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Why Become a
Chartered Engineer?

NEWSLETTER

December 2020-Vol 2

WESTERN CANADA GROUP OF CHARTERED ENGINEERS,

FUNCTIONING AS

CHARTERED ENGINEERS PACIFIC

<http://www.charteredengineerspacific.ca/>
alternative
www.wcgce.org

Members of Institutions of
Structural Engineers, Civil Engineers, Engineering &
Technology,
Building Services and Mechanical Engineers in
British Columbia, Alaska, Washington & Yukon

Message from the Chairman

Dr. Suresh Vishwakarma P.Eng., CEng, MIET, MBA, PhD

It is my proud privilege and honor to serve as Chairman of the Chartered Engineers Pacific for the year 2020 also. It was a great pleasure to work with a wonderful group of engineers for another year especially when the entire global community was finding itself in an insane situation. The success of organizing various activities throughout year 2020 despite having severe restrictions against physical events since March 2020 was the result of strong teamwork with an extraordinary support of Vice Chair Chris Richardson, Secretary - Douglas Yee, George De Ridder (Past Chair), Matthew Walton Knight (Past chair), Treasurer - Zeeshan Khan, Events Coordinator David Woo, and other committee members.



With great sadness we lost our colleague and friend Alan Kay (MICE) who died from natural causes (not covid-19) in the Lions Gate Hospital on April 22, 2020 after weeks of deteriorating health. Alan was 96, having served the committee continuously with enthusiasm, intelligence, and wisdom since the 1980s to his very end.

2020 was an unprecedented year full of challenges and new learning opportunities. In response to the restrictions due to COVID-19 virus pandemic CEP continued scheduled activities through virtual meetings and webcasts.

It is now looking forward to celebrating the 150th anniversary event of IET in 2021. The Institution of Engineering and Technology (IET) has a rich history. Since its foundation in 1871 as the Society of Telegraph Engineers, it eventually became the Institution of Engineering and Technology (IET) in 2006 by joining of the Institution of Electrical Engineers and the Institution of Incorporated Engineers. IET is now a home for engineering and technology across the world, providing extensive knowledge, resources, and support to help its members grow professionally, champion the profession in all its forms and inspire the engineers and technicians of tomorrow. With over 120,000 members in 140 countries,

Institution of Mechanical Engineers has been at the heart of the mechanical engineering professions since 1847.

The Institution of Civil Engineers (ICE) is one of the world's most respected professional engineering associations. Since it was formed 200 years ago, it has attracted some of the most famous and influential civil engineers in history.

Formed by the merger of the Institution of Heating and Ventilating Engineers and the Illuminating Engineering Society in 1976, the Chartered Institution of Building Services Engineers supports the science, art, and practice of building services engineering with over 21,000 members in 94 countries.

The Institution of Structural Engineers (IStructE) was originally founded in 1908 as the Concrete Institute in the UK and evolved to become IStructE since 1922, currently with 27,000 members operating in over 100 countries. Noteworthy is our Committee member David Harvey FICE, MICE, past Chair CEP) served as international president of IStructE during 2006-07. CEP is proud to represent such prestigious institutions in western Canada.

Since its founding in 1987, CEP is progressing by continually expanding activities each year and facilitate in the continuous professional development of members. We proudly served more than 1000 internationally trained engineers in the region extending institutions' services to members locally, and assisting local professional engineers, EITs and technologists.

Apart from organizing annual IET's "Present Around the World" and IMechE's "Speak Out for Engineering" (SOFE) competition, we organized 2020 SOFE America Regional in Vancouver. CEP was the only group in American region to organize 2020 virtual IMechE's SOFE heat due to pandemic restrictions. The winner will now compete at global final.

The success of our seminar on Artificial Intelligence in January 2020 has inspired us to organize more such events in the future. Our monthly technical presentations maintained their pace through virtual webcasting, not only benefitted our members but also non-members and guests.

I encourage readers to please visit us at <https://charteredengineerspacific.ca/> to read transcripts of past events and suggest topics and speakers for our monthly presentations by contacting me at chair@charteredengineerspacific.ca I am sure you will enjoy reading this Newsletter of year 2021. Your suggestions are most welcome.

Stay healthy and stay safe!

Dr. Suresh Vishwakarma

Past Event.

Wednesday June 17: Why Hydrogen?

Presenter: Mr. Mark Kirby.

President and CEO, Canadian Hydrogen and Fuel Cell Association (CHFCA), Honors Graduate in Mechanical Engineering, UBC.

Venue Webinar via Microsoft Teams



Given the global concern regarding the fact that Green House Gas (GHG) emissions are growing. Individuals, governments, and organizations are looking for greener solutions.

Our presenter provided a very interesting insight into the future of hydrogen as one of the solutions and how Canada is stepping up.

Over the past four decades, Canada has developed a world leading hydrogen and fuel cell sector, supplying products and services around the world.

Over the past three years in particular, interest and activity in adopting hydrogen for energy applications has ramped up globally and this shows every indication of continuing. That is due to the growing awareness of how hydrogen energy technology can complement other clean technologies to provide a complete solution. Unlike past commercialization efforts, the situation now is different due to advances in fuel cell technology, hydrogen supply and policy.

One example is for road transport where hydrogen as a fuel provides longer range, faster fueling and reduced weight when compared to present battery technology. With increased scale, hydrogen technology becomes particularly attractive for heavy transport trucks where every pound costs money.

In the presentation, it was pointed out that it is essential that Canada moves quickly to adopt and deploy hydrogen for energy applications because:

- it is vital to achieve net-zero emissions by 2050.
- it is a Canadian strength that will lead to jobs and investment.
- it is inclusive, both in terms of how clean hydrogen can be produced from many energy sources and in terms of how it provides choices to Canadians and Canadian industry – allowing them to thrive in a presently carbon constrained world.

Although hydrogen energy adoption is progressing, the concern is time and maintaining Canadian leadership. The CHFCA recommends seven measures for government and industry to take to accelerate commercialization including: acknowledgement, policy, hydrogen infrastructure, early adopter support, research, and stimulus.

Past Event.

November 18: Energy Management for Buildings.

Presenter: Mr. Robert Greenwald, P.Eng, MBA
President + Principal at Prism Engineering

Venue Webinar via Microsoft Teams

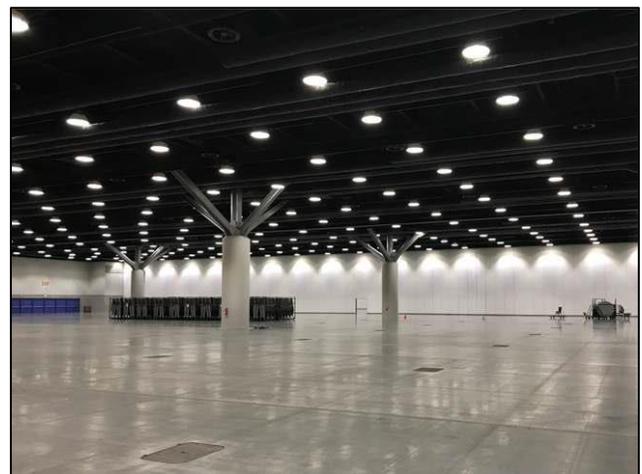


Our presenter provided a very interesting discussion on the latest technology and trends in energy management for buildings in Canada.

The global pandemic has made climate change and a green recovery top-of-mind for all sectors of the Canadian economy in 2020.

As background, buildings contributed up to 35% of Canada's carbon emissions and energy management played a significant role in preventing a higher figure.

Our presenter explained how a building's energy efficiency could be improved by implementing more up to date and efficient systems.



An LED light upgrade to the Vancouver Convention Center is saving \$100,000 per year.

The session explained Prism's holistic approach to energy management in buildings, focusing on projects, programs, and people.

Our speaker shared specific case studies from healthcare, advanced education, and local municipalities that have benefited from energy management initiatives as well as lessons learned.

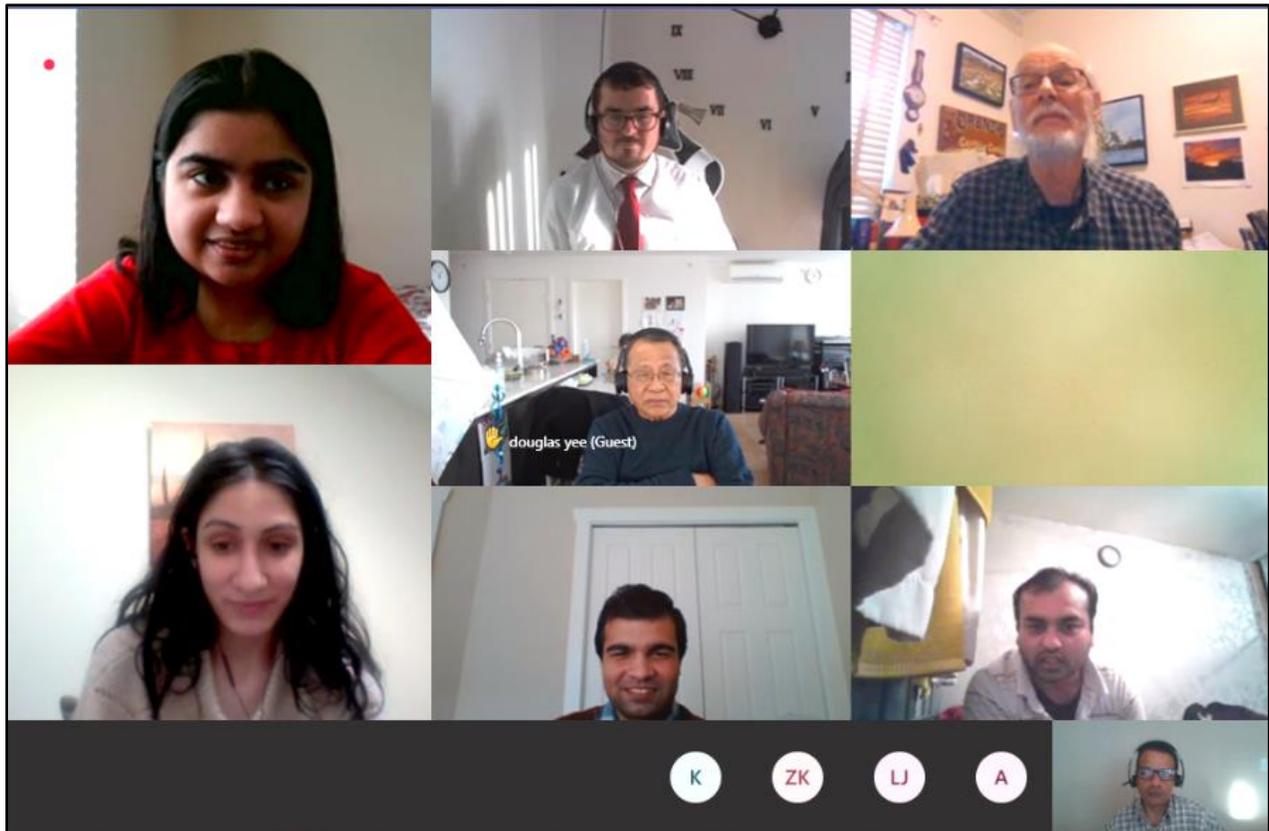
Past Event.

November 21: Speak Out for Engineering (SOfe) Competition.

Chartered Engineers Pacific (CEP), Vancouver has organized IMechE's Speak Out for Engineering (SOfe) Competition on Nov 21, 2020 by virtual mode due to the ongoing pandemic situation inhibiting physical events.

Speak Out for Engineering is a competition for young engineers designed to help develop verbal and visual communication in explaining technical mechanical engineering related subjects. The competition is organized annually in Vancouver by Chartered Engineers Pacific which represents Institution of Mechanical Engineers in Western Canada.

Speak Out for Engineering (SOfe) competition heats take place across the globe. Winners from each heat are invited to participate in their regional final and the winners of the regional finals are invited to participate in the grand Global Final, the winner of which gets crowned with the global SOfe winner. Speak Out for Engineering competition is open to any Affiliate, Associate or Young Member of IMechE who has been professionally registered for ten years or less.



Altogether, five candidates had registered for the SOfe 2020 Vancouver heat. However, only four candidates participated in the competition. Apart from the panel of three judges, three CEP Committee members and six guests had also attended this online event.

The competition began with a brief introduction of Chartered Engineers Pacific (CEP) by Dr. Suresh Vishwakarma, Chairman of Chartered Engineers Pacific, followed by

the introduction of The Institution of Mechanical Engineers (IMechE) and SOfE competition by Lewis Judd, CEP Committee Member.

That was followed by presentations by the young engineers and university students based in Vancouver.

All four presentations were very impressive and brilliantly delivered to the 'three judges' of this year being: -

Jovan Kovacevic, P.Eng.

COO and Vice President (Distribution), ZE Power Engineering, Richmond BC.

Arlene McConnell, P.Eng. CEng, MIET.

Systems Engineering Manager, OSI Maritime Systems, Richmond BC (*Member CEP Committee*).

Zeeshan Khan, BEng, MBA.

Building Operations Manager, Langara College, Vancouver (*Treasurer, CEP Committee*).

The presented topics were: -

1. A practical Hazard Log Approach, by **Gary Cooke**
2. Application of Machine Learning in Biological Sciences, by **Saurabh Vishwakarma**
3. Exoskeletons, by **Dalia Kasim**
4. The Human Respiratory System and Coronavirus, by **Shefali Vishwakarma**

After due deliberation, the three judges, who are all practicing engineers of various disciplines, agreed upon a winner based on both the quality of the presentation, and presenter's presentation skills to adequately convey a complex technological concept to the audience. Prior to announcing the results of the competition, Dr. Suresh Vishwakarma, Chair - CEP appreciated all presenters for their quality presentations and motivated them to participate in future SOfE competitions also.

The winner of this year was **Gary Cooke** and the runner-up was **Dalia Kasim**.

CEP congratulates all the presenters and wishes this year's winner Gary Cooke further success. Gary advances to the next level of competition: SOfE 2020 - Regional final of Americas. Appreciations go to all CEP committee members for their support and efforts to organize IMechE's 3rd SOfE event in Vancouver this year.

(Report submitted by Dr. Suresh Vishwakarma, Chair - Chartered Engineers Pacific).

CEP Annual General Meeting March 17, 2021.

Our Annual General Meeting will be held on the afternoon/evening of March 17, 2021 via **Microsoft Teams**, and is open to all members and the public.

Motions for discussion on the Agenda may be sent to secretary@charteredengineerspacific.ca, not later than March 15, 2021.

No pre-registration is necessary. The right to vote on any matter is restricted to members in good standing with their Institution.

The Agenda, Minutes and reports by the Executive Committee of 2020 can be accessed at: -

<https://charteredengineerspacific.ca>

CEP Schedule of Technical Meetings & Activities 2021.

Driven by the current Covid-19 pandemic mandatory restrictions, CEPs annual program is subject to adjustments.

Arrangements are in-place to continue presentation of technical events and meetings by the virtual Internet based facility Microsoft Teams.

Members should receive the usual Notice of Event by email with instructions from their Institution on how to access an event.

The current Schedule can be accessed at: -

<https://charteredengineerspacific.ca/all-events/events>

CEP SCHEDULE OF TECHNICAL MEETINGS AND ACTIVITIES FOR 2021.



Date	Venue	Tech Meeting at 7 pm Subject - Topic	Presenter	Status
January 20, Wednesday	MS TEAMS	National Shipbuilding Strategy on the West Coast	Russell Davison	-----
March 17, Wednesday	MS TEAMS	AGM	Chair CEP	Confirmed
April 21, Wednesday	MS TEAMS	International Women's Day	Arlene McConnell	Confirmed
May 19, Wednesday	MS TEAMS	TBC	Sami Khan	Confirmed
May 22, Saturday	TBC	IET's PATW Competition	Suresh Vishwakarma	Tentative
June 16, Wednesday	MS TEAMS	TBC	Dr. Anuradha D. Thakare	Confirmed
June 20, Sunday	TBC	IET 150 th Anniversary Event		Tentative
July 21, Saturday	TBC	Summer Appreciation Event	TBC	Tentative
August 21, Saturday	TBC	IMechE SOfE	Lewis Judd	Tentative
September 15, Wednesday	MS TEAMS	Designing and Building Polar Class Vessels	Russell Davison	Confirmed
October 20, Wednesday	MS TEAMS	TBC	Dr. Solange Kelly	Confirmed
November 17, Wednesday	MS TEAMS	Phytoremediation through Genetic Engineering	Ryan Lider	Confirmed

Technical presentations commence at 7:00 pm on every third Wednesday of the month, while Committee Meetings commence at 7:00 pm on every fourth Wednesday of the month. Additions and amendments to the above schedule along with details on individual functions will be distributed via email and posted on our website: www.charteredengineerspacific.ca

WHY BECOME A CHARTERED ENGINEER?

Chartered Engineer (CEng) accreditation tells employers worldwide that you have and are committed to maintaining and enhancing knowledge, skills and competence required to meet the engineering and technological needs of today. The prestige and international recognition of your title will enrich your resume and may lead to wider employment options, career progression, promotion, and respect from peers.

The UK Standard for Professional Engineering Competence (UK-SPEC) is well respected across the world. The **Engineering Council** also collaborates with many local engineering organizations across the world to validate qualifications and registration standards of engineers. This process facilitates the international mobility of professionally registered engineers. Visit www.charteredengineerspacific.ca or www.wcgce.org and email or call any of our representatives. There is a place for you at **Chartered Engineers Pacific!**

From the Editor... We trust that this edition of our Newsletter was interesting to read and welcome your comments and suggestions for improvements. It was compiled voluntarily by **Alan Wood** (MIET) and reviewed by **George De Ridder** (FIStructE) (Past chair and past Hon Secretary) covering some of the Group's activities from July 2020 to January 2021.



ALAN WOOD



GEORGE DE RIDDER

This and past editions of the newsletter is available on our website: -

<https://charteredengineerspacific.ca/news/newsletter>

The Western Canada Group of Chartered Engineers (wcgce), doing business as Chartered Engineers Pacific (CEP) serves members of parent Institutions ICE, IMechE, IET, IStructE, and CIBSE; located in British Columbia, Yukon, Washington State and Alaska.

The Group exists to extend the Institutions' services to **members locally, and to assist local engineers, EITs and technologists** with aspirations to register professionally for an engineering credential recognized world-wide.

