect with professionals outside my immediate company, which has been invaluable for my development.”

Emily’s journey from art school to engineering underscores the importance of merging diverse interests and skills. Her work in sustainability and heritage preservation showcases how engineers can contribute to a better future by learning from the past.

“Engineering isn’t just about new technologies,” she says. “It’s about finding innovative solutions using what we already know and improving upon it.”

Meet our members, learn what they do and why it matters:

Emily Pepper, P.Eng.

Hamza Alami, EIT, PMP

Carl Bodimeade, P.Eng.

Leila Jafari, P.Eng.

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PROFESSIONAL ENGINEERS AWARDS

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Celebrate Engineering Excellence

November 15, 2024

Woodbridge, ON

The Ontario Professional Engineers Awards (OPEA) Gala is the province's most prestigious and anticipated engineering event of the year. Proudly presented by the Ontario Society of Professional Engineers (OSPE), this annual gala brings industry innovators, business leaders and policymakers together to celebrate and be inspired by engineering excellence and achievement.

RECAP: OSPE at the CNE 2024

On **August 23, 2024**, OSPE staff and a dedicated group of volunteers headed up an OSPE booth at the **Canadian National Exhibition (CNE)** in Toronto, ON. The team led activities that entire families could enjoy, such as button-making, crafting gliders, and building circuits of holiday lights.

The booth attracted hundreds of CNE attendees throughout the day, especially families, small children, and high schoolers enjoying the last few weeks of summer vacation. Participants enjoyed the hands-on activities, learned about the fun of engineering, and left the OSPE booth with souvenirs to fondly remember their time at the ex.

OSPE government relations coordinator, Bojana Nakic, leading a holiday circuit activity at the OSPE booth during the Canadian National Exhibition on August 23, 2024.

A group of kids making buttons at the OSPE booth during the Canadian National Exhibition on August 23, 2024.

A family at the OSPE booth making buttons during the Canadian National Exhibition on August 23, 2024.

OSPE volunteers at the OSPE booth during the Canadian National Exhibition on August 23, 2024.

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Plenary Session

Bridging Borders: Engineering the Gordie Howe International Bridge

An engaging panel discussion focused on the monumental Gordie Howe International Bridge. This panel brings together key stakeholders, experts, and engineers involved in designing, constructing, and managing this transformative project. Panelists will examine the intricate engineering challenges, innovative solutions, and collaborative efforts required to bring this vital international crossing to fruition.

Speakers: Charl van Niekerk, Clayton Sereres, Heather Grondin, Hellen Christodoulou, Jim Siler, Jose Luiz Mendez, and Zaher Yousif, P.Eng.

Engineering Practices and Technology

Lunch & Keynote Speaker

Why Canada is Poised to Be a Carbon Removal Superpower

In the global race to develop and scale carbon removal solutions, Canada stands out as a leader. Engineered carbon removal technologies, such as direct air and direct ocean capture, rely heavily on access to clean electricity. With its abundant hydroelectric resources—especially in Quebec—Canada holds a significant advantage that many countries envy. Additionally, Canada's vast wind power potential and rich geological landscape make it an ideal location for carbon removal and storage initiatives.

Speakers: Phil De Luna, PhD *(Deep Sky)* and Sandra Odendahl, P.Eng, CFA *(BDC)*

Sustainability and Innovation

Engineering Practices and Technology

Learning Stream 1 - Session 1

How AI is Making Smart Buildings Greener

Real estate is undergoing a massive transformation, moving from a static to a dynamic and programmable asset. The move to programmability is being driven by sustainability and the need to ensure both new and retrofit projects meet present and future business needs. The design and construction industries require a set of new tools to keep up with the advancements in technology and industry standards.

Speaker: William MacGowan, P.Eng., CEM *(Cisco Systems Inc)*

Sustainability and Innovation

Learning Stream 2 - Session 1

Redefining “Safety” in the 21st Century

Engineers have always had a responsibility to ensure the safety of our communities. In our modern connected digital world, that now means new and different things. This session will begin an ongoing dialogue expanding the definition of the term ‘safety’.

Speaker: Beatrice Sze, P.Eng., Juris Doctorate *(Sze Law)*

Cybersecurity and Data Management

Learning Stream 3 - Session 1

Connecting ISO Certifications with Important Environmental, Social, and Governance Goals

There are many tools for engineers to use to increase their positive environmental, social, and political impact. This session will explore the use of ISO 9001, ISO 14001, and ISO 45001 in positioning engineers to maximize their contributions within their organization and their community.

Speaker: Ivana Strgacic, P.Eng. *(Strategies for the Environment Inc.)*

Engineering Practices and Technology

Learning Stream 4 - Session 1

Amplifying Indigenous Voices in Engineering

Indigenous Peoples, encompassing First Nations, Métis, and Inuit communities, have historically been marginalized and underrepresented across various sectors, including engineering. As part of our commitment to fostering diversity and inclusion in the engineering profession, our conference presents a discussion panel centred around increasing Indigenous participation in the engineering industry.

Speaker: Adam Kahgee *(Bruce Power)*

EDIA

Engineering Practices and Technology

Learning Stream 1 - Session 2

Empowering Green Futures: Innovative Approaches in Decarbonizing Buildings

This presentation will explore cutting-edge strategies for decarbonizing buildings, with a focus on practical applications, technological advancements, and sustainable practices. It will cover the role of engineers in driving the green revolution, showcase successful case studies, and discuss challenges and opportunities in this evolving field.

Speaker: Mike Hassaballa, MA.Sc., P.Eng., CEM *(HH Angus and Associates Ltd. Consulting Engineers)*

Sustainability and Innovation

Learning Stream 2 - Session 2

Cybersecurity and Global Privacy Trends and Their Impact on Canada

Learn about what leading organizations from across the world are doing to reinforce their cybersecurity and privacy programs. Explore ideas on how the generation and preservation of trust can be demonstrated to the public.

Speaker: Carlos Chalico NIST CSF LI, CISSP, CDPSE *(EY)*

Cybersecurity and Data Management

Learning Stream 3 - Session 2

The Use of Encapsulated Mass Timber as an Opportunity within the National Building Code

This presentation will explore cutting-edge strategies for decarbonizing buildings, with a focus on practical applications, technological advancements, and sustainable practices. It will cover the role of engineers in driving the green revolution, showcase successful case studies, and discuss challenges and opportunities in this evolving field.

Speaker: Noah Fetterly *(Canadian Wood Council)*

Engineering Practices and Technology

Learning Stream 4 - Session 2

Elevating Youth and Student Voices in Engineering

The perspectives of the next generation is often underrepresented in decision-making processes within the engineering community. Our conference presents a discussion panel focused on elevating student and young professional perspectives in engineering, aiming to amplify their contributions and promote their involvement in community initiatives.

Speaker: To Be Determined

EDIA | Engineering Practices and Technology

Learning Stream 1 - Session 3

The Challenges of Increasing Electric Vehicle Adoption and Multi-Residential Housing

Most EV owners charge at home, however, more than 1/3 of Canadians live in multi-residential buildings. This creates a challenge and an opportunity as Canada encourages personal vehicle travel to go electric. The presentation will address ways to overcome those obstacles, and the multiple options available in the market, with an engineering approach to demand management.

Speaker: Luis-Alberto Quiroz, P.Eng. *(Intellimeter)*

Sustainability and Innovation

Learning Stream 2 - Session 3

How to Craft a Killer Generative AI Product

This session will examine lessons learned from navigating this rapidly growing and evolving field. From AI roadmap definitions to probabilistic user journeys, a step-by-step process of how to create a killer generative AI product will be explored.

Speaker: Jingfei Chen *(ServiceNow)*

Cybersecurity and Data Management

Learning Stream 3 - Session 3

Managing Climate Change Impacts on Water Resources

Learn about procedures, methods, and technologies available to maintain the delivery of safe drinking water and reduce the impact of contaminants generated due to climate change.

Speaker: Saad Jasim, P.Eng. *(SJ Environmental Consultants (Windsor) Inc.)*

Engineering Practices and Technology

Learning Stream 4 - Session 3

Intersectionality in Engineering: Embracing Diversity and Inclusion

Intersectionality acknowledges that individuals' experiences and opportunities are shaped by a combination of factors, including race, gender, sexual orientation, socioeconomic status, and more. Our conference presents a discussion panel dedicated to exploring intersectionality in engineering and the importance of recognizing and addressing the multifaceted identities and experiences of engineers.

Speakers: Janice Wojcik, B.A.Sc. *(Humber Polytechnic, FAST)*, Lija Ward, P.Eng. *(Enbridge Gas Ontario)*, Theresa Nyabeze P.Eng. *(Vale)*, and Victoria Kerr

EDIA

Engineering Practices and Technology

Learning Stream 1 - Session 4

Lessons for Planning a Climate-Resilient Electricity Sector

The path to net-zero means an increased reliance on our electricity system. The Ontario Provincial Climate Change Impact Assessment highlighted that the Ontario electricity system has a medium-risk profile under current conditions, and that risk is rising. This panel will discuss the lessons from new and updated climate adaptation strategies and action plans from the perspective of different electricity sector entities and experts.

Speakers: Daniel Manzon, P.Eng. *(ENWIN Utilities Ltd.)*, Erin Jaggard *(Hydro One)*, Kadra Branker, P.Eng. *(IESO)*, and Karina Richters, P.Eng. *(City of Windsor)*

Sustainability and Innovation

Learning Stream 2 - Session 4

Generative AI and its Implications on Software Engineering

This session will provide a deeper understanding of the technologies that are shaping the future of software engineering. Learn how to acquire the skills needed to thrive over the next decade with a focus on Generative AI.

Speaker: Gary Tamber, P.Eng. CISM *(ADP)*

Cybersecurity and Data Management

Learning Stream 3 - Session 4

An Overview of Risk, Operational Readiness, and Monte Carlo Simulations

An honest look at why so many projects fail, and the tools required to minimize financial and overall project risk.

Speaker: Carmine Ciriello, P.Eng, M.Eng., LSS MBB *(Analyze and Improve Inc.)*

Engineering Practices and Technology

7:00 AM - 8:30 AM	**Registration and Breakfast**				
8:30 AM - 9:00 AM	**Welcome Remarks**				
9:05 AM - 9:50 AM	**Plenary Session**	Bridging Borders: Engineering the Gordie Howe International Bridge			
10:05 AM - 10:50 AM	**Learning Stream Session 1**	How AI is Making Smart Buildings Greener	Redefining “Safety” in the 21st Century	Connecting ISO Certifications with Important Environmental, Social, and Governance Goals	Amplifying Indigenous Voices in Engineering
11:45 AM - 1:15 PM	**Lunch & Keynote Speaker**	Why Canada is Poised to Be a Carbon Removal Superpower			
1:20 PM - 2:20 PM	**Learning Stream Session 2**	Empowering Green Futures: Innovative Approaches in Decarbonizing Buildings	Cybersecurity and Global Privacy Trends and Their Impact on Canada	The Use of Encapsulated Mass Timber as an Opportunity within the National Building Code	Elevating Youth and Student Voices in Engineering
3:05 PM - 3:55 PM	**Learning Stream Session 3**	The Challenges of Increasing Electric Vehicle Adoption and Multi-Residential Housing	How to Craft a Killer Generative AI Product	Managing Climate Change Impacts on Water Resources	Intersectionality in Engineering: Embracing Diversity and Inclusion
4:05 PM - 4:55 PM	**Learning Stream Session 4**	Lessons for Planning a Climate-Resilient Electricity Sector	Generative AI and its Implications on Software Engineering	An Overview of Risk, Operational Readiness and Monte Carlo Simulations	

Cybersecurity and Data Management EDIA Engineering Practices and Technology Sustainability and Innovation

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The Results Are In: OPEA 2024 Awardees

PROFESSIONAL ENGINEERS AWARDS

OSPE is thrilled to announce the winners of the 2024 Ontario Professional Engineers Awards. From seasoned engineers celebrating lifetimes of achievement to young engineers making their first impactful strides in the engineering community, OSPE is proud to honour the following list of awardees.

Professional Engineers Gold Medal

Dr. Zheng Hong (George) Zhu, P.Eng.

York University

Citizenship Award

Annette Bergeron, P.Eng., MBA, FEC, FCAE

Bergeron Consulting

Citizenship Award

Omar Alghabra PC, MP, P.Eng., MBA

Parliament of Canada

Engineering Medal – Engineering Excellence in Industry

Michael Kropp, P.Eng.

PEER Group Inc.

Engineering Medal – Management

Inga J. Hipsz, M.A.SC., P.Eng.

CSA Group

Engineering Medal – Management

David Poirier, P.Eng., P.Log., CBSF

The Porier Group

Engineering Medal – Entrepreneurship

Dr. Giovanni Grasselli, P.Eng.

University of Toronto

Engineering Medal – Young Engineer

Serena Mandla, P.Eng., MASc.

Noa Therapeutics

Engineering Medal – Research and Development

Gregory Kopp, P.Eng.

Western University

Engineering Medal – Research and Development

Boxin Zhao, Ph.D., P.Eng.

University of Waterloo

Distinguished Lifetime Achievement Award

Paul Acchione, P.Eng.

This group represents the very best of the Ontario engineering community and we are thrilled to bring Ontario's engineers together on November 15 at Paramount EventSpace in Woodbridge, ON to celebrate their accomplishments.

For more information on each awardee and to purchase tickets please visit opeaawards.ca.

PROFESSIONAL
ENGINEERS
AWARDS

Ontario Professional Engineers Awards

Celebrate Engineering Excellence

RECOGNIZE A GREAT ENGINEER IN YOUR COMMUNITY!

Since 1947, the **Ontario Professional Engineers Awards (OPEA)** have recognized professional engineers in Ontario who have made outstanding contributions to their profession and their community. The Ontario Society of Professional Engineers is proud to honour the very best of the Ontario engineering community at an annual awards gala in November. This annual gala brings industry innovators, business leaders and policy makers together to celebrate and be inspired by engineering excellence and achievement.

Recognize an engineer in the areas of:

- Innovation
- Community Service
- Entrepreneurship
- Research
- Leadership
- And more!

What is OSPE?

The **Ontario Society of Professional Engineers (OSPE)** is the voice of the engineering profession in Ontario. We represent the entire engineering community, including professional engineers, engineering graduates, and students who work or will work in several of the most strategic sectors of Ontario's economy.

Who is eligible to be nominated?

All P.Eng. licence holders of Professional Engineers Ontario (PEO) in good standing, who have demonstrated achievements significantly above the standards of the profession, with the exception of members serving on PEO Council, the Board of Directors of the Ontario Society of Professional Engineers (OSPE) and the OSPE Awards Committee (OAC), are eligible to receive an Ontario Professional Engineers Award (OPEA). A licence holder from one of the excluded groups above may be nominated for an award after 12 months have elapsed from their participation in the group.

Who can Nominate?

Nominations may be made by any P.Eng. licence holder of Professional Engineers Ontario (PEO). The nominee must not be aware of the nomination and self-nomination is not allowed. All nominations must be submitted using the Awards Force platform.

Deadline for Nominations

Wednesday, February 25, 2025




Learn more: opeaawards.ca

Award Types

The Gold Medal
This is the OPEA highest honour, recognizing conscientious commitment to public service, as well as technical excellence, and outstanding professional leadership.

Citizenship Award
This award recognizes a professional engineer's contributions to public service. Those who earn this award have given freely of their time, professional experience, and engineering expertise to the benefit of humanity.

The Engineering Medal - Entrepreneurship
The award recognizes professional engineers for applying new technologies or innovative approaches that have enabled new companies to get started, and/or assisted established companies to grow in new directions. The engineer should have demonstrated the initiative, energy, and spirit it takes to seek out new ideas and to take a leading role in fostering and promoting them.

The Engineering Medal - Management
The award recognizes professional engineers who are managing and directing engineering projects or enterprises where innovative management practice has contributed excellence in engineering achievement.

The Engineering Medal -Engineering Excellence in Industry
This award recognizes excellence in the practice of engineering in industry, where the innovative application of engineering knowledge and principles has solved a unique problem, led to advanced products, or produced above-average results based on work-related contributions and achievements from the last four (4) years.

The Engineering Medal -Research and Development
The award recognizes professional engineers using new knowledge in developing useful, novel applications, or advancing engineering knowledge or applied science, or discovering or extending any of the engineering or natural sciences.

The Engineering Medal - Young Engineer
The award recognizes outstanding young Ontario engineers in industry, who have made exceptional achievements in their chosen fields and are active in communities both personally and professionally.
** NOTE: The Nominee must be 35 years of age or younger by the submission deadline date.*

Engineering Achievement of the Year
The award recognizes a professional engineer, or group of professional engineers, who have given freely of their time, professional experience, and engineering expertise - to improve the engineering profession in Ontario.

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16 CPD HOURS

Dates:
2 per week (8:30 am - 12:30 pm)
Dec 2 – Dec 10, 2024

Price:
$860

ONLINE

At one time or another, most people have been faced with the job of planning and executing a project. It might have been a simple thing like organizing an office lunch or something quite complex like developing a software application. Even though these two projects seem worlds apart in importance, objectives, and resource requirements, they have a great deal in common in terms of the planning and overseeing that will make them successful. This course is designed to show you the tools and techniques used by project managers to better organize your work to make your projects more successful.

Check the OSPE Events Calendar for more information:
go.ospe.on.ca/learn

JOURNEY TO P.ENG.

PE300 – Journey to P.Eng.

Dates:
Oct 2 (12 pm – 1 pm)
Nov 6 (12 pm – 1 pm)

Price:
$0

ONLINE

This free 1-hour webinar will offer you guidance and support on the licensing process in Ontario. At the end of this presentation, participants will have a foundational understanding of:

- Submission requirements for PEO's application form
- Overview of the stages to licensure
- OSPE's membership services
- Ways in which OSPE's Career Services can benefit you in your skill development and job search techniques
- Professional Development programs that may help you in building your career in Ontario

Preparatory Course for the National Professional Practice Exam (NPPE): PE403/1024

Dates:
Oct 8 - Nov 5

ONLINE

Price:
Member Price: $450
Non-Member Price: $475

Ready to take the next step in your engineering journey and secure your P.Eng license? Our workshop, Preparatory Course for the National Professional Practice Exam (NPPE), provides the essential tools, knowledge, and guidance to help you excel in the National Professional Practice Exam (NPPE). Designed for both members and non-members, these sessions ensure you're fully prepared to meet the licensure requirements.

JOURNEY TO P.ENG.

PE302: Competency-Based Assessment (CBA) Workshops for P.Eng. Experience Requirement

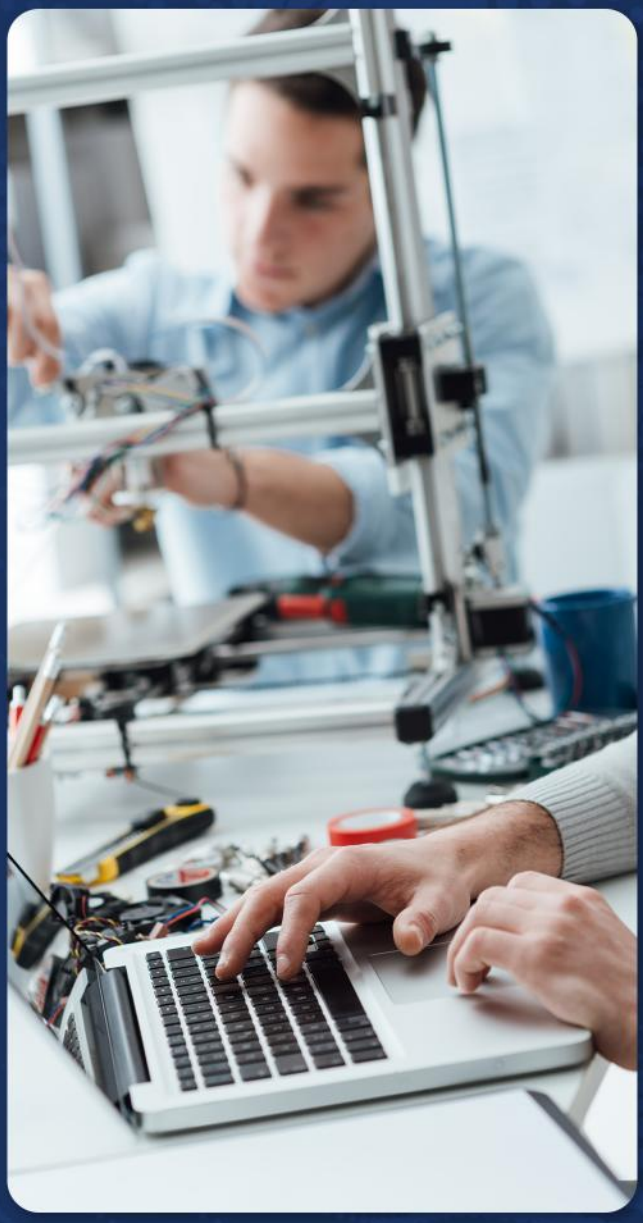
Dates:
Oct 22 (8:30 am - 12:30 pm)
Dec 4 (1 pm - 5 pm)

ONLINE

Price:
Member Price: $350
Non-Member Price: $475

How can you best navigate the P.Eng. competency-based assessment (CBA) system? Professional Engineer (P.Eng.) applicants are required to obtain a minimum of 48 months of acceptable, verifiable professional engineering experience, submitted through a CBA model. CBA is a tool, introduced by PEO in 2023, also used by other provincial regulators (BC, SK, MB, ON, NB, PEI, NL) to assess readiness for licensure that examines 34 engineering competencies across 7 categories: technical, communication, project management, professional accountability, and more.

Our workshop pair gives you the skills and confidence to successfully write your CBA's 34 engineering competencies. We've developed two alternating 4-hour workshops, each offered every few weeks (dates listed below). Each session covers different competencies while having common elements so learners can start with either one. After making progress on your CBA, join the next workshop, to reflect and ask questions then practice more competencies.



THE ENGINEERING ACADEMY | EngTalks By OSPE

1 CPD HOUR

THOUGHT LEADERSHIP THURSDAYS

OSPE's Engineering Academy hosts Thursday webinars with leading experts on a diverse range of technical and non-technical topics.

Understanding Pay Equity: Origins, Requirements, Best Practices, and Trends (Special Edition)

Date:
Sept 17 (12 pm- 1 pm)
ONLINE

Price:
Member Price: $0
Non-Member Price: $59

Join us for an informative webinar led by Kadie Philp, Ontario's Pay Equity Commissioner. Commissioner Philp will discuss the essential aspects of pay equity, including, why fair compensation matters, obligations for employers, and general trends in the field. Whether you are a professional engineer, manager, HR professional, or business owner, this webinar will provide valuable insights and practical strategies and resources to ensure pay equity in your organization. The session will include time for Q&A.

Nuclear Mitigation of Climate Change

Date:
Sept 19 (12 pm - 1 pm)
ONLINE

Price:
Member Price: $0
Non-Member Price: $59

Planet Earth is presently headed toward CO2-driven thermal extinction of large land animal life forms. This process can potentially be stopped, but only by parties who understand the relevant physics and who act promptly. In this presentation, I will indicate the nuclear fuel issues that must be addressed now to limit further injection of CO2 into Earth's atmosphere and then I will review the corresponding nuclear hardware requirements. Immediate major changes in government policy are required, particularly with respect to all aspects of funding and reprocessing of used nuclear fuel.

Utility Management in Infrastructure Project 1 & 2: Part 2 of 2

Date:
Sept 26 (12 pm- 1 pm)
ONLINE

Price:
Member Price: $0
Non-Member Price: $59

This is a 2-part webinar. These webinars aim to offer valuable perspectives on the Subsurface Utility Engineering (SUE) sector. ASCE acknowledges the critical role of utility engineering within civil engineering. Utility engineering encompasses the planning, positioning, design, construction, operation, maintenance, and asset management of utility systems, along with their interplay with other civil infrastructure. SUE is delineated as a specialized area within civil engineering's utility engineering discipline, involving investigation, analysis, decision-making, and documentation and management of existing utility networks.

Adaptive Communications for Engineers

Date:
Oct 17 (12 pm- 1 pm)
ONLINE

Price:
Member Price: $0
Non-Member Price: $59

This workshop is designed to help you enhance your communication skills, fostering stronger relationships with colleagues and clients, and building trust and authority in your professional roles. Engineers often have a technical, data-driven communication style that may not always resonate with non-technical stakeholders. By understanding your own communication tendencies and learning strategies to adapt your style, you can become a more effective leader and collaborator.

Check the OSPE Events Calendar for more information:
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- Journey to P.Eng.
- Project Management
- And more!

NEW!

MEMBER PROFILE

Modeste Muhire, P.Eng.

An Engineer's Journey to Digitizing Civil Engineering

At OSPE, we know that many engineers are drawn to the profession because they like a good challenge.

In getting to know OSPE member Modeste Muhire that is definitely the case, and then some.

In quick summary, Modeste moved continents, pursued a career in a fast-paced and demanding engineering design niche, started his own engineering firm, became a thriving volunteer with OSPE and did it all in his second language. How's that for overcoming obstacles?

Modeste now works with Bentley Systems US as an on-site consultant within the New York State Department of Transportation. Modeste supports user success using Bentley Systems' advanced solutions in road design.

Modeste began his engineering journey building small houses for fun in Rwanda before moving to the United States to pursue a civil engineering degree from California Baptist University on a scholarship.

After completing his undergraduate degree, he was accepted into a civil engineering master's program at Michigan Technological University where he specialized in transportation. He enjoyed the programs, but, all the while, he would say the one thing he didn't like was working with computers.

In our interview with Modeste, he recalled the first coding class he took, frustrated that just one misplaced dot could ruin an entire project. But as he continued to learn, he began to see computers as tools instead of obstacles. As he explored technology deeper, its potential to transform the field of civil engineering became clear. This potential for change encouraged him to begin the pursuit of digitizing civil engineering. Though it didn't come naturally at the start, Modeste developed a new motto, whenever there's repetition, a computer is your friend.

Despite his initial struggle with tech, Modeste speaks about his work with passion and curiosity. He continues to push himself to learn more about digitization and the idea of learning something new every day is what keeps him motivated.

It's safe to say that Modeste is comfortable navigating situations of uncertainty, situations that many people would find too daunting to undertake.

"Most of the time people focus on the gap," said Modeste. The fear of failing can keep us paralyzed. "If we focus on the gap, it's scary and we can go into information overload."

But according to Modeste, there is an easy fix. Make the gap smaller. If we're so focused on the result and how far away from it, we are, we might never get there. But if we focus on the fundamentals, we can accomplish big goals, one simple step at a time.

That's definitely good advice, for large engineering projects, and for life. Thank you Modeste.

EngConnect
By OSPE

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Are you looking to give back to the engineering community? Consider joining OSPE's mentorship program.

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- Building leadership skills
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[2] Internal statistics of The Personal: Approximate number of policyholders who renewed their policies when their policy came up for renewal from January 1, 2023, to September 30, 2023. The rate does not include mid-year term cancellations and terminations.