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CSSE Newsletter



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President's Editorial

Dear CSSE Members,

Your society is active in a number of areas as described in this Newsletter, as well as some new and ongoing activities not mentioned in the Newsletter. For example under the leadership of **Ken Putt** and jointly with the EIC Council, the CSSE has advocated to the Federal Government in their 2025 Pre-Budget Consultation that they establish a mechanism to streamline the transition to Canada of outstanding displaced American researchers. In addition CSSE Fellow



President Tom Tiedje

Laleh Behjat is working to operationalize our recently established MOU with the Canadian Academy of Engineering in the area of women in Engineering. CSSE members **Suzelle Barrington** and **Mike Bartlett** continue their ground breaking work, also in collaboration with the EIC, on the Engineering oral history project. The interviews are excellent, well worth listening to (google Engineers Oral History Interviews). The CSSE Edmonton and Victoria branches offer regular online technical seminars on topics of current engineering interest, that are also well worth attending. The CSSE continues with its charitable donations program, if you have a suitable project that fits the CSSE mandate please consider applying for funding. This year CSSE members successfully nominated five new Fellows. Please consider nominating worthy candidates that you know, keeping in mind that the deadline is November 30, 2025.

Best wishes,

Tom Tiedje, PEng (ret), FRSC, FCAE, FCSSE
President, Canadian Society of Senior Engineers
Professor Emeritus, Electrical and Computer Engineering,
University of Victoria and University of British Columbia

CSSE Annual General Meeting (AGM)

The CSSE AGM was held May 09, 2025, via videoconference.

CSSE Board of Directors and Committees

Officers:

- President - Tom Tiedje
- Past President - Bill Rosehart
- President-elect - Essam Hussein
- Vice President (East) - Dan MacDonald
- Vice President (West) - Dena McMartin
- Secretary-Treasurer - Bruce Peachey
- Communications Officer - Ken Putt

Regional Directors/Committee Chairs:

- Chair, History and Archives Committee - Suzelle Barrington
- Chair, Honours and Awards Committee - Colin Smith
- Chair, Charitable Donations Committee - Chan Wirasinghe (and S. Alberta)
- Atlantic Canada - Terry Hennigar
- Quebec - Jim Nicell
- Ontario - John Harris
- Manitoba - Alan Pollard
- Saskatchewan - Peter Jackson
- N. Alberta - Ken Porteous
- B.C. - Guy Van Uytven
- Greater Vancouver - Aidan Gordon
- Vancouver Island & EIC HAF Committee - Robin Black

Honorary Directors:

- Nelson Ferguson (Past President)
- Colin Smith (Past President)
- Ken Putt (Past President)
- James Beckett (Past Secretary-Treasurer)
- Pieter Van Vliet (Past LMO Director; Inaugural CSSE Director)

Newsletter Editor: Ken Putt

Webmaster: Alan Pollard

Committees:

Audit - Bill Rosehart, Chair; Colin Smith, Vice Chair; Bruce Peachey, Ex Officio

Bylaws - Ken Putt, Chair; Colin Smith, Vice Chair;

Charitable Donations - Chan Wirasinghe, Chair; Ken Putt, Vice Chair; Laleh Behjat, Cheryl Trudell, Soheil Asgarpour (CAE MOU Representative)

History and Archives - Suzelle Barrington, Chair; Michael Barrett, Vice Chair

Honour and Awards - Colin Smith, Chair; Robin Black, John Harris, Terry Hennigar

Nominations - Bill Rosehart, Chair; Ken Putt, Vice-Chair

Engineering Institute of Canada (EIC) Representatives:

EIC Council - Tom Tiedje; CSSE Council Member

EIC History and Archives Committee - Suzelle Barrington; Chair; CSSE Committee Member

EIC Honours and Awards Committee (HAF) - Robin Black; CSSE Committee Member

New Member

Anders Nygren, PhD, PEng, currently serves as the Dean of the Schulich School of Engineering, University of Calgary. Dr. **Nygren** is a Professor in the Department of Biomedical Engineering and has been a faculty member in the Schulich School of Engineering since 2004. Over his 20 years in the school, he has a track record of gradually increasing leadership responsibilities, including serving as Co-Director for the Centre for Bioengineering Research & Education (now the Department of Biomedical Engineering) 2011-2014, Associate Dean (Academic & Planning) 2014-2018, and Vice-Dean 2018-2024.



Dr. **Nygren** has played a central role in many initiatives in the Schulich School of Engineering over the past decade, including the successful launch and accreditation of the Energy Engineering program, the establishment of the combined BSc Engineering and BComm program with the Haskayne School of Business, and implementation of significant growth in enrolment in the BSc Engineering and course-based Master of Engineering programs.

Dr. **Nygren** is a Professional Engineer registered with APEGA. He holds Master's degrees from the Royal Institute of Technology, Stockholm, Sweden and the University of Houston, Texas, USA and a PhD from Rice University, Houston, Texas, USA all in Electrical Engineering.

Canadian Academy of Engineering

The CAE, a member of the International Council of Academies of Engineering and Technological Sciences (CAETS), has engaged with the CSSE to create a CAE-CSSE Memorandum of Understanding (MOU) to provide a framework for CSSE Members and CAE Fellows to collaborate more closely on initiatives of mutual interest. Liaison: (CSSE) **Ken Putt** kwputt@shaw.ca and (CAE) **Soheil Asgarpour** asgar@telus.net



Members in the News

Women in AI

Laleh Behjat, PhD, P.Eng., FCAE, FCSSE, a member of the CSSE Charitable Donations Committee, has been named the Award recipient of the Women in AI Champion Award as the **DEI Champion of the Year** at the 2025 Women in AI North America Summit Awards.



CSSE Charitable Donations

CSSE-Sponsored Award at Youth Science Canada Canada-Wide Science Fair

For many years, the Canadian Society of Senior Engineers, and recently with the Engineering Institute of Canada, has sponsored the Engineering Innovation Award as the top senior entry in Youth Science Canada's annual Canada-Wide Science Fair. In 2025, this inspirational event, featuring award winners from regional Science Fairs held across Canada, was held in Fredericton, NB.

The 2025 EIC CSSE Engineering Innovation Award - Prix de l'innovation en génie, Senior / Sénior recipient was **Anish Rathod**. His award -winning project was entitled PIONEER: Pipe Inspection and Observation for Non-Destructive Evaluation and Environmental Review, Bay Area - Ontario.



CWSF | ESPC Canada-Wide Science Fair | Expo-sciences pancanadienne Youth Science Canada Sciences jeunesse Canada

Regional News

Quebec

Contact **Jim Nicell** PhD, P.Eng., FCAE, FCSSE jim.nicell@mcgill.ca or **Suzelle Barrington**, PhD, P.Eng., FCAE, FCSSE suzelle.barrington@consumaj.com for more information on the **Montreal Chapter** of the Canadian Academy of Engineering meetings or any activities of the **Montreal CSSE Chapter**.

Manitoba

Contact **Dave Ennis**, FCSSE, Chair of the **CSSE Winnipeg Chapter** for information on the next meeting or with your questions at dave.ennis18@outlook.com.

Alberta

CSEM/CSSE Calgary - CSSE Calgary members are invited to attend the CSEM monthly luncheons.

The Calgary Section of the Canadian Society for Engineering Management has conducted a series of luncheons on topics related to engineering management. Since their venue has changed, for current information go to <http://www.csem-scgi.org/calgary.html>.

The **Edmonton Chapter** meetings are held via Zoom™ They start at 12:45 Mountain Time and, depending on the number of questions, are over between 13:30 and 14:00. CSSE meetings are open to everyone. This notice can be forwarded to anyone who may be interested. The CSSE

Regional News (Continued)

Edmonton Zoom Coordinator is **Tom Madsen** but if you have received this notice indirectly you need to email Tom, tcmadsen@telus.net, to register and to be added to the Edmonton Chapter direct email list for future meeting notices.

Tom Madsen sends out a meeting notice/invitation to those on the Edmonton CSSE Chapter direct email list a couple of weeks ahead of the meeting and asks invitees to inform him (register) if they plan to attend. The notice includes a brief biography of the speaker and an abstract of the presentation. On the day prior to the meeting **Tom** sends out the Zoom link to those who have indicated they wish to attend.

Fall 2025 Program

Thursday, September 18, 2025 - Speaker: Mr. **Bruce Peachey**, P.Eng., FCSSE, FCIC, FEIC President, New Paradigm Engineering, "The Changing World for New Engineering Graduates"

The September meeting of the Edmonton Chapter of the CSSE will occur on Thursday September 18, 2025 via the Zoom platform starting at 12:45 pm Mountain Daylight Time. Please respond to tcmadsen@telus.net by noon Wednesday, September 17, 2025 to receive an invitation. Invitations will be sent the afternoon of September 17, 2025.

"The Changing World for New Engineering Graduates"

Abstract: The experiences of students graduating from Canadian Universities as engineering BSc graduates are continually changing as the industrial worlds they are entering have many new and continuously changing needs, technological tools and technologies. Global and Regional politics are also creating new, more demanding and often contradictory demands on new grads, while at the same time increasingly destabilizing the year to year demand for new engineering employees. Generally, despite growing demands for employees, many engineers now in the universities are having difficulty obtaining meaningful summer and co-op term employment opportunities, and as a result get less out of their classes and have further difficulties finding permanent positions on graduation. Even if they find a position it is increasingly difficult for them to assess potential career options as the driving forces for projects and economics are highly variable due to political and societal changes that may or may not result in long term opportunities.

Correspondence with the CSSE Administration Office

All "snail-mail" correspondence, including cheques, and enquiries, should be sent to:

The Canadian Society
of Senior Engineers
464 Briar Avenue
Ottawa, Ontario
K1H 5H6

administrator@seniorengineers.ca

Phone calls: 613-795-9363

Dues and donations can be paid securely by credit card by going to the "Members" page at the CSSE website www.seniorengineers.ca

Regional News (Continued)

This presentation will take a high-level look at how employment outlooks have changed for specific cases of Petroleum Engineering roles and how the working environment has been more chaotic for Chemical Engineering design roles for industrial positions when success criteria and design criteria are being influenced by often illogical or unsupported external influences. This changing world can greatly influence career choices for grads and potentially lead them down blind alleys from which they may or may not emerge from as professionals. This will be contrasted to the presenter's own career progression since his 1976 graduation.

British Columbia

CSSE Vancouver Island Branch / Vancouver Island Engineering Society (VIES)

VIES Meetings

The CSSE Vancouver Island Branch operates as the Vancouver Island Engineering Society (VIES) and meets the first Friday of each month from October through June via Zoom™. The program details with the speaker's biography and the presentation abstract are issued via a VIES Newsletter, typically two weeks prior to the presentation date, where the links are provided to register; one for CSSE/VIES Members and guests, the other for EGBC professionals who want EGBC to record their Professional Development Hour (PDH) for each session. Alternatively, register at www.viengsoc.ca

VIES 2025 Fall - Winter Technical Speaker Series Program

October 3, 2025 "Resilience of Ice-Rich Permafrost Beneath Mine Waste Facilities"

- Company: SRK Consulting
- Speaker: **John Kurylo**, Principal Geotechnical Engineer
- Topic category: Mining Engineering.

"Modern mineral exploration combines traditional methods with cutting-edge technologies like AI and machine learning to unlock new possibilities."

For the Abstract and to register click on <https://mailchi.mp/viengsoc/nov2024-14178101>

November 7, 2025

Company: Solaires
Speaker: Sahar Sam, CEO
Topic: Climate Solutions using Perovskite Solar Technology

December 5, 2025

Company: Victoria Hand Project
Speaker: Michael Peirone, CEO
Topic: Biomedical Engineering of Low-Cost Prosthetic Arms

VIES NEWS - Follow us on LinkedIn!

Stay connected with VIES by following our LinkedIn page, where timely updates are provided on VIES events. Relevant engineering news is shared to keep our engineering community informed and engaged. The VIES LinkedIn presence is also a useful platform for accessing selected activities, discussions, and developments. Access VIES there to be a part of this vibrant network and stay informed about VIES upcoming events and initiatives.

<https://www.linkedin.com/company/viengsoc>



Regional News (Continued)

Scholarships and Awards

VIES supports three endowed scholarships for Engineering and Computer Science students at UVic:

- A CSSE EIC Vancouver Island Award for graduates of area high schools;
<https://extrweb.uvic.ca/donate-online/csse-eic>
- A Bonnie and Ken Putt Award for women engineering students;
<http://extrweb.uvic.ca/donation/bonnie-ken-putt>
- A VIES Leaders Entrance Award to attract highly accomplished new engineering students;
<https://extrweb.uvic.ca/donate/vies-leadership>

Honours and Awards Committee

2024 CSSE Fellowship Awards

CSSE - Fellowships were awarded to five accomplished Canadian Engineers who had distinguished themselves in academic or engineering practice over a minimum of twenty years since graduation. Thanks to CSSE Members who nominated our 2025 cohort of accomplished Engineers and to the Honours and Awards Committee for their rigorous assessments, led by Chair **Colin Smith** colin.smith.ca@gmail.com. The 2025 Fellows were:

Bing Chen, St. John's, NL
Curran Crawford, Victoria, BC
Katherine MacLeod, Coldbrook, NS

Suzanne Powell, Brentwood Bay, BC
Lauren Savoie, Calgary, AB

CALL FOR 2026 CSSE FELLOWSHIP NOMINATIONS: The Honours and Awards Committee will accept nominations for 2026 CSSE Fellowships (FCSSE/MCSSE) until November 30, 2025. Late nominations will be returned for resubmission for 2027. Please give thought to nominating a worthy colleague. The submission process is not onerous. Contact Chair **Colin Smith** at colin.smith.ca@gmail.com to receive nomination forms.

CALL FOR EIC FELLOWSHIP/MEDALS NOMINATIONS: The Engineering Institute of Canada (EIC), of which CSSE is a Constituent member, is also calling for nominations for 2025 EIC Fellow and EIC's prestigious 2026 senior medals. The deadline for 2026 award nominations is 24:00 (EST) on 15 November 2025.

Please send nominations to EIC's Executive Director at ggosselin.eic@gmail.com. Any nominating documents sent to **Guy Gosselin** must be in MSWord, or unlocked PDF, to facilitate the assembly of committee packages (please do not forward CVs of nominees). Visit this page (https://eic-ici.ca/honours_awards/nomination/) to review the rules and download the nomination form.

For more information on the EIC, including a list of awards and of past award recipients, please visit the EIC website https://eic-ici.ca/honours_awards/.

Professional Programs

UVic's professional programs are designed for working engineers and recent graduates who want to advance their expertise through applied, industry-focused graduate degrees. For more on UVic's professional programs, visit: [uvic.ca/ecs/programs/professional-programs](https://www.uvic.ca/ecs/programs/professional-programs)

MEng in Aerospace Systems Engineering

UVic's new Master of Engineering in Aerospace Systems Engineering equips graduates and professionals with the tools to thrive in the rapidly evolving aerospace sector. With a focus on autonomous aerial vehicles, hybrid-electric propulsion, composite materials, AI, and machine learning, the program blends traditional aerospace engineering with cutting-edge technologies. Students also complete a hands-on capstone project and may pursue a co-op placement in industry. Learn more: <https://www.uvic.ca/ecs/programs/professional-programs/meng-ase/index.php>



DEng in Leadership in Engineering Applications and Practice (LEAP)

The Doctor of Engineering (DEng) is a cohort-based professional doctorate designed for senior engineers seeking to lead large-scale, high-impact initiatives. The program emphasizes applied research, technology integration, sustainability, and responsible innovation, preparing professionals to drive change while continuing to work in industry. Students complete coursework alongside a multi-year applied Praxis project, guided by academic and industry mentors. Learn more: <https://www.uvic.ca/ecs/programs/professional-programs/deng/index.php>



Images provided by University of Victoria

Member's Input - Review of Important Issues

Assessing the Risks of Large Volume CO₂ Releases

by **Bruce Peachey**, P.Eng, CD, FCIC, FEIC, FCSSE

This article is intended to energize discussion of an important public safety issue which the author feels requires much more discussion and evaluation than it has been getting. This item is a précis of the January 21, 2025 presentation made to the Edmonton CSSE Chapter entitled, "**One View of Carbon Capture and Storage (CCS) in Alberta**". One of the key messages I wanted to get across was that the risks associated with very large CO₂ releases from large CO₂ pipelines and, more importantly CO₂ injected into subsurface aquifers for permanent disposal, were being downplayed and not adequately discussed. The key players in GHG emission reduction consist of many players; governments, environmentalists and energy

Member's Input - Review of Important Issues *(continued)*

producers. All are motivated to try and have CCS become one of the main methods of reducing CO₂ emissions. But I would posit that the risks of CCS have not been adequately assessed and discussed in public fora.

A key concern is that industry has very little experience with large releases of pure CO₂ from facilities, pipelines or underground storage. A quick review of the literature and statements by CCS proponents is that they are relying on very simplistic dispersion models to assess the safety of CO₂ operations. However, a key paper I found (Dr. **Frank Hedlund**, 2012), and recent articles related to CO₂ pipeline ruptures in the U.S. (listed below for your review), indicate that these simplistic models and the release cases do not adequately reflect reality and could provide a false sense of security.

Most reported industrial releases of CO₂ have been of short duration and less than 50 tonnes in size, while releases from large CO₂ pipelines could be much larger and releases from underground aquifer storage sites could emit kilo-tonnes of CO₂ and continue for weeks, if not months. This would be similar to the history of releases from failures at natural gas storage sites in various locations which, while at times spectacular, do not put local populations at as much risk, compared to a CO₂ release, as the methane can be either burned off or, being lighter than air, will quickly disperse. To date I have not found any significant papers evaluating the potential risks and impacts of a major release of heavier than air CO₂ from an aquifer. The largest data point at this scale is the Lake Nyos disaster in Cameroon in 1986 when a natural release of 100-300 kt of CO₂ killed over 1,700 people in their sleep when a CO₂-charged volcanic lake turned over releasing dissolved CO₂. The other case of a large release causing death was a release of only 1-4 kt CO₂ from a potash mine in 1953 which is described and modelled by Dr. Hedlund and resulted in 2 asphyxiation fatalities even though the standard models predicted no hazard from CO₂ build-up.

If you wish to explore this topic further, please contact **Bruce Peachey** newparadigm@shaw.ca



Recruit a New Member!

If you have a friend who is not a CSSE member, simply refer them to the CSSE website at www.seniorengineers.ca

Changed Your Coordinates?

If you have a new mailing (or emailing) address, please inform the CSSE Administration Office at administrator@seniorengineers.ca or (613) 795-9363.