

APR-JUN 2017

CONTENTS

QUARTER 2 NEWSLETTER 2017.....	2
MESSAGE FROM THE CHAIR.....	2
EVENT SUMMARIES	3
TECHNICAL CLASS: AUTODESK FUSION 360.....	3
EIT/GIT SEMINAR: PATH TO PROFESSIONAL REGISTRATION.....	4
2017 RICHMOND PUBLIC WORKS OPEN HOUSE	5
DINNER PRESENTATION: LNG BUNKERING AND CANADIAN SHIP DESIGN FOR LNG POWER	7
TOUR OF TRIUMF	8
UPCOMING EVENTS.....	10
PROFESSIONAL DEVELOPMENT SEMINARS.....	10
BRANCH EXECUTIVE MEMBERS 2017-2018.....	11



QUARTER 2 NEWSLETTER 2017 (APR-MAY)

MESSAGE FROM THE CHAIR

The Richmond Delta branch has worked very hard on promoting Engineering and its relevance in the community. Fardin Barekat has continued to work through the Richmond Library to provide tutorials on ACAD's Fusion 360 software. The branch co-hosted the annual bridge busting event at Richmond Public Library as part of Engineering and Geoscience Awareness Month. This event also attracted many university and technical college sidebar demonstrations. Many local schools participated in this event due to active promotion with school administrators and STEM faculty. We continue to enjoy a privileged association with Kwantlen University Polytechnic who generously allow us the use their premises for our monthly meetings.

This quarter we once again staged an information table at the Sungod Arena in North Delta as part of the Science and Technical Trades Career Awareness Day. Almost 1,000 students visited the all day event. The branch continues to be poorly represented from members who live south of the River. There is no doubt that the Alex Fraser Bridge and Massey Tunnel connections between Delta and Richmond influences this situation. We have addressed this deficiency by hosting our evening speaker sessions at the Primrose Mediterranean Restaurant in Ladner, Delta. We hosted a talk on LNG Bunkering and Canadian Ship Design. There have also been several Industry tours to the Annacis Island Treatment Plant and the TRIUMF labs at UBC.

As we are about to break for the summer there will be a change in leadership at the branch due to the departure of Peter Bryce (Chair 2017) who has moved to Chilliwack. Dr. Abbas Nikbakht who is currently the vice Chair will assume the position of Chair after the summer break.

Peter Bryce, P. Eng., Chair (2017 -2018)

EVENT SUMMARIES

TECHNICAL CLASS: AUTODESK FUSION 360

*Richmond Public Library, Brighthouse Branch, 7700 Minoru Gate, Richmond, BC
April 22, 29, 2017 and May 6, 13 & 20, 2017, Time: 10:30 AM - 12:00 PM*



The Richmond Delta Branch of Engineers and Geoscientists BC has actively presented classes and workshops at Richmond Public Library- Brighthouse. In the five weekends during April and May 2016, the branch hosted a five session workshop series on “Introduction to Autodesk Fusion 360”.

The Autodesk Fusion 360 software is a free industry standard 3D modeling software. The capabilities are enormous and the learning curve is steep. In this course, the students learned the basics to get up and running on using Fusion 360 very quickly. In the beginning sessions the students learnt how to use the tools and the options available to them.



They took part in learning the basic concepts to design a 3D model with the available tools in the Fusion 360 environment. Most of the tips and tricks on using this wonderful software was taught. By the end of class, students will be able to design 3D object from simple to complicated ones in the Fusion 360 environment that can be exported for 3D printing.

The course had eight participants. The instructor Fardin Barekat, EIT, is an Electro-mechanical engineer with 5 years' experience in product design, prototyping, testing, and manufacturing.

EIT/GIT SEMINAR: PATH TO PROFESSIONAL REGISTRATION

Richmond Public Library, Brighthouse Branch, 7700 Minoru Gate, Richmond, BC
Tuesday, April 25, 2017, 6:00 - 8:00 PM



After a short networking opportunity, the speaker discussed the benefits of becoming a P.Eng./P.Geo., application forms, the law and ethics seminar, the ethics test, examples of applicable experience, how to record/document experience, and more. He explained the current

requirements and the EIT/GIT Experience Reporting System and process, which changed considerably over the past few years. 40 people attended this seminar.

Speaker: Mr. Jason Ong

MANAGER, EXAMS, GEOSCIENCE REGISTRATION AND MEMBER-IN-TRAINING PROGRAM,
Engineers and Geoscientists BC

In this position, he is responsible for overseeing the internship periods for Engineers-in-Training (EIT's) and Geoscientists-in-Training (GIT's). This involves processing applications as well as maintaining the EIT/GIT Online Experience Reporting System.

Mr. Nima Moazen, EIT, coordinated this event.

2017 RICHMOND PUBLIC WORKS OPEN HOUSE

*Richmond City Operations Yard, Richmond, BC
Saturday May 13, 2017*

This year's annual Richmond Public Works Open House was organized by the City of Richmond on the Richmond Public Works Yard. This was the fifth year that the Richmond/Delta Branch of Engineers and Geoscientists of BC took its share of educating the public on engineering and public works by setting up and maintaining its booth on this full-day event, as a part of its outreach program particularly making interested children and teens.



Hundreds of adults and children visited and engaged in the activities set up in our booth. This year our booth had three activities. First game was building structures with marshmallows and toothpicks. Tens of various space wireframe models were built by children of ages 3 to 15 and their parents. Second game was Slo-Mo Plinko for children and teenagers. Some children tried hard to make a spatial spiral road with wooden sticks and elastic bands that could successfully support and

transfer a ping-pong ball from top to the bottom. Third, one was a demonstration of our popsicle-stick bridge tester. Through all the games, many children were also learned about various engineering fields and the concepts of design, measurement, and testing.

The Executive Committee of the Branch would like to extend their sincere thanks to the City of Richmond for facilitating our attendance in the event, as well as to the volunteers who passionately interacted with visiting children and their parents. We look forward to attending next year's Public Works Open House, 2018

Mr. Ron McOuat, P.Eng. , Mr. Fardin Barekat, EIT, Dr. Hamid Ghanbari, P.Eng., and Dr. Abbas Nikbakht, EIT, volunteered at the branch booth.



DINNER PRESENTATION: LNG BUNKERING AND CANADIAN SHIP DESIGN FOR LNG POWER

Primerose Mediterranean Restaurant 6165 Highway, 17A, Ladner, BC

Tuesday, May 16, 2017, 5:30 PM - 9:00 PM

Credit: 2.0 Informal Professional Development Hours (PDH)

The branch hosted a presentation by Calum McClure and Greg Peterson to look at the potential for LNG in Western Canada. The presenters talked about challenges of the new fuel and specifics to marine industry, a case study of new ongoing projects, training requirements and challenges, regulations and development, and Canadian design for West Coast LNG dual-fueled vessels.



Speakers

Mr. Calum McClure, P.Eng, Chartered Naval Architect (RINA), MBA

CEO, Cryopeak LNG Solutions

Calum McClure has worked in the LNG shipping industry for over 15 years. He is currently CEO of Cryopeak, a company specializing in the small-scale LNG industry in North America.

Prior to founding Cryopeak, Calum served with Teekay Corporation, which is the second largest independently owned liquefied natural gas (LNG) fleets in the world, in a number of senior management positions covering both vessel operations and projects, including Vice President, Innovation and Technology, and Vice President, Teekay Marine Services. Calum is a professional naval architect by education, with a degree in naval architecture from Newcastle in the UK, as well as a Master of Business and Administration from the University of British Columbia.

Mr. Greg Peterson

Director, Engineering Services, BC Ferries

Greg Peterson is Director, Engineering Services, in BC Ferries' engineering department, where he has served in a variety of capacities for more 27 years.

Greg is a graduate of the Canadian Coast Guard College in marine engineering and spent time in the icebreaking fleet before moving to BC Ferries to serve as a 1st Class Chief Engineer in the early 1990's. BC Ferries has provided a rich experience in maintenance and engineering projects, technical investigations, environment management, and the regulatory regimes in general. His greatest curiosity is for the interactions between technology and people.

Mr. Reza Zandi, P.Eng. coordinated this event.



TOUR OF TRIUMF

*4004 Wesbrook Mall, Vancouver, BC
Wednesday June 28th, 2017, 2:00 PM – 4:00 PM
Credit: 2.0 Informal Professional Development Hours (PDH)*

Thirty members of Engineers and Geoscientists BC joined an informative presentation and a facility tour of TRIUMF, which is one of the world's leading subatomic physics laboratories. TRIUMF brings together dedicated physicists and interdisciplinary talent, sophisticated technical resources, and commercial partners in a way that has established the laboratory as a global model of success.

The tour started with a presentation by researchers from the labs at the lobby of the building. The presentation covered the history, divisions and products of the laboratories. After the presentation,

the participants were divided into three groups with one tour guide per group to take the facility tour. They explained different parts of the facility while taking each group to the key locations at the facility from the control room to the top of the TR-13 cyclotron and TRIUMF's nuclear medicine labs before heading off to ISAC I. In ISAC II, the tour guests observed the higher energy experiments like EMMA, TIGRESS, and IRIS. In addition, the guests saw the experiments like the DRAGON detectors, the TITAN ion trap, among other material science experiments. The tour leaders discussed the proton therapy facility and the material science and testing parts of the lab.



After one and half hour all tour members returned to the meson hall and ISAC facilities lobby of the building and the event was finished with Q&A.

ABOUT TRIUMF LABS

TRIUMF is one of the world's leading subatomic physics laboratories. It brings together dedicated physicists and interdisciplinary talent, sophisticated technical resources, and commercial partners in a way that has established

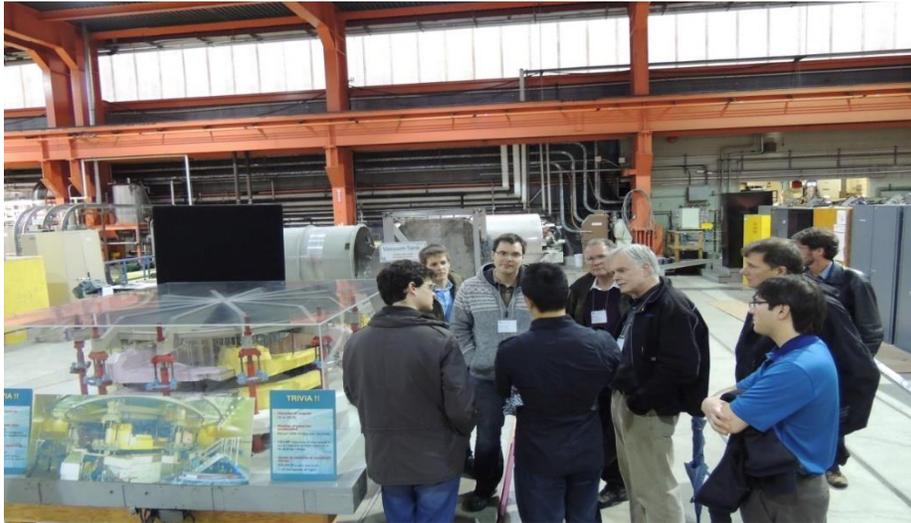
the laboratory as a global model of success. Its large user community is composed of international teams of scientists, post-doctoral fellows, and graduate and undergraduate students. The advances ensuing from TRIUMF's research will enhance the health and quality of life of millions of Canadians, launch new high-tech companies, create new high specificity drugs, help us to understand the environment, enable the development of new materials, and spur the imaginations of our children who want to know their place in the universe.

Since its opening in 1969, the laboratory has received more than \$1 billion of federal investment and \$40 million from the province of British Columbia. The provincial contributions fund the buildings, which are owned by UBC and located on an 12.55 acre site in the south campus of UBC. The site houses over 350 scientists, engineers, and staff performing research. It attracts over 500 national and international researchers every year and provides advanced research facilities and opportunities to 150 students and postdoctoral fellows each year.



In addition to the onsite program, TRIUMF serves as a key broker for Canada in global research in particle, nuclear, and accelerator physics.

Dr. Abbas Nikbakht, EIT, coordinated this event.



UPCOMING EVENTS

Please note that our events are typically open to the general public. Come see how Engineering and Geosciences contribute to our communities.

For our upcoming events, visit <https://www.apeg.bc.ca/Events/Branch> and select Richmond/Delta on the drop down menu for the Branches.

PROFESSIONAL DEVELOPMENT SEMINARS

Registration and further information can be found from the following website:

<https://www.egbc.ca/Events/Seminar>. Also be sure to check out upcoming webinars.



ENGINEERS &
GEOSCIENTISTS
BRITISH COLUMBIA

BRANCH EXECUTIVE MEMBERS 2017-2018

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Executive Members

Peter Bryce, P.Eng., Chair
Dr. Abbas Nikbakht, EIT, Vice-Chair
Fardin Barekat, EIT, Past Chair (2016-2017)
Edward Cheung, P.Eng., Secretary
Earl Masarsky, P.Geo., Treasurer
Nima Moazen, EIT, Communication Coordinator
Dr. Mohsen Seraj, EIT, Newsletter Coordinator
Fardin Barekat, EIT, NEGM Coordinators

Branch Councillors & Past Chairs

David Harvey, P.Eng., Councillor
Richard Farbridge, P.Eng., Councillor
Dr. Hamid Ghanbari, P.Eng. (2015-2016)
Ron McOuat, P.Eng., Past Chair (2014-2015)
Phillip Chow, P.Eng., Past Chair (2013-2014)

Representatives

Melanie Au, Richmond Public Library
Jessica Leung, EIT, Corporation of Delta
Michael Poon, EIT, Kwantlen Polytechnic University
Corrine Haer, EIT, City of Richmond
Carissa Wells, P. Eng., YVR
Douglas Yee
Miao-Yi Yan
Hossein Mirzaghafour

Members-at-Large

Ryan Allen, EIT
Mohsen Barkh, P.Eng.