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*Eiffel Tower, France. Image by
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Message from the President



David Harvey, P.Eng.
SEABC President

Peer Reviews

There has been a lot of discussion recently regarding peer reviews. This is the underlying principle of EGBC's requirements for independent review of structural design (IDR). To be independent requires someone external to the design concept and its development; however, the review is not the single occurrence at the end of the process that is often assumed. Except for some small projects, most design delivery is multi-staged, and many designs have component parts. To manage quality, all stages of all components, i.e., all deliverables, should be independently reviewed.

Further, designer and reviewer may wish to have regular or interim update review meetings, to help achieve a continuous review of design development. This reduces the risk of rework and helps to prevent a design submission proving to be unacceptable. This is commonly used to control the quality of major infrastructure projects and is how peer review can add significant value. Of course, the reviewer needs to maintain design independence throughout.

Independence does not mean that designer and reviewer do not know each other and are not professional colleagues; however, EGBC does have a requirement for reviewers to be out-of-firm for Type 2 IDRs. According to EGBC's guide, Type 2 reviews are intended for "high-risk" work that is innovative or complex, with the type of review being determined by a documented risk assessment. In addition, Type 2 reviews can be used in other circumstances, e.g., where required by contract, the absence of internal reviewers, or when increased diligence is needed.

Except in small organizations, in-firm reviews are most commonly used. Fortunately, personnel quickly adapt to the requirements and good quality

management practices become routine. The key is for all involved in the IDR process to see its value and 'buy into it.' Unless out-of-firm reviews are normal – as may be the case in small companies, most designers will be unfamiliar with reviewers from another organization. This situation can create areas for confrontation, especially if the firms involved are direct competitors.

It pays to choose external reviewers wisely. First consider the experience and reputation of the reviewer and the alternative choices. Next, ask the candidate about interest and availability, and try to set up a 'win-win' scenario. Most importantly, be realistic about the budget – the reviewer is entitled to proper compensation. The scope of the review must be the complete design to avoid excluding review of potential flaws in the design. The 2019 collapse of the FIU pedestrian bridge in Florida is a tragic example of a limited scope-and-budget, out-of-firm IDR that proved to be of no value.

Peer reviews are commonplace across the US, but particularly for high-rise buildings on the West Coast. Peer reviews are required by regulatory authorities to accommodate designs through "equivalent means" for buildings not meeting the prescriptive requirements of ASCE 7 or stipulated height limits. Peer reviewer reports are required for submission with the permit application. Disputes can be resolved by an Authority decision or by replacement of the peer reviewer. To avoid this scenario, consider the track record and select a reviewer carefully!

Respectful behaviour during a peer review is vital. Buying into the process as added value will generate a desire to share information. The goal is to obtain confirmation that the design is appropriate and meets generally accepted standards.

Daniel Kahneman, Emeritus Professor at Princeton University, is the author of 'Thinking, Fast and Slow', and is the recipient of the 2002 Nobel Prize in Economic Sciences. He notes: "People don't change their minds." Kahneman's scientific legacy will be the practice of "adversarial collaboration" (AC) which aptly describes the peer review process. In AC, the scientific method is used to employ evidence from joint investigation to settle belief differences. AC has been credited for spurring radical change in the way scientific research is now conducted.

Bear all this in mind next time you conduct an IDR!

Committee Reports

Communications Committee



David Harvey, P.Eng.,
Struct.Eng.

Director SEABC

Regular readers will note that from time to time I report in SEABC newsletters regarding communications. Hopefully my column is of interest. The key point is that communications is not an end product, it is a vehicle for information on activities.

Note that “no news is good news”. Happily, I can report that I have no “news” – just as it should be, and all is well.

The pandemic has had little affected SEABC communications – SEABC has always published newsletters electronically and communicated with its members by email. We have not needed to introduce changes – preferring small adjustments, which have enabled SEABC’s activities to adapt to changes stemming from remote working. So, the newsletter continues to be published, and the SEABC Diary emails, which keep everyone posted on internal and external events of interest, are distributed as usual. You may have noticed receiving additional notifications because there is an increase in the availability of on-line events.

SEABC is currently transitioning out of pandemic mode and adapting SEABC activities to post-pandemic circumstances. We are getting our feet wet with new delivery modes, trying to find the right blend of in-person and on-line participation and becoming comfortable with our ‘new normal.’

However, we still need articles for our quarterly newsletter. With plenty taking place locally in structural engineering, the committee aims to bring as much of that to you as we are able. We appreciate all the generous contributions you have made, but we need to do better. Everyone has a story to tell – so please tell us!

Articles can be full, or half-page and should be illustrated. Abbreviated research papers are also acceptable. You can also send in photos with a descriptive paragraph. Contributions should be newsworthy and/or inform our readers on structural engineering. We also invite feedback from you. If you have a great idea – share it with us!

Please send your information for publication to: newsletter@seabc.ca – we look forward to hearing from you.

Young Members Group



Lois Tso

E.I.T.

This issue of the YMG report summarizes the past Trivia Night event that took place and also highlights the upcoming highly anticipated Presentation Competition Event.

YMG Trivia Night

On November 9th, a group of YMG members got together to test the depths of their knowledge at the Trivia Night event hosted at Good Co. located in downtown Vancouver. As a team, the members were quizzed on a set of general knowledge and song recognition questions. The night was a fun time filled with insightful discussions; a big thanks to those who came out! We are excited to host more social events like these for everyone in the future.



SEABC YMG Presentation Competition

The YMG Committee is proud to announce the 12th annual Presentation Competition will be held on March 27th 2023, at the Library Square downtown Vancouver. The Presentation Competition is an event where students and industry members can participate to present on an engineering topic of their choice, competing for the top title and grand prize. The committee has just closed the call for abstracts period and look forward to the interesting presentation topics to come. Save the date and keep an eye out for event registration coming soon on our website, emails, and socials. We're excited to see you there!



If you are interested in becoming a volunteer for our upcoming YMG events, feel free to reach out to us through our social media links below! All volunteers of any commitment level are welcome.

On the Web



Ricardo Ruiz,
B.Sc., M.Sc.

Hard to believe the first 2 months of 2023 are almost done! The year started with a bang and it's going to be a busy first quarter, with the coming annual AGM and Pinnacle Lecture and the YMG Presentation Competition.

Industry event postings:

- Getting to a Less Wild West: Earthquake Early Warning and Instrumentation in BC by EERI on November 29

- Application of Shape Memory Alloys in Earthquake Engineering by CAEE on December 7
- From Ductility to Repairability: Evolution of Building Design in the Wake of the Christchurch Earthquake by EERI on January 9
- Mass Timber Schools: A 21st Century Solution by WoodWorks! on January 16
- FREE Two-Part Webinar Series on FEMA P-749 Earthquake-Resistant Design Concepts: An Introduction to Seismic Provisions for New Buildings- February 8 and 15, 2023

SEABC January 2023 Term Courses- started on January 10 and will run until to April 6, 2023

SEABC April 2023 Term Courses

- Registration opened on February 6, early bird deadline is March 24.
- Courses will start on April 11 and will continue until July 6.
- For more details and to register, please go to: seabc.ca/certificate

SEABC November Newsletter- published and available on the website at: [SEABC Newsletter](#)

Board of Directors 2023/2024- Call for candidates. Notice was sent out on February 1. Elections will take place at the AGM.

Annual General Meeting

- Like last year, the AGM will be held virtually and is scheduled on April 6 at 5:30 pm.
- An email invitation was sent to all members with the details and the link to register for the event.
- For more information, including registration and sponsorship opportunities, go to: seabc.ca/event

YMG Presentation Competition

- This year's competition will be held in person at the Vancouver Library Square Conference Centre on March 27.
- The topics for presentation are currently being selected from the submitted abstracts.
- Sponsorship opportunities available through the website at: seabc.ca/event

IStructE News



David Harvey, P.Eng.
Struct.Eng

Now emerging from the pandemic, IStructE is finding its own 'new normal'. Although headquarters is now open for business, many activities continue on-line. This is greatly appreciated by remote members, including those of us in BC, but also by many in the UK that have difficulty attending in-person events.

Since events switched to on-line delivery, I have 'attended' quite a few evening meetings in London whether by IStructE or IABSE. Happily, on-line availability of live events continues.

The activity most affected by the pandemic was the IStructE Chartered Membership (CM) exam. Over the past three years, the timing of exam sessions has changed. Two exams annually, having February and July exam dates is now typical.

One point to watch out for is the recent move to include sustainable development as a component of the CM exam. In future, candidates will be expected to be familiar with carbon accounting. Generated by IStructE's commitment to tackling the climate emergency, the move is expected to occur later this year, so look out for announcements. The Institution will introduce on-line training sessions to assist those who are unfamiliar with designing for sustainability.

With the new year's arrival, a new president is elected. Now that Jane Entwistle's term of office is complete, the Institution has announced her successor – Matt Byatt. Matt, who hails from Norwich, Norfolk, is the 102nd individual to hold office. Matt's presidential address took place on January 23rd and can be viewed at:

istructe.org/matt-byatt

2023 IStructE President



Matt Byatt

Matt is a Co-Founder and Director at Subteno, a company built upon the simple premise of providing engineering solutions that are fully considered, inherently safe and considerate of the environment. Matt is responsible for the technical running of their South Norfolk office. He is a consulting engineer with widespread experience across the commercial, retail, and industrial sectors in the UK, as well as specialising in brownfield modifications of offshore structures.

Matt has been actively involved with the Institution since the mid 1990's serving on numerous panels and committees as well as being East Anglian Regional Group Chairman twice, serving on Council and the Board. Matt progressed from becoming an Incorporated Engineer in 1995, to Chartered in 2005 and a Fellow in 2015. In 2014 he was presented with the Institution's Lewis Kent Award.

"It is a very special honour to be invited to be our Institution's 102nd President. From my non-conventional start, not knowing which career direction to take in the early years. I am deeply humbled and a living testament that with hard work anything is possible," said Matt. "Our profession is going through a period of rapid and fundamental change. The climate emergency, legislation and rising costs means that every structural engineer needs to re-evaluate their approach...regardless of experience or background. The Institution needs to support the profession as it responds to these challenges."

So you Think you can be a Sole Proprietor?



Mark Budd, P.Eng.

Whether you call it “hanging out your own shingle” or “launching your own ship”, starting your own engineering practice is a rewarding, Sisyphean, leap of faith. In this article, I hope to give a general overview of some of the common issues that popped up through my own experience of becoming a sole proprietor. As a young engineer, I was frequently sheltered from the inner workings of the business. In my experience this is common and, consequently, there may be an unrealistic understanding of how to operate an organization in the current industry. My hope is that others – young, middle-aged, and experienced – will begin to share real, valuable knowledge about how to establish an engineering business in today’s industry.

Insurance

Acquiring an insurance policy is the first action when starting out on your own. Beyond the obvious liability coverage, the policy is beneficial to have as it becomes a necessary document for building permit submittals.

There are two basic policies you need: a professional liability policy and a commercial general liability policy. In simplified terms, the former covers your engineering work and decisions, while the latter covers your actions on the job site or damages to your operation. Search out an insurance broker to help with the process, which is reminiscent of a job application. You and the broker will have a conversation and review your application. The broker will then consult the policies offered by insurers. If a policy can be successfully acquired, the broker will notify you of the cost and payment options. In many cases, an introductory policy may be offered as a locked-in rate for a one- to three-year period. Otherwise, the policy may be tied to the yearly

billings, coverage amount and history of claims. It seems common to pay a yearly rate in the \$5000 to \$15000 range.

Regulatory Plan

Since the regulatory changes in 2021, the process to launch an engineering practice has become more challenging. One of the key components that has changed is the requirement to establish and implement a Professional Practice Management Plan (PPMP). In very simplified terms, this is a long-form document that spells out how you will organize and manage the engineering work completed under your firm’s name. This document must be in place within twelve months after your firm registration date. It makes sense to develop this very early on so that your process is consistent and compliant.

Through the development of a PPMP, it will be necessary to become aware of the quality management requirements provided in the practice guidelines. My experience working within an organization is that I was less informed of the regulatory and bylaw nuances due to the insulation of the organization. With close to one-thousand pages of regulatory information to read, my best advice is to start reading and organizing the information for your own practice.

Checks and Reviews

Documenting the checks on your work is one of the most critical parts of your operation. Ultimately, the checks and reviews required for structural work need to comply with Section 7.3.4, 7.3.5, and 7.3.6 of the Bylaws. So, how can a sole proprietor make this work?

First, understand the exemptions for Independent Reviews related to Part 9 conforming one- and two-family dwellings. Next, decide on a manageable set of design projects that you will pursue. From this set of projects, start to develop a consistent process for each type of design project. Once this process is developed, evolve it by creating flowcharts, checklists, and formwork which capture the criteria noted in the Bylaws.

You may also stumble into projects that are well within your expertise but are not included in the exempt project list. Or perhaps the project is technically exempt but includes a new or unfamiliar

aspect that would benefit from another perspective before finalizing the design. These outlier cases require an Independent Review. As a sole proprietor, your Independent Reviews will all be classified as “Type 2”. Although “Type 2” reviews are somewhat of a competitive disadvantage for sole proprietors, it will force you to search and discover other engineers and willing participant firms in the wild. It would be beneficial if there was an official list of willing independent reviewers, but this does not currently exist. Many practices complete “Type 1” reviews or complete “Type 2” reviews using their pre-existing connections. New practitioners can start their search with SEABC firm directory, old colleagues, a “Google” search, or LinkedIn.

Of course, this is only one partial method for how checks and reviews can work. The effectiveness of the method will significantly depend on the application and implementation.

Yes and No

One of the first skills to learn is how to decipher when to say “Yes” and when to say “No” to a project. It’s a good idea to have a conversation and ask the prospective client questions before considering the project. Are there existing drawings? Is there a contractor involved? Are they building with a permit? Is the site accessible? What is the vision for the project? What is the budget? Walk away from the initial conversation with a better formed opinion of the client and the project goals. Over time, you will develop foresight for how projects can turn out. If the project seems right for your practice, start writing a proposal. Ensure that your scope and fees are clearly identified. Include any “Terms and Conditions” that may apply to your operation. It is beneficial to have a lawyer review or draft your standard service agreement terms.

Send the proposal to the client and wait for their response. My preference with many projects is to require a deposit before starting work. The financial commitment often shows the client is serious and ready to commit. It is also important to acknowledge that some clients may inquire solely for the benefit of budgeting and free knowledge. These social exercises almost certainly take away your time and focus. With experience, you will be able to limit the time spent on these unbillable activities while still giving each client the respect they deserve.

How to Stay Alive

If learning how to say “Yes” and “No” is one of the first skills to learn, then learning “how to stay alive” may be one of the last. Starting an engineering practice has a high upfront cost with insurance, regulatory fees, and technology expenses; starting a detail and design tool library from scratch is also no easy feat. So, how do you stay focused and ready for each day?

The best advice is to plan, organize, and learn how to motivate yourself. Establish a comfortable routine so that you can thrive and not feel overburdened with the demands of an engineering business. Use gaps in your project schedule to chip away at standards, templates, and other development tools. Leverage sub-contracting when your project schedule becomes relentless or when the non-engineering tasks are perpetually in the queue. Give yourself realistic deadlines and goals. Keep expanding your library with design guides, references, examples, and technical literature from which you can use when new challenges arise. And finally, start building connections with other professionals and former colleagues. Find colleagues, other sole proprietors, experts and past reviewers who are available to discuss concepts, give opinions, and even collaborate on projects. These relationships will help you build confidence in your work and prevent you from being totally isolated.

End Remarks

Working as a sole proprietor has been a rewarding experience. I enjoy the complete ownership of my work and the ongoing challenge of managing every aspect of a job. And while the working hours sometimes seem endless, it’s still refreshing to think that I can dictate my own schedule to meander through family commitments, health, and the balance in my own life. I welcome feedback and constructive discussion on this topic. Feel free to reach out if you’d like to chat.

Save the Date – Northwest Conference

The 2023 Northwest Conference will be held at The Hilton, Bellvue, WA, September 14, 15, 2023. Look out for announcements!

Buildings Need a Longer Lifespan



Robert Bourdages, P.Eng.
LEED AP

It has always concerned me that buildings in the United States and Canada have a relatively short lifespan, compared to some other parts of the world. Granted that North America is a relatively new land, and we can't expect buildings to be very old, say over 200 years old.

Commercial and residential buildings in the west seem to have a life span of 30 to 60 years, based on casual observation. Churches and public buildings appear to have an extended life span, perhaps even 100 years or more. Of course, there are a variety of variables at play, such as building materials, soil type, environmental exposure, geographic location, maintenance, and funding.

But now more than ever, it is important to extend the life of buildings. We are now conscious of our carbon footprint and associated greenhouse gases that are expended when buildings flow through their life cycle. If, however, a building life is extended, the average equivalent carbon footprint/year is reduced for the production, construction, and demolition phases of the building. It also makes financial sense to extend a building's life rather than demolish and reconstruct.

This new consciousness will need to be embraced by the building community at large.

Building Codes could emphasize longevity and perhaps even provide incentives for each decade of planned building age. Permits to occupy may need to be re-evaluated periodically (every 10-20 years?) to ensure building maintenance is properly managed. Design criteria will have to reflect the extended lifespans. Loading criteria will be increased to handle a higher risk of exposure to environmental loading such as, wind, rain, snow, earthquakes, and flooding.

Fire protection requirements will also be upgraded for extended lifespans.

Financial institutions will need to rethink how mortgages are implemented, such as requiring a certain holdback (1-2% per year?) to fund mandatory building maintenance. Mortgages could also extend far longer than historical loan periods.

Imagine buildings having a minimum lifespan of 100 years, and even 200 years at the onset of design. Suddenly we are thinking of solutions that promote longevity.

Concrete structures will be designed that use concrete mixes that self-heal, provide inherent moisture protection throughout, and have additional clearances to reinforcing. Corrosion protection would also be considered, such as providing protective coatings or cathodic protection. This technology is now available, it just needs to be implemented on all future buildings.

Masonry structures would have similar attributes: Improved structural masonry units, grouts, and mortars that are more durable, moisture resistant, and are self-healing. Corrosion protection for reinforcing would be similar to concrete.

Steel structures are inherently long lasting, provided moisture infiltration and corrosion is avoided. Use corrosion resistant alloys when there is a potential for moisture infiltration. For example, stainless steel bolts can far outlast typical mild or high strength steel fasteners. Stainless steel is relatively expensive compared to mild steel, however the new design criteria will require longevity, and thus may be more practical over the long lifespan of the building.

Timber structures can also be designed to have extended lifespans. Some timber buildings in Europe are several hundreds of years old. The need for reliable buildings envelopes and adequate dry air exchanges on timber contact surfaces will be essential.

Engineers and architects obviously play a major role in this endeavor. Building envelopes need to be highly functional, and readily repairable. Windows and doors should be easily repairable or replaceable. Interior partitions should be moveable. Finished surfaces should be extra durable. Brick and other masonry cladding have already proven to perform well over extended periods of time.

Modular construction should be used as much as possible to allow for simpler modification, unit replacement, and upgrades relative to traditional buildings. Allowance for future wiring, plumbing, and other future and unknown utilities will be required. Provisions for repairing building settlement and other undesirable deformations will need to be considered. Many building technologies to extend a building's lifespan already exist. The key is to focus on designing for the very long term. It's a great way to respond to a sustainable building practice.

Reinforced Concrete – Some Historical Notes



David Harvey, P.Eng.
Struct.Eng

If you design structures, then like me, you probably design using reinforced concrete at least some of the time. After all, for structures other than housing, it is the most prevalent structural material worldwide. Although there are many natural cements which bind the aggregates together, the basic ingredient of most modern concretes and grouts is Ordinary Portland Cement (OPC). William Aspdin is credited for inventing this material in 1848, after his father Joseph had patented Portland Cement in 1824. The material was so named because of its resemblance to Portland stone, quarried in Portland, Isle of White.

Joseph's material was first used in the foundations for the palace of Westminster in 1840, however, the addition of steel reinforcement increased its tensile strength and allowed new opportunities for its uses. Combining concrete with iron bars was first patented in 1854, however, when French engineer Francois Hennebique patented his system of building with reinforced concrete in 1892, a new composite structure that would change the face of the planet was launched.

My first structural design in practice was in reinforced concrete, some 50 years ago. It happened to be a 66 m span arched bridge in Exeter,

UK. The bridge design leveraged the ability of the material to be moulded into practically any shape desired. The bridge still looks good today, which likely explains my affinity for reinforced concrete. Interestingly, although modern designs are focused on minimizing labour costs, the way we design reinforced concrete structures has changed very little.



It is further of interest to note that steel/concrete composite sections are designed in much the same way as reinforced concrete. The main difference is that the steel section is normally external and engages with the concrete via shear connectors at the interface, as opposed to perimeter bond with embedded reinforcement.

The historical development of reinforced concrete, and the later emergence of steel composite sections, reminds me of a project from my early days where we were asked to load rate a bridge dating from the 1880s. The short span comprised several wrought-iron beams which were partially embedded in concrete to form the deck. Material strengths were unclear, but using probable strengths, the wrought iron beams were only good for a 2 tonne vehicle. However, the properties served by the bridge were regularly serviced by a 20 tonne fuel truck (conveniently ignoring the pre-existing 5 tonne posting) so it was time to think again. The only explanation was that the concrete was acting compositely with the iron which would provide much more capacity, but no provisions for interface shear transfer were apparent.

To resolve the matter, we decided to conduct a load test. As no one wanted to damage the bridge, we carefully plotted deflection curves for various degrees of composite behaviour. It turned out that the span was exceptionally stiff, the measured deflections were about half of our calculated values for full composite behaviour. At 30 tonnes of test load, we had enough evidence to officially raise the bridge load rating to 20 tonnes. The private owner was delighted as he could now restore his public liability insurance. That project gave us a lot to think about!

Certificate in Structural Engineering Program



Shannon Remillong,
CSE Program
Co-ordinator

Registration for the **April 2023 term** is now open through the [SEABC website](#)

The CSE Program is offering a spring term! ...

Four courses will be offered this term, and all courses will be offered **Live Webcast**, with selected courses simultaneously offered in-person at the UBC Robson downtown campus. Courses will be Tuesday or Thursday evenings beginning the week of April 11th and ending the week of July 6th, 2023.

The following courses will be offered in April 2023:

- **C2** Effective Structural Modelling
- **E5-1** Seismic Design of Concrete Structures
- **E14** Pre-stressed and Post-tension Concrete Design
- **E23** Performance-based Design of Tall Buildings

Course outlines are available seabc.ca/certificate-program

Course Delivery:

- All courses will be available **ONLINE** format.
- Four courses will be offered once a week for 2 hours in the evening.
- Courses are 12-13 consecutive weeks.

Program Details:

The Certificate in Structural Engineering Program offers courses on a wide range of structural

engineering topics. In addition to promoting the Certificate in Structural Engineering, we also welcome auditing of courses:

- **Credit:** Take a course with the goal of obtaining a final grade of 68% or higher, a Certificate in Structural Engineering will be provided.
- **Audit:** Take a course to expand your knowledge, **without** an evaluation of assignments or exams. Letter of audit will be provided.

Important Dates:

- Registration open: Monday, February 6, 2023.
- Early-bird deadline: Friday, March 24, 2023.
- Registration will remain open until Monday, April 10, 2023.
- First lecture: Week of April 11, 2023.
- Last lecture: Week of July 6, 2023.
- Withdrawal Deadline: Monday, April 24, 2023 (\$75 administration fee will be applied to refund of course registration fee).

Course Fees and Discounts:

- Classroom (UBC Robson) \$500 + GST.
- Live webcast \$700 + GST
- Early-bird discount of \$50 per course applicable until Friday, March 24, 2023
- SEABC Member's discount of \$50 applied at registration.



Courses 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: courses@seabc.ca

2023 Executive Board – Candidates for Election

	<p>Perry Adebar, Ph.D., P.Eng., University of British Columbia</p> <p>Professor and Department Head of Civil Engineering at the University of British Columbia, Perry has served as a Director of SEABC for ten years. If elected, Perry will continue to serve in that capacity.</p>
	<p>Robert Bourdages, P.Eng., SE, LEED® AP</p> <p>A Principal with Stantec, Robert is standing for re-election to the SEABC Board, having served as a Director of SEABC for three years. If elected, Robert will serve as a Director.</p>
	<p>Stanley Chan P.Eng</p> <p>A design engineer with RJC, Stanley is a past chair of SEABC's Young Members Group. He has been involved with the Young Members Group since 2011 and has served as a Director of SEABC for five years. If elected, Stanley will continue to serve as a Director.</p>
	<p>Tim Dunne, P.Eng</p> <p>Tim is the founder and principal of Dunne Enterprises Ltd with three decades of industrial experience. If elected, Tim will serve as a Director</p>
	<p>Gregory Gislason, P.Eng</p> <p>Gregory is a structural engineer with Bush Bolman & Partners, has served as Network Coordinator with the Young Members Group and is the current YMG Chair. He has served on the SEABC Board for one year. If elected, Gregory will continue to serve as a Director.</p>
	<p>Tejas Goshalia, P.Eng., SE</p> <p>A Senior Associate with Stantec, Tejas has served as a Director of SEABC for ten years and currently chairs its Education Committee. If elected, Tejas will continue to serve as a Director.</p>
	<p>David Harvey, P.Eng., Struct.Eng., President</p> <p>A Principal with Associated Engineering, David is a founding Director of SEABC. David currently chairs the SEABC Communications Committee and has served as President for seven years. If elected, David will continue to serve in that capacity.</p>

	<p>Cameron Kemp, P.Eng., LEED® AP, Past President</p> <p>A Principal and Chairman of Omicron Canada Inc., Cameron was a founding Director of the SEABC. Having served five years as SEABC President, Cameron is currently Past President, and if elected, he will continue to serve in that capacity.</p>
	<p>Kitty Leung, P.Eng., Struct.Eng.</p> <p>A structural engineering principal and manager, working for Vancouver-area firms, Kitty has served as a Director of SEABC for eight years. If elected, Kitty will continue to serve as a Director.</p>
	<p>Colin MacLeod, P.Eng.</p> <p>Colin is a Senior Project Manager, Alternative Delivery, with AECOM. If elected, Colin will serve as a Director.</p>
	<p>Surinder Parmar, P.Eng., PMP</p> <p>Manager- Portfolio Capital Projects with BC Hydro, Surinder was a founding Director of the SEABC and has served as Secretary/Treasurer since its inception. If elected, he will continue to serve as a Director.</p>
	<p>Kevin Preston, P.Eng</p> <p>A facade structural specialist with Morrison Hershfield Ltd, Kevin has served as a Director of SEABC for one year. If elected, Kevin will continue to serve as a Director.</p>
	<p>Kevin Riederer, P.Eng. Struct. Eng.</p> <p>A Principal Structural Engineer with RJC, Kevin has served as a Director of SEABC for eight years and is the outgoing Chair of the SEABC Technical Committee. If elected, Kevin will continue to serve as a Director.</p>
	<p>Calvin Schmitke, P.Eng., Struct.Eng.</p> <p>Director, Structural Engineering of Omicron Canada Inc., Calvin has served as a Director of SEABC for four years. If elected, Calvin will continue to serve as a Director.</p>

	<p>Andrew Seeton, P.Eng.</p> <p>Structures Engineer with the City of Vancouver, Andrew was a founding Director of the SEABC and former chair of its Education Committee. If elected, Andrew will continue to serve as a Director.</p>
	<p>John Sherstobitoff, P.Eng.</p> <p>A senior structural engineer specializing in earthquake engineering and a Principal with Ausenco, John has been an SEABC Director for eight years. If elected, John will continue to serve as a Director.</p>

The SEABC Annual General Meeting will take place online on Monday March 6th at 5.30 pm. Look out for announcements in your mailbox.



Nominate a Colleague!

2023 Engineers and Geoscientists BC Awards: Nominations now open!

Engineers and Geoscientists BC Awards are the top awards for professional engineers and geoscientists in BC. They highlight the exceptional work that our registrants and their employers do in local communities and throughout the global community.

There are several award categories available, including [Outstanding Achievement in Engineering](#), [Outstanding Achievement in Geoscience](#), [Young Professional Award](#), [Equity, Diversity, and Inclusion Award](#), and [more!](#) We need your help to showcase these exceptional BC engineers and geoscientists!

How You Can Help

There are a few ways you can help us with our 2023 Awards program:

1. **Promote this opportunity through your network:** Use our [2023 Awards Social Media Kit](#) to share a post about these awards on your personal Twitter and LinkedIn accounts. Sample newsletter copy is also available to include in any outgoing mailings that you're

sending to engineers or geoscientists (or people who work frequently with those registrants).

2. **Submit an award nomination:** If you know of a great candidate for one of our 2023 Awards, you can nominate them now online. Visit [our website](#) to learn more about nomination procedures, award criteria, and eligibility. Deadlines for award submissions are listed below:

- **Innovation in Sustainability Award:** Initial Application is due February 28, 2023
- **Individual Awards:** Online application is due April 7, 2023

Questions?

If you have questions about Engineers and Geoscientists BC 2023 Awards or the application process, please email awards@egbc.ca for support.

Eytan Michael Fiszman: Born to Build

By Alejandro and Sebastian Fiszman



Eytan loved to share the projects he worked on with his friends; he had tremendous pride to have worked on The Post, Vancouver. Illustration by @Ilyazsa

Eytan was born on March 9, 1991, to Sergio, an Olympian and an electrical engineer with nine patents to his name, and to Viviana, a physical education teacher with a love for nature. Eytan is the middle brother, Alejandro is the youngest, and Sebastian the oldest. Eytan was also extremely close to our grandmother, Sofia, who overcame antisemitism and sexism to become a dentist in Buenos Aires, Argentina, in the 1940s. These three individuals, Sergio, Viviana, and Sofia shaped who we are. Eytan would prove to be the leader in embodying their work ethic and adopting their ethos of always giving and never taking.

Our parents immigrated from Buenos Aires to Ottawa hoping to give us a better life. Education carried the greatest priority in the household, not just for the sake of securing a place in society, but more so to ensure that we were open-minded and empathetic, able to understand that everyone has a story.

Somehow our parents knew that Eytan would be strong in every sense of its Hebrew origin, עִזָּז, “firm, enduring, and strong.” Before he turned 2, Eytan would welcome Ma y Pa outside of his crib

with his green eyes, ready to be picked up to go exploring. By four, Eytan took it upon himself to disassemble furniture, an early foray into reverse-engineering to learn how things are built and a sign of things to come. We always joked that our parents waited five years to have Alejandro because of the effort it took to keep up with Eytan’s incredible levels of energy.



The Fiszman Family: Alejandro (left), Eytan (middle), Sebastian (right), Viviana (mom), and Sergio (dad)

IKEA would later provide an outlet for Eytan in two ways: first, being left to play in the ball pit as our parents shopped for Billy Bookcase replacements (these did not last in the Fiszman household because we treated them like fixtures in a playground); and second: Eytan would then happily put together the furniture for my parents. Eytan’s true passion to build became evident in our basement, which he claimed as his ‘Lego Land’. Here, Eytan acted as a city planner, architect, and builder. Alejandro would later become Eytan’s assistant. With Sebastian relegated to the role of Godzilla, a dilemma Eytan easily solved by expanding the city limits and adding a police station. Of all the toys and creative outlets we had as children, Eytan’s Lego is what our parents have held onto for the next generation.

From an early age, it was apparent that Eytan inherited his father’s mathematical and scientific talent. He was only seven years old when dad bought him the first iteration of the Lego robot, RCX 1.0. The box declared that the build was suitable for children twelve and older, but the designers over in Denmark had not met Eytan. At first, Eytan struggled to get the robot to work. You would find him sitting on a blue IKEA TED chair, his feet not able to touch the ground, looking at the monitor of our Dell computer trying to get the robot to activate. Eventually—and without

any help—Eytan succeeded, and he could then be found chasing the yellow robot all around the house. At the end of every play session, once Eytan and the RCX had settled their differences, he would hide the robot in a secure location to make sure that Godzilla would not cross its path.

Throughout elementary school, our brother would be known by teachers not only for his intelligence, but also his unapologetic enthusiasm for, and success at, making his classmates laugh. Recess was never long enough for Eytan, and so it had to extend into the classroom. While Eytan loved to have fun, he was always loyal to his friends, and to this day and for all eternity, that is one of the first traits that friends and family identify when describing who he was.

High school presented a bigger playground for Eytan. It was an opportunity to make new friends, try new sports, and immerse himself in new subjects. There was a technology and building course, in which Eytan excelled, and through which he gained his first exposure to AutoCAD. The learning did not stop in the classroom: Eytan carefully studied, and supervised, any contractor hired to work in the Fiszman home.

Eytan excelled academically, but always wanted his friends to succeed alongside him. In one instance, he caught a friend cheating off him during a test. Recognizing that his friend was struggling, Eytan provided him with a clearer view of his own answers. Somehow this friend not only struggled with the test, but also struggled with copying. Eytan grew frustrated but did not lose touch with his desire to help his friend and he proceeded to hold up the test in front of his friend's face. This episode was typical of Eytan: always willing to sacrifice his own interests for the benefit of others. It was an expression of Eytan's formula for happiness, which was: "If I help others, they will be happy, and if they are happy, I am happy."

As high school graduation approached, Eytan's friends dreaded the inevitable question, "What do you want to be?". This question held no fear for Eytan. "I want to be an engineer like my dad" was his response. Eytan also saw education as an opportunity to learn and contribute more to society. Eytan attended Carleton University, winning numerous scholarships along the way, including the Senate Medal for graduating in the top 3% of his

class. Eytan never really celebrated these accolades, but the day he received his iron ring was one of his happiest: he now had the same ring his father had.

Eytan and Sergio spoke another language, one that readers of this newsletter speak as well. As Sebastian and Alejandro would observe, an engineer's work often goes unnoticed. There is no profession whose work is more utilized and facilitates more comfort and joy, than that of the engineer. The highways we drive on, the buildings and houses we occupy, the appliances we use, the medical devices we rely on—an engineer made it all possible. Engineers also propel other professions forward. Imagine if architects did not have structural engineers supporting them. Eytan would share the struggles that engineers and architects faced in balancing aesthetics with physical constraints. These were struggles to Eytan, not limits. It is unsurprising that Eytan dedicated himself to a profession that does not receive the recognition it deserves but has a meaningful impact on the world. While others may feel burdened by helping others, Eytan lived to do so.



The day Eytan received his iron ring was one of his happiest. The ring now rests on our father's.

While Eytan fielded scholarships from other universities for his Master's studies, there was only one real choice: the University of British Columbia's esteemed civil engineering program. This program offered Eytan the opportunity to specialize in structural and earthquake engineering and, most importantly, allowed him to be at the forefront of timber construction. As his brothers, we are in awe of the friendships that Eytan formed through the program. This speaks to the excellence of the students admitted and is also a testament to the professors who were able to bring together

individuals of different backgrounds, cultures, and academic levels to not only excel in the classroom but also in society. For Eytan, graduation cemented the following principle: "The integrity one carries in their profession will seep into the very walls they help engineer."

Eytan worked on an assessment for one of Vancouver's oldest hotels and conducted a stress analysis of the property. His findings were concerning, and he shared them with his superiors, who then relayed them to the hotel's management. The hotel executives responded by saying that insurance would cover the matter. To Eytan, this was an affront to everything he believed in, and he took a stance and advocated for the proper measures to be taken to ensure the health and safety of the hotel's employees and visitors.

Eytan's eyes continuously scanned the horizon. No structure would receive more scrutiny than the bridges we drove under. He constantly pointed out signs of deterioration, including whenever we passed under Toronto's infamous Gardiner Expressway, which is in a state of advanced decay. Eytan was not just concerned about physical structures; he also

considered the impact of human intervention on the environment. Our mother often reminded us that nature would respond to our actions in kind, and he took this to heart.

In life, we have the choice to be active or passive participants in our surroundings. From a young age, Eytan chose to be an active participant. Every fiber of his being was dedicated to protecting others and his chosen profession was an extension of his personality. The Fizman brothers' initials spell out S, E, and A, and these letters are tattooed on Eytan's right bicep. Many would ask Eytan what those letters represented. Eytan's grin would build, and develop into a laugh, as he would say they stood for the Structural Engineering Association. He would then collect himself, and proudly explain that it was in honour of the three of us, the brothers. Eytan rejoiced over two of his loves interacting: his love for being an engineer, and his love for his family.

On March 9th, Eytan's birthday, we will light candles for our brother, and invite you to join us in building a collaborative picture mosaic with flames glimmering in his honour. For more details, please visit:

www.eytan.ca.



In 2019, Eytan relocated to Kelowna for 6 months to work on the city's tallest building, One Water Street. Eytan left such a lasting impression on the family that hosted him, that they have a picture of him up in their house to this day. Illustration by @arditarts

Mark Your Calendar

Upcoming Seminars, Webinars and Events

Remote Monitoring to make Civil Infrastructure Safer

Date: Friday March 3, 2023

Location: Webinar (244 seats available)

Time: 12:00 PM–1:00 PM Pacific Time

For more info: egbc.ca/Events

Emotional Intelligence and Team Effectiveness

Date: Thursday March 9, 2023

Location: Webinar

Time: 8:15 AM–8:30 AM Pacific Time: Login

8:30 AM–12:30 PM Pacific Time: Webinar

For more info: egbc.ca/Events

Bridge Building Competition (Hosted by The Fraser Valley Branch)

Date: Saturday March 18, 2023

Location: City Centre Branch- Public Library 10350 University Dr Surrey, BC V3T 4B8 (40 seats available)

Time: 11:00 PM – 2:00 PM Pacific Time

For more info: egbc.ca/Events

Tour of the Canadian Museum of Flight

Date: Monday March 20, 2023

Location: Hangar #3 5333 216th Street Langley, BC V2Y2N3. Parking is available on site. (54 seats available)

Time: 2:00 PM–5:00 PM Pacific Time

For more info: egbc.ca/Events

Bridge Building Competition (Hosted by The Tri-City Branch)

Date: Saturday April 21, 2023

Location: Douglas College: Coquitlam Campus 1250 Pinetree Way Coquitlam, BC V3B 7X3

Parking is available on site. (100 seats available)

Time: 9:00 AM–3:00 PM Pacific Time

For more info: egbc.ca/Events

Leading with Emotional Intelligence

Date: Thursday April 20, 2023

Location: Webinar

Time: 8:15 AM–8:30 AM Pacific Time: Login

8:30 AM–4:30 PM Pacific Time: Webinar

For more info: egbc.ca/Events

Geotechnical Earthquake Engineering Short Course

Date: Monday March 6, 2023

Location: Webinar (11 seats available)

Time: Login and Registration Day 1: 8:15 AM–8:30 AM Pacific Time

Online Course Day 1–3: 8:30 AM–4:30 PM Pacific Time

For more info: egbc.ca/Events

Save the Date! CCEE - PCEE 2023 Conference!

Date: June 25 – July 1, 2023

Location: Sheraton Wall Centre, 1088 Burrard St, Vancouver, BC, V6Z 2R9

For more info: Please check your emails in the coming weeks for more information regarding the conference.

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: Ricardo Ruiz

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.

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