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Message from the President



David Harvey, P.Eng. SEABC President

Structural Engineering – The New Normal

Adjusting to the Covid-19 pandemic has become 'normal' for structural engineers – something I have commented on previously. We are currently experiencing the second wave, and no one knows the pandemic's trajectory. Models are all predicting that it will end eventually, with differing recovery times for various industries. Airlines face one of the biggest recovery challenges with most predictions suggesting five years and some up to ten for the business to rebound. Significant factors are the lack of physical distancing in air travel and a widespread use of virtual meetings brought about by necessity.

We have seen many changes in the structural engineering world – notably that we can operate remotely. Collaboration via videoconferencing is feasible and comfort levels are improving. Technology has certainly helped, and the tools are getting better. Without the pandemic, this likely would have taken much longer. As a result, many firms are considering different ways of working in the future, with a mixture of virtual and face-to-face collaboration as a popular choice.

Changes within our industry are also expected. We are already seeing rapid developments in inspections and survey technology, where cameras mounted on drones and large data processing are curbing on-site presence, while also improving safety and accuracy. Cost-effectiveness is rising along with capabilities.

Another likely outcome is an increased shift from onsite to off-site production where processes can be more easily controlled and optimized. Having less site personnel not only reduces the transmission of viruses, it increases safety. We've already seen offsite component manufacturing reducing site assembly and speeding construction. The upsurge in the use of mass timber and engineered-wood products are examples. But it may not end there – will we see increased modularization? There is a definitely a strong appetite among megaproject promoters, exasperated with delays and cost overruns to "keep designs simple".

Not everything can be modularized and there will always be unique, custom-designed structures moving us forward, but many structures present modularization opportunities. Repetitive structures are not new – early examples in social housing were frequently associated with poor quality linked with cost cutting. With greater controls in place, modularization can be highly beneficial.

In the world of bridges, the use of prefabricated girders, deck panels, piles and other components is almost universal today. Prefabrication speeds up construction, reduces road-user impact, and assists with managing quality.



Portable Bridge Spans en Route to Site

In BC, steel portable bridge spans are widely used for emergency bridging, access bridges, construction detours, work trestles and removable work decks. Standardisation and rapid deployment are key.

Complete building modules have been developed but shipping enclosed space to speed erection is inefficient. Precision prefabrication of fully fitted-out components is a fast-rising outcome of computercontrolled manufacturing. A catalogue of standard designs is needed with the option of making custom variations. Industries quickly adapt to the demand for new products. Are modularized structures the way forward? Maybe, but some changes will certainly occur – all hastened by the coronavirus.

We have all been impacted by the pandemic, have learned to cope and to adapt. Now we look for a solution and seek a brighter tomorrow – hopefully vaccines arrive before a full-scale lockdown strikes!

Adapting the Development Process



Mark Budd, P.Eng.

Many offices have adapted to remote work accommodations in order to keep their staff safe and healthy during the pandemic. There are numerous benefits to staff and clients, helping us all continue our projects forward safely. However, it is observed that with the reduced face-to-face interactions a significant part of the early development process in engineering careers will be affected.

In that respect, I would theorize that the pandemic is one of three significant career hurdles that a post-2000 graduate like myself and possibly you — the reader — has had to develop through. I am not a master of anything specific, nor am I an expert in career guidance, however, I have navigated my own hurdles out of necessity. It seems like an apt time to at least translate some of my observations for others to contemplate and perhaps make their own choices to benefit continued engineering growth.

In the office we have the privilege to examine lessons learned from senior engineers. Knowledge translating down the line has historically been an essential part of the engineering development process. Certainly, we gain something from the spontaneity in chats at each other's desks, hand sketching solutions on scrap paper, having a chuckle, and then carrying on. So, how can we continue to have these meaningful discussions given the reduced opportunity for face-to-face interactions?

Video conferencing technology and telephones are natural alternatives which allow both real-time and interactive discussions. These interactions take more planning and patience to navigate and, in some respects, we need to be mindful how to make the interactions as engaging as the desk chat. Perhaps a small set of questions can be presented prior to conversing, in order to direct the discussion toward certain goals. This adds another layer of preparation, but also is a good method to gauge when the discussion is ready to conclude or maybe carry on at a better time.

Even after we discuss our way through references, equations, and code clauses, we still search for rules of thumb to remember. Rules of thumb are the essential relationships with the numbers that we are so intimately tied to as engineers. Reducing face-toface interactions may limit our opportunities to uncover these relationships through serendipitous conversation, however, it does not limit our opportunities for discovery. So, where else can we discover these essential relationships given the reduced face-to-face interactions?

Building and working with design tools, such as spreadsheets, is a method that has worked for myself. This is reinforced through many of SEABC's courses: spend the time to build your own design tool and reap the benefits in a deeper understanding of the solution. Taken one step further, we can expedite common solutions and start our own discovery of certain rules of thumb. By doing so, we can also improve our engagement by having something new to offer and discuss in our newfound remote interactions.

Finally, the remote accommodations have also resulted in less available work. Unemployment is not a fun word to mention, but it is a real consequence that needs to be addressed. Having navigated my own unemployment under various circumstances, I continue to hold the perspective that it gives valuable downtime to help build new skills. Whether in sketching, coding, or even in a non-engineering related area of study, unemployment is a rare opportunity to become more resilient in your career. The reality is that a post-2000 engineering career is much different than the career trajectories of the past. So, what can we do to help others navigate the trajectory of modern engineering careers?

Simply put, we must all provide opportunities for engagement and encouragement in order to help the development process adapt. It is a collective opportunity to reimagine engineering beyond the knowledge bound in books. Put another way: there is an opportunity to share our own knowledge by creating new meaningful interactions. We still have our voices and conversations to inspire. We still have the curiosity that drives us toward understanding the structural world. So, we all hold a role in supporting each other's growth, whether we are a senior engineer with a wizard's worth of knowledge or a young graduate with an observant eye. Adapting the development process will simply take our own efforts to create meaningful interactions that encourage discovery.

Some inspiring photographs from Mark are below, which demonstrate the wide array of projects one can pursue with building and broadening skill areas.



Skybridge over the Fraser River



Tynehead Pedestrian Bridge over Highway 1 – Night time erection



Engineered roof trusses from a rebuild in Mission



Bolted timber connection at the Vancouver Island Regional Library in Chemainus

Unbonded Post-Tensioned Slabs



Robert Bourdages, P.Eng. PE. SE. LEED AP

Post-tensioning of concrete elements has been a popular method of reinforcement, ever since T.Y. Lin introduced the concept of load balancing back in 1963. Post-tensioning provides two important features compared to traditional mild-reinforced concrete elements.

1) It introduces favourable compressive stresses that offset the inherently weak tension properties of concrete.

2) It can provide an upward force to offset gravity loads when draped appropriately.

Post-tensioning also provides the following benefits:

- Controls deflections by offsetting dead load deflections by means of draping
- Provides good crack control by the introduction of sustained compressive stresses
- Allows for thinner slabs and improved column spacing
- Minimizes the use of mild reinforcing, thus reducing slab congestion
- Uses tendons that have much higher yield strengths than mild reinforcing

For these reasons, post-tensioning is used worldwide to create efficient and cost-effective design solutions.

Post-tensioned concrete elements are stressed following the pouring and curing of concrete. There are bonded and un-bonded types. Bonded posttensioning typically use grouted ducts, and is common in precast concrete girders. Unbonded tendons are used in both cast-in-place suspended slabs and slabs on-grade. Unbonded slabs are typically reinforced with 7-wire strands having a total diameter of 12.5mm (0.5 inch) and have an ultimate strength of 1860 MPa (270 ksi).

Unbonded post-tensioned slabs are popular in many parts of the world, including US, Europe, Asia, and Australia, but are not used as much in British Columbia and Alberta. Earlier techniques of posttensioning locally did not adequately address corrosion, and some failures have occurred, leading to the reluctance to use this technology. However, over the years there have been major improvements in corrosion protection, such as vinyl extrusions and improved lubricants surrounding the tendons, and the use of fully encased anchorages. Proper installation techniques and anchorage encasement has greatly improved the long-term performance of unbonded post-tensioned slabs even in the most corrosive environments.

There are constraints when using post-tension slabs. It is difficult to introduce openings after stressing, and tendons must be located prior to any other after-pour slab modifications, such as adding penetrations or inserts. Uncontrolled cutting of a stressed tendon can be very dangerous, as the near instantaneous release of energy can be violent.

All things considered, post-tensioned slabs have proven to be cost effective design solutions and should be contemplated for use in western Canada.

Applicable Building Codes are CSA A23.3 and ACI 318.

Resources for design are available from the Post Tensioning Institute (PTI):

- Post-Tensioning Manual, PTI
- Design Fundamentals of Post-Tensioned Concrete Floors, PTI
- Design of Post-Tensioned Slabs using unbonded Tendons, PTI
- Guide for Evaluation and Repair of Unbonded Post Tensioned Concrete Structures, PTI, ICRI

Committee Reports

Vancouver Island Branch



Thor Tandy, P.Eng, Struct.Eng, MIStructE Branch Chair

Mission:

To provide a focal point for SEABC members on the Island to meet, discuss SEABC issues and to take benefit in the form of exchange of items of technical interest.

2020 Branch Executive:

- Thor Tandy
- Dan Gao
- Stephen Pienaar
- Dan Weber
- Dean Hynes

Branch Demographic:

- Members in the local Victoria, Gulf Islands area.
- A central Island group centred on the Nanaimo, Port Alberni area.
- A small North Island group.

Recent Events:

- 1. **Branch Webpage:** The Branch now has a dedicated web link on the SEABC website. As the link is a new facility, we are currently in the process of finding and inserting content. seabc.ca/vancouver-island-branch
- 2. **Executive Meetings**: We meet every three months or so and we extend a warm invitation to join us. Please contact an exec. member if you would like to be notified.

Successful Zoom Event:

Due to the COVID restrictions, gatherings are on hold until further notice.

"Georgia sedimentary basin effects on the response of modern tall RC shear wall buildings to M9 Cascadia subduction zone earthquakes"

Tall RC shear wall buildings (RCSW) are predominant in Metro Vancouver. These buildings have the potential to experience large-magnitude earthquakes generated by the Cascadia Subduction Zone (CSZ). Furthermore, the region lies above the Georgia sedimentary basin, which can amplify the intensity of ground motions at medium-to-long periods and the resulting damage in tall structures.

The goal of this study was to provide insights into the effects of the Georgia sedimentary basin amplification on:

- Spectral accelerations associated with M9 CSZ earthquakes.
 Resulting force- and deformationcontrolled actions in tall RCSW buildings.
- (ii) Ensuing earthquake induced repair costs and times.

To this end, a suite of physics-based ground motion simulations of a range of M9 CSZ earthquake scenarios, which explicitly consider basin effects are used. These scenarios are benchmarked against a range of seismic hazard intensities, as defined in Canada's 2015 National Seismic Hazard Model (NSHM), which neglects basin effects. Relevant ground motions are propagated through a suite of archetype RCSW buildings designed to comply with the requirements of the 2015 National Building Code of Canada (NBC) at eight locations throughout Metro Vancouver with distinct basin depths.

Finally, this study provides recommendations on basin amplification factors that could be applied to the 2015 NSHM design spectra using the M9 ground motion simulations, as well as BC Hydro's empirical Ground Motion Model (GMM) for CSZ interface earthquakes, which is used in the 2015 NSHM. We thank Dr Carlos Hutt, Assistant Professor of Structural Engineering & Alireza Monfared, Graduate Research Assistant for presenting this webinar.

We are now planning to run a similar webinar on: "How to Design for Tsunamis."

We encourage members to submit comments to our executive on any matter that may concern or be of interest to structural engineers.

Contact: Thor Tandy: <u>island@seabc.ca</u>

On the Web



Stephen Pienaar, P.Eng. Webmaster

Our fantastic SEABC volunteers have returned from aestivation and hosted several virtual events during September and October. To be notified about upcoming events, check seabc.ca/events for a list of upcoming SEABC events.

- Subscribe to our email lists form to your membership dashboard at: seabc.ca/members.
- Follow us on Twitter at twitter.com/seabc.

Photo of the Month

Our thanks to SEABC members for their generous donation of photos for the SEABC website. The current and upcoming photos of the month are:

- "Turbine Inertial Block Foundation, Fraser Lake, BC" by Gairns Santos Engineering Inc.
- "Whistler Roundhouse Patio, Whistler BC", by ISL Engineering and Land Services.

Please see seabc.ca/photo-of-the-month for photo submission guidelines.

Directory of Structural Firms

The SEABC website hosts a Directory of Structural Firms that currently includes 98 firms across the province. We have seen a market increase in the number of listings in recent months, presumedly due to members optimising avenues to attract new business during the pandemic. Feedback from members confirms that listings are indeed generating valuable leads.

Listing in the Directory is free and available to all structural firms that employ at least one SEABC member. If your company is not listed yet, then please apply at: seabc.ca/directory.

Communications Committee



David Harvey, P.Eng., Struct.Eng. Director SEABC

In every issue, I remind you that your hardworking Communication Committee publishes the quarterly newsletter and is looking for articles. I am aware that a lot is going on locally in structural engineering – it is the goal of the committee to bring as much of that to you as we are able. We've done well so far, because many of you have made significant contributions. We are indeed grateful for your continued support, but we are constantly trying to do better. A big thank you to Robert Bourdages and Mark Budd for their interesting articles in this issue, so if Robert and Mark can do it – how about you? Everyone has a story to tell so why not give it a go?

Articles can be full- or half-page and should be illustrated. Short research papers are also acceptable. You can even submit photos with a descriptive paragraph. The main criterion is that contributions should be newsworthy or informative for our readers on structural engineering matters. We are also looking for feedback from you and if you believe you can make an improvement, we invite you to show us how.

Kindly send all information for publication to: newsletter@seabc.ca

Young Members Group



Amr Farag, E.I.T. M.Eng

The SEABC YMG has been working hard to plan future events and initiatives including the 10th Annual Presentation Competition which will be held virtually this year. The SEABC YMG also hosted a virtual tour of StructureCraft's new manufacturing facility earlier this fall.

Virtual Tour of StructureCraft's Manufacturing Facility

On October 14th, the SEABC YMG hosted a virtual tour of the StructureCraft facilities in Abbotsford. Erik Warkentin, senior engineer at StructureCraft, presented the exciting opportunities available with the latest advancements in engineered wood and then outlined how these members are fabricated in their new state-of-the-art manufacturing facility.

Afterwards, a lively Q&A session was held between Erik and the 30+ YMG attendees. We thank StructureCraft for their participation in the YMG's first fully virtual event and look forward to hosting similar virtual events in the future.



StructureCraft's new manufacturing facility in Abbotsford

Let's give youth its due... and acknowledge mid-career excellence

The Young Member Meritorious Achievement Award

visit https://seabc.ca/legacy-awards

Photos of the Month



Turbine Inertial Block Foundation, Fraser Lake, BC" by Gairns Santos Engineering Inc.



Whistler Roundhouse Patio, Whistler BC", by ISL Engineering and Land Services.

IStructE News



David Harvey, P.Eng. Struct.Eng

Business at the Institution continues more-or-less as usual and the distanced staff are doing a remarkable job. This impressive achievement can be attributed to the effort made by IStructE to better serve its international membership. With everything moving to on-line delivery, what would happen to its flagship event, the Structural Awards, which since its inception has been held in-person in London?

The Institution has delayed the awards event to 2021, when it expects to celebrate both the 2020 and 2021 winners. That promises to be a blockbuster event – a real feast of structural engineering excellence. In the meantime, IStructE is showcasing all the 2020 submissions online – and you can join in by voting for your favourite projects!

Each year the judges receive dozens of submissions from across the world. From these, the judging panel selects a shortlist in each category, then picks the category winners along with commendations. Finally, the panel picks the Supreme Award for Structural Engineering Excellence. It is quite a task, but very satisfying. This is a great opportunity to experience the work the judges do. Go to:

structural-awards-2020

There are four categories to view and you can vote for one winner in each.

Achieving Architectural Vision is something many structural engineers are involved in. In this category, there are several unusual and dramatic structures, but **Tianjin CTF Finance Centre** was the project that caught my eye. This is a bold design for a 530 m tall skyscraper which looks like a space rocket, but I really liked its curved façade which towers over the surrounding rectangular buildings. The Finance Centre's perimeter steelwork is quite delightful. *Challenging Construction* is a fascinating category with diverse entries which are tough to compare. An eight-year rebuild of **Christchurch Town Hall**, a key New Zealand landmark damaged in the Canterbury earthquake is impressive. A novel entry is the **Iona Skydome** – a massive room dome for P&O's new 5200-passenger LNG-powered cruise ship. The new retractable Wimbledon No. 1 Court roof is a bespoke movable structure that opens or closes in just ten minutes – a big benefit for hosting championships in the UK's uncertain weather conditions.

Creative Design is a category that describes what drives modern structural engineering and there are some great projects entered. For me, the **Lille Langebro Bridge** stood out from the crowd. This spectacular swing bridge has a stunning structural form and seems impossibly slender. Unusually, the swing spans are joined with a moment connection. Close behind was the **Mary Elmes Bridge** – this fixed span also has beautiful lines which fit perfectly into its setting in Downtown Cork, IR. Pedestrian structures have become very creative, I also liked the organic form of the **Viper Elevated Walkway**.

For the final category, *Sustainable Leadership*, the entries demonstrated the application of sustainable design techniques to benefit society. I liked 1 Finsbury Avenue that dramatically transformed a listed building into a state-of-the-art office development. I also liked **HobHouse**, where much was going on inside the placid exterior of a London building - check out the construction preview. For its minimal impact, cost-effectiveness and pure ingenuity, you have to admire King's Scholars Pond Sewer Rehabilitation., where the entire structural support system was delivered in pieces through a manhole. In marked contrast, the sleek movable Water Street Bridge was barged from Belgium to Canary Warf where it provides pedestrian access to Wood Warf, a new dockside district. The huge interest in sustainable projects is encouraging and selecting a winner is certainly no easy task.

I encourage you to check out the showcase and take in the best recent structural engineering projects – it will be time well spent. And if you find a project or two that impress you enough, feel free to vote for them. Voting closes on November 30th.

IStructE Exam Training Resources

For those of you studying to sit the IStructE Chartered Membership Exam, now is an excellent time to hone your exam technique. Many people study by reviewing past papers and the Examiners Reports which are published by IStructE. To do so, look no further than the SEABC website which contains more study material than any other site. SEABC has exam papers and reports dating from 1990 and also contains archived possible solutions prepared by experienced designers demonstrating suitable exam techniques. We recently uploaded the exam papers up to September 2020, and the Examiner's Reports up to January 2020.

Check out: seabc.ca/struct-eng

2021 Subscriptions Renewal

Log in by December 31st to renew your membership for 2021, or to become a SEABC member. A group renewal option is available to assist firms wanting to bulk-renew their staff memberships. Subscriptions remain unchanged for next year. Go to:

seabc.ca/membership/#renewal

SEABC Legacy Awards



The Peter Ridgway Taylor Grant for Structural Engineering Advancement visit https://seabc.ca/legacy-awards

Certificate in Structural Engineering Program



Shannon Remillong, CSE Program Co-ordinator

Registration for the **January 2021 term** is now open through the SEABC website:

seabc.certificate-program

The CSE Program is trying something new! ...

<u>Five courses</u> will be offered this term AND classes will run <u>Monday through Thursday</u> from <u>5:30–7:30PM</u> beginning the week of January 4th and ending the week of April 1st, 2021.

The following courses will be offered in January 2021:

- C1 Analytical Methods in Structural Engineering
- C4-1 Introduction to Earthquake Engineering & Seismicity
- C11 Light Timber Design for Residential/Commercial Buildings
- C51 Bridge Analysis
- E7 Seismic Strengthening of Existing Structures

Course outlines are available:

seabc.ca/course-list

Course Delivery:

- All courses will only be available **ONLINE** (not at the UBC Robson location).
- Four of the five courses are once a week: one 2 hour session from 5:30 - 7:30pm PST.
- Course C4-1 is twice a week: two 1 hour sessions (Tues & Thurs) from 12:00 – 1:00pm PST.
- Courses are 13 consecutive weeks.

Important Dates:

- Early-bird deadline: Friday, December 11, 2020.
- Registration close: Sunday, January 3, 2021.
- First lecture: Week of January 4 through January 7, 2021.
- Last lecture: Week of March 29 through April 1, 2021.
- Withdrawal deadline: Sunday January 17, 2021.

Course Fees:

- Live webcast \$650 + GST.
- If facing unexpected financial hardship due to COVID-19, please inquire about reduced registration fees with <u>courses@seabc.ca</u>
- Early-bird rates and SEABC Member's discounts apply.

Courses will fill up fast so make sure to register early and take advantage of the savings!

Registration Inquiries and Requests/Suggestions: Please contact Shannon Remillong, Certificate Program Administrative Assistant, at email: <u>courses@seabc.ca</u>

SEABC Website Help Needed

Due to new work commitments, the SEABC webmaster is reducing his available time for maintaining and developing the SEABC website. We are looking for someone take over or assist with the webmaster role.

SEABC Webmaster Job Description

There are two aspect of possible involvement:

1) Content updates

Take over (preferred) or share the webmaster tasks related to website updates and communication to members:

- Set up registration pages for events such as the AGM, monthly seminars, and young member tours (approximately two events per month).
- Compose and schedule email broadcasts and Twitter updates (varies between zero and several times a week).
- Update web pages such as quarterly newsletters and meeting minutes (about once a month).
- Time commitment: varies between zero and about 4 hours per week.
- Payment: This is a volunteer position.

Qualifications:

- An understanding of structural engineering context is required for editing content in the web pages and email broadcasts. If you are a SEABC member, then you qualify.
- Experience with managing a WordPress website will be helpful. Training can be provided.

2) Web development (optional)

Phase 2 of the development of the new SEABC website is in its beginning stage. This phase will expand the WordPress back-end to enable SEABC volunteers to self-manage the events that they organise and add automation to email broadcasts. Take over the development (preferred) or work with the current webmaster to complete the development.

Qualifications:

- Proficiency with the PHP programming language.
- Proficiency with HTML and CSS.
- Experience building WordPress plugins is not required but will be very helpful. Training can be provided.
- Time commitment: many hours over months.
- Payment: The SEABC Board has approved funds for Phase 2.

For more information, please contact SEABC webmaster Stephen Pienaar at webmaster@seabc.ca



Mark Your Calendar

Upcoming Seminars, Webinars and Events

City of Vancouver's VanMap is Being Replaced

Have you had a chance to try out the City of Vancouver's new <u>VanMap</u>? This version has better performance (faster) and works on mobile phones. If you have used Legacy VanMap in the past, drop in at one of these virtual sessions to learn how to use the new VanMap. This is your chance to explore and learn about the City's geospatial data and maps.

- Monday, November 23, 2020: 1:00 pm -2:30 pm
- Tuesday, December 8, 2020: 1:00 pm 2:30 pm
- Monday, January 18, 2021: 9:30 am 11:00 am

At each session, you'll learn about the following:

- Using Property Viewer to view key property information such as zoning, legal description and assessed value.
- Using Infrastructure Viewer to view utility assets like sewer mains, street lighting, and district energy infrastructure.
- Reviewing popular features including Street View and Pictometry.

- Accessing links added to the different viewers.
- Changing base maps and adding data

You'll also have the opportunity to ask questions and provide feedback.

For more information and to register for a session, please go here:

shapeyourcity.ca/vanmap

10th Annual SEABC Young Members Presentation Competition - Submission Deadline

Date: Friday 08 January, 2021

Worked on an interesting dream project? Got a chance to visit an amazing job site? Learned something extra-ordinary? Here's a chance to share your experiences and enter a chance of winning **\$1,000** and bragging rights among your fellow young engineers. The SEABC Young Members Group invites you to the 10th Annual SEABC Young Members Presentation Competition. The competition is organized and hosted by the SEABC Young Members Group. This edition of the competition will be a virtual event on February 23 and 25, 2021.

For more info: See poster at end of newsletter

Final Words

Editorial Information

The SEABC Newsletter is published by the Structural Engineers Association of British Columbia. The current and past issues are available on the SEABC website at www.seabc.ca.

The Newsletter is edited and managed by the SEABC Communications Committee.

- Committee Chair: David Harvey
- Newsletter Editor: Catherine Porter
- Editorial Assistant: Mark Budd
- Webmaster: Stephen Pienaar

Submissions are welcomed and all SEABC members are encouraged to actively contribute to the Newsletter. Submissions, letters to the Editor, questions and comments can be sent to: newsletter@seabc.ca.

The Committee reserves the right to include or exclude submitted material and in some cases, edit submitted material to suit overall space requirements. If content is not to be edited, please advise so at submission time.

SEABC Board of Directors

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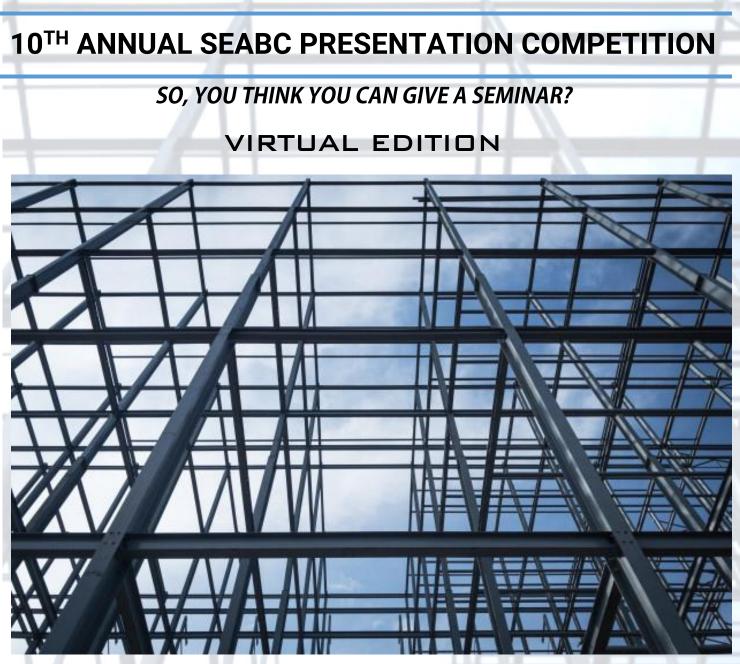
Advertising

Pre-paid rates per edition:

- \$270 (quarter page), \$360 (half page) or \$450 (full page) plus GST. Rates include a banner advert on the Events page of the SEABC website.
- 50-word "Available for Employment" ads are free.

Please address advertising enquiries to: newsletter@seabc.ca.

Please support our advertisers!



DATES: FEB 23RD, and 25TH, 2021 @ Noon

Worked on an interesting dream project? Got a chance to visit an amazing job site? Learned something extra-ordinary? Here's a chance to share your experiences and enter a chance of winning \$1000 and bragging rights among your fellow young engineers.

Prizes: Up to \$1000 Cash! Invitation to present at SEABC Virtual AGM! SEABC Trophy!

APPLICATION DEADLINE: JANUARY 8TH, 2021

Organizing Committee: Stanley Chan, Navpreet Bharaj, Tanya Fraser, Hossein Bajehkian

Who?

Students. EITs, Engineers with less than
10 years' experience.

• SEABC members (annual membership for \$85, free for students).

• Contestants outside of lower mainland highly welcomed as travel costs are eliminated due to the virtual nature of this years event!

Participation in previous years' event does not disqualify from participating again!

What to expect?

Give a 10-15 minutes presentation followed by up to 5 minutes Q&A. Rating is based on:

- Presentation skills
- Ability to answer questions
- Topics and content

Be advised that the presentations may be recorded.

Topics

Must pertain in some way to structural engineering and can include:

- A project you have been involved in;
- Post-disaster reconnaissance work;
- · A project completed at school;
- An international experience you would like to share;
- Your research work;

 A personal reflection about industry practice;

Application

To apply for the competition, all you need to do is to submit your:

- Presentation title
- Your title and affiliation

to <u>ymg@seabc.com</u>

Looking forward to your presentation!

