INGENUITY
Dear UBC Engineering alumni and friends,

As Dean of one of the University’s three founding Faculties, it is my pleasure to welcome you to UBC’s Centennial. Over the course of the year, there will be many special events and opportunities for you to connect with your alma mater. I am looking forward to seeing you at one of our celebrations (pages 22-23).

UBC has earned its stellar national and international reputation from the innovative research conducted by our faculty, staff and students and our excellence in educating the next generation of inspired leaders in both industry and academia. Applied Science continues to play a pivotal role in these efforts. Our strategic plan, ENGAGE 2020 (page 13), was officially launched this past spring and our Associate Deans, Heads and Directors are working hard with their teams and the University executive to enact this vision. I am looking forward to the opening of the new Engineering Student Centre this fall with our Chancellor Lindsay Gordon and to seeing our students begin to take advantage of all the opportunities it will open up for them.

As the University executive transitions in the next year, we are fortunate to have Dr. Martha Piper return to the UBC President’s role. I look forward to, in her words, “working together, honouring our past, while envisioning our future... aiming, as always, for the top.”

It will be an extraordinary year for the university, one of both sustained forward momentum and recognition of our past. In this edition of Ingenuity, we dedicate our features to the first 50 years, recognizing the strong foundation that our early engineering students, alumni, faculty, staff and supporters established. In our January 2016 edition, we will focus on our second 50 years.

I hope you have the opportunity to join us in the celebration. Thank you for your continued support of UBC Engineering and the Faculty of Applied Science.

Sincerely yours,

Marc Parlange, P.Eng.
Dean, Faculty of Applied Science
Professor, Civil Engineering
UBC Applied Science from the beginning:
Sample a few days in the life of a UBC Engineering student in 1916, 1930, 1944 and 1963.

Travel back in time and experience what it was like to be a UBC Engineering student in different eras. Early on when cars and electricity were new technologies, the world was embroiled in WWI, and UBC was just beginning to take root.

Research and innovation
Discover a few of UBC’s leading-edge technologies, and the “why” behind their development.

Centennial timeline
From the start of the Faculty of Applied Science in 1915 with eight men and one woman, to the record enrolment of female UBC Engineering students and the launch of the Iron Pin Ceremony in 2014, have a look through 100 years of UBC Engineering. This edition focuses on 1916-1965; look to our January 2016 edition for the next 50 years.

NEWSWORTHY
The launch of a new Strategic Plan and Master of Engineering Leadership programs and generous gifts from local supporters make headlines for UBC Engineering.

ENGINEERING EXCELLENCE
Two university presidents, an entrepreneur and a kickboxer were among those honoured at this year’s celebration.

ALUMNI UPDATES
Don’t miss the recap of our recent alumni events; let us know if you’d like to plan a reunion for your class!

UPCOMING EVENTS
Save a spot in your calendar for these fantastic opportunities to connect with UBC Engineering. We hope to see you there!
Welcome to UBC’s and the Faculty of Applied Science’s Centennial! UBC marks its centennial beginning September 30, 2015, coinciding with the opening of the Robert H. Lee Alumni Centre, and closing with Alumni Weekend, May 28, 2016. To learn more about UBC’s Centennial programming and to put your pin on UBC’s Global Impact Map, visit 100.ubc.ca. Enjoy Part 1 of UBC Applied Science’s Centennial edition of Ingenuity focusing on the first 50 years of our history and look forward to the January 2016 edition for the next half century.

For the first 10 years, UBC students studied at the Fairview “shacks” near Vancouver General Hospital at 12th Ave and Oak Street in Vancouver. The end of the war brought many students back to UBC.

1914 WWI starts

1914 Ford Model T

A DAY IN THE LIFE OF A UBC ENGINEERING STUDENT: 1916–1965

In the early days, students needed to complete five years of study comprising a common first-year in Arts, then a common first-year in Applied Science, followed by three years of specialized study in an engineering discipline. But besides school, what was life like for a student? Find out on this journey through a day in the life of a UBC engineering student in 1916, 1930, 1944 and 1963.

Engineering students working at lathes at Fairview campus
6:30–7:00 am Time to wake up, eat breakfast and prepare for the day. At UBC, men wore suits and women wore gowns, both outfits taking considerable time to prepare. Many students lived in Kitsilano or in Fairview.

7:00–8:00 am Commute to campus at what is now Vancouver General Hospital (VGH) at 12th and Oak Street. The buildings were dubbed the Fairview “shacks” by that generation of students. Many students walked and would have risen extra early to allow the time. Some students had motorcycles, which afforded them a few extra minutes of precious sleep.

Students would often wait together outside class for the last tardy student so that they could all enter together. They could wait beside the army tents, which were erected outside the buildings.

9:00 am First class of the day: report to Professor L. Killam, for mechanical engineering class. Killam was popular with the students. He taught both first- and second-year engineering students.

10:00 am Report to Professor J. G. Davidson, for physics class. Davidson was always tinkering between lectures, at times working on an invention for the precipitation of factory smoke by electricity.

11:00 am Before lunch, the students might take a lecture on mapping or surveying.

12:00 pm Lunch could be taken on campus from a bag or at a nearby café with friends. Some students would have a quick lunch and then try to squeeze in some studying in the library reading room, amid whispers of “Can I borrow your slide rule?” and “Who’s got my trig?”

2:00 pm Time for a chemistry lecture and lab.

3:00 pm Mechanics class, perfect for priming students for some shop work in the evening. This slot could also be filled with mechanical drawing or structural engineering.

4:00 pm During wartime, male students were required to train for combat. A contingent of the Canadian Officers’ Training Corps (COTC) was set up on campus so that young men could train while pursuing college work. Students practiced rifle shooting and route marching, among other things.

6:00 pm Shop work until dinnertime.

7:00 pm Students would eat dinner, maybe after returning home for the evening or perhaps on campus if they stayed to do work. If they weren’t doing homework for the evening, which they often were, they might be found having beers at the pub, watching some much-beloved rugby or ice hockey (or playing themselves) or attending a social event such as a dance or costume party.

11:00 pm–Late Time to trek home for the night. For many, this would have been a walk home in the rain to their rooms, where they would hang up their clothes to dry and perhaps do some more reading before bed by candle, oil lamp or electric bulb, depending on the home.

Rona Hatt Wallis (B.ASc ’22 CHML), the first known Canadian female chemical engineering student, entered UBC in 1917 at the age of 15. She was one of some 350 students on campus in those early years, when the tuition was $18. In the year Rona Hatt Wallis took Mechanics, she was one of only three of 16 students who passed the course.

1930

6:30–7:00 am Time to wake up and start the day. Boarding houses were still primarily in Kitsilano and Fairview, with very little housing on campus for students.

8:00 am Commute to school from around the city, since the University was now located at the Point Grey campus. Most students would have taken a streetcar or perhaps a fancy new motorcar to get to campus, if they lived too far to walk. Trolley buses wouldn’t appear on the streets until the 1940s.

9:00 am Report to Professor D. Buchanan (LLD ’40) for math class. Engineers needed to take at least six math courses in the first two years, so entire mornings could be filled with calculus, geometry and algebra. Classes were either in the “Science” Building (now Chemistry) or on the engineering end of campus, which was mostly populated with temporary buildings. Even though classes were packed, recent budget cuts meant UBC wouldn’t expand its facilities for a while yet.

12:00 pm After a cerebral workout, students would be hungry for lunch. UBC operated a grill that could serve 400 students and that offered lunch, afternoon tea and a light supper for “very reasonable prices.” If eating alone, a student might read a copy of The Ubyssey, which was founded in 1918.

1:00 pm Some shop practice was always welcome after a morning of sitting. Students would refine their milling and lathe skills, considered foundational for any type of engineer.

2:00 pm The afternoon would be filled with classes including studies in physics, mechanics, chemistry, electricity and surveying. In a free hour, one might attend a meeting of the Radio Club, which was organized under the guidance of Dr. H. Vickers, the Head of Mechanical and Electrical Engineering.

6:00 pm After dinner, students would spend some time applying for summer engineering jobs, since it was required that students engage in practical work related to their field throughout their degree studies. The recession of 1929 and the looming Great Depression would have meant this requirement was especially challenging to fulfill this year.

7:00 pm If not planning a social evening, students would head to the library (now the Irving K. Barber Learning Centre) for a night of...
studying. If heading out, students might enjoy watching a rugby match (still the school’s favourite sport) or the increasingly popular ice hockey. In the spring and summer, the Boat Club was a fun way to enjoy Vancouver’s stunning natural scenery. Downtown was growing, and students could now visit places like Chinatown if they wanted a change of scene.

11:00 pm-Late Trek home, and try to study for a bit before turning in for the night. Engineering was already notoriously challenging. The class of ’30 started out with more than 80 members in 1926/27 but by graduation had only 35. Those hardened souls were the fifth cohort ever to receive an iron ring. The students were distributed in the various departments as follows, in the words of a fellow student: “five Chemicals, two Civils, ten Electricals, one Forester, eight Geologists, six Mechanicals, one Metallurgist and two Miners.”

Dean John N. Finlayson, 1936-1950
Dean Finlayson (DSc ’50) was a civil engineer originally from Nova Scotia and educated at Dalhousie. He was appointed dean after Dean Brock and his wife were killed in a plane crash in 1935.

AN IRON TRADITION
History of the Iron Ring — In 1900, construction began on the Quebec Bridge, completing the link from Winnipeg to Moncton on the National Trans-continental Railway. As construction neared completion, it collapsed under the weight of a locomotive loaded with steel. Seventy-five people were killed and a subsequent inquiry showed the accident was due to an error in judgment by the engineers who designed the bridge. Tragedy struck again during the second attempt to build the bridge in 1916. The centre span collapsed while being hoisted into place, killing 10 more people. The bridge was finally completed in 1917. Contrary to popular belief, the first rings were not made of iron from the collapsed bridge. But the collapse of the bridges led to the tradition of the Iron Ring to symbolize both the responsibility and fallibility of engineers.

IRON RING MEETS IRON PIN
In 1925, the first Iron Rings were given out as a part of a ceremony called, “The Calling of the Engineer.” The ceremony was developed by Rudyard Kipling, at the request of the engineering community, to connect Canadian engineers.

Fast forward to 2015 and both the Vancouver and Okanagan UBC Engineering Undergraduate Societies have developed their own Iron Pin Ceremonies. The ceremony symbolizes the beginning of each student’s journey towards joining the profession. The ceremony welcomes students into the UBC Engineering community with a pin marked by their entrance year. Students pledge to a code of ethics.
6:30 am The alarm clock ringing at the beginning of the day may have been more appreciated by a groggy engineer in 1944 than any other year — alarm clocks were in short supply due to manufacturing diversions for the war.

7:30 am The commute for those who lived off campus would have probably been in a bus or a streetcar; students taking special courses for servicemen lived on campus in Acadia Camp, the first residential unit on campus.

8:30 am As always, Engineering is a math-heavy discipline, so students would report to the Math Building for a class in geometry, algebra or calculus. The Math Building, like many buildings on campus — including the Engineering Buildings — was considered “semi-permanent.” Despite this, many wouldn’t be replaced for decades to come, and some are still standing.

9:30 am Time for chemistry, a core subject for engineers. Walking between classes, students would pass air-raid sirens and entry points for underground shelters, which had been prepared after World War II reached the Pacific.

10:30 am Physics was (and still is) a core discipline. Engineers would study electricity, thermodynamics and mechanics — much like today. Students might pop into the University bookstore on their way to class to pick up an extra fountain pen, since the high-speed note taking could empty one quickly.

11:30 am Descriptive geometry, mapping, geology and surveying are no longer in the curriculum, but in 1944, they were considered essential or taught in the Engineering Buildings. Or students might be in one of the fields practicing surveying work.

12:30 pm The Grill remained a popular place for lunch, but the new Brock Memorial Building had a good cafeteria and was a favourite for many. First-year students attended noon-hour talks on the various types of engineering professions, much like today. Some students would take medication for tuberculosis with their lunch. UBC gave every new student a chest X-ray and skin test to check for TB, since it was the leading cause of death of university students.

1:30 pm Mechanical drawing class was a nice prelude to machine-shop practice and was a key skill for any engineer at the time.

2:30 pm Machine-shop practice was always fun and a nice break from classes.

3:30 pm Time for a study break. Studying was taken very seriously since students were exempted from active military service if they maintained good grades.

4:30 pm Enlistment in the Canadian Officers’ Training Corps was mandatory, nearly 2,000 students would head down to the Armoury for training. Many faculty members were on leave for wartime assignments. Training included “prevention against gas,” rifle drills and bayonet practice. Engineers were advised by the federal government to continue their studies, as they may prove more useful for their engineering skills than their battle skills.

5:30 pm Over dinner one might speculate about UBC’s new president, Professor Norman A. M. Mackenzie, who was taking over from the beloved L. S. Klinck (DSc ’44). Most often, the red shirts would plot their next prank on their campus rivals, Forestry and Agriculture.

7:00 pm Students listened to CBC radio for updates on the Western Front or read The Ubyssey for thoughtful discussion of the new “welfare state.”
Construction for a new Agricultural Engineering Building began in 1947 and was completed in 1949. The official opening was held in May 1950. This program evolved into Biological Engineering and then Bio-Resource Engineering within the Department of Chemical and Biological Engineering.

**1950**

Dean H. J. MacLeod, 1951-1954

Originally from Prince Edward Island, Hector MacLeod (DSc ‘56) was an electrical engineer who received his PhD from Harvard. In 1964, UBC constructed a new building for Electrical Engineering, which is named in his honour and still houses the department.

Dean Henry Gunning, 1954-1959

Henry Gunning (BASc ’23, MSc ’26, DSc ’67) was one of the first two graduates of UBC Geological Engineering, earning his BASc in 1923. He later established the engineering program at BCIT.

**1958**

UBC Professors Hull (Mathematics), Noakes (Electrical Engineering), Wilkinson (Commerce), and Bohn (Electrical Engineering), gathered around the Alwac, a UBC resource shared due to its lofty price tag of $80,000.

**INVENTORS, RESEARCH AND INNOVATION**

During the early 1900’s university research became increasingly critical to business success, providing a source of highly-skilled workers and innovative product ideas. In 1917, the Canadian government established the National Research Council (NRC) — a partnership that exists to this day and was a precursor to Natural Sciences and Engineering Research Council of Canada (NSERC).

- Dean Reginald Brock, an innovator who previously served as the director of the Geological Survey of Canada, recognized the importance of the resource industry to Canada.
- In 1939, Standard Oil and Britannia Mining and Smelting Company offered research scholarships to UBC students. Graduate student research began in the 1940s with the first Master’s of Applied Science degrees awarded in 1947. From 1943-45, the War Metals Research Board sponsored military-related research at UBC. For example, Professor Hector MacLeod conducted top-secret research on neutralizing the magnetic fields of naval vessels to avoid detonating magnetic mines.
- In the late 1940’s, Professor Frank Forward discovered conditions under which metal sulphides dissolve in aqueous ammonia and co-invented the Sherritt-Gordon process. The process helped the Fort Saskatchewan nickel mine operate successfully, and became widely used for nickel recovery.
- In the late 1940’s, Professor Frank Forward discovered conditions under which metal sulphides dissolve in aqueous ammonia and co-invented the Sherritt-Gordon process. The process helped the Fort Saskatchewan nickel mine operate successfully, and became widely used for nickel recovery.
- Professor William F. Seyer, along with his son Frank (BASc ’47 CHEM), developed the unique formula for quick-drying ink that revolutionized the pen industry and helped PaperMate become one of the most successful companies of the time.
- Dean Henry Gunning helped the Greater Vancouver Water Board in locating the Cleveland Dam on the Capilano River. His research resulted in development at a new oxidized lead and zinc property at Ymir, B.C. The mineral “Gunningite” was named after him.
- By the 1950’s, most departments offered a full research program including doctoral degrees. With the switch from analogue to digital computing, coupled with an infusion of government funding, research launched on a new trajectory for the next 50 years. Look to the January 2016 edition of Ingenuity for the next half century of UBC Engineering research and innovation highlights.

**1946**

A day in the life doesn’t change much in a year, except for this year. In 1946, with WWII over, the Veterans Rehabilitation Act (Canadian G.I. Bill) meant that campus life changed dramatically.

The G.I Bill offered all qualified veterans full tuition and a living allowance, to help ease their transition to civilian life. Since more than 38 per cent of the male adult population had served in the war, there was a huge number of vets suddenly enrolled in classes. In just three years, UBC enrollment tripled from 3,000 students to 9,000 in 1946. Veterans made up 50 per cent of the student body that year.

In 1946, there were 566 second-year engineers — meaning there were more students in second year than there were in the whole four years in 1944. This group of engineers was known for working “with a singleness of purpose” – a focus which is entirely commendable after being witness to such horror.
1963

6:30-7:00 am Time to wake up and start the day. A more liberal attitude toward everything meant that many college students would be sleeping in — but not the engineers. As usual, their schedule is packed. Students who lived in the new student residence (Totem Park) could enjoy a few extra minutes of sleep, which they might desperately need since the residences were more social than ever before.

8:00 am The commute to campus would be by bus or car for some students or on foot for those who lived in one of the many residences now on campus. The major routes to campus were busy, with over 14,000 students enrolled in full-time classes. Almost a thousand of those students were engineers — a sizable portion of the student body. Once on campus, everyone had to walk, sometimes quite a ways, to get to class. Post-war expansion meant that campus was quite large by this time. Cars were routed to huge parking lots far from the campus centre. Students would spend much of each day walking between classes.

9:00 am As always, physics is a core subject for engineers. Students would head to the brand-new Hebb Theatre for a lecture. The student body was growing by almost a thousand students per year as baby boomers reached college age. The University was expanding, but not quite fast enough.

10:00 am Students would now walk to the Engineering Building, in the engineering section of campus, for a class on “Strength of Materials.” The modern analogue of the course is “Mechanics of Materials.” On their way, they would pass students from a number of newer Faculties at UBC, including Law, Medicine, Commerce and Pharmacy. No student from other faculties would envy the engineers as they walked past — the Engineering courses were regarded as some of the most challenging at UBC.

11:00 am Applied Mechanics was on order before lunch. The class was in a “temporary” army hut that had been in use since 1944.

12:00 pm Some students spent their lunch in Brock Hall — other students referred to them as the “Brock type.” Brock Hall was the social centre of campus and was the scene of many activities — official and otherwise. Over lunch students might browse The Ubyssey — and read a fascinating exposé on undercover RCMP agents spying on student political groups. UBC’s students had become much more diverse in their social and political views, to the consternation of the more conservative members of campus. Atheists, socialists, peace activists and social critics all found a voice in the campus community.

1:00 pm Some engineers would have to TA after lunch, as part of their PhD student duties. The Engineering departments had begun offering PhDs only a few years earlier.
2:00 pm Math was always on the timetable. Students would head to the “semi-permanent” Math Building, built in the 1920s, for a lecture on differential equations or analytical geometry. Depending on a student’s chosen specialization (the University now offered ten options for engineers), there may be more trips to the old end of campus still to come.

3:00 pm Walk back across campus to the Engineering Building for a materials science class.

4:00 pm Time for a chemistry lecture and lab. Head to the Science Building, soon to be exclusively the Chemistry Building, one of the oldest buildings on campus. The Science Building and Library, both built in the ‘20s, stood in stark contrast to the more recent, modern buildings on campus, such as the Thea Koerner House.

5:00 pm Classes are finally done for the day. Students might head to a clubhouse for some ping-pong and casual socializing or to the library to study before dinner.

6:00 pm Dinner might be had in any of the student residences or in one of the restaurants around the area. In the cafeteria, one could overhear conversations among the student “radicals,” complaining about the University’s association with the so-called “military-industrial complex” and calling for nuclear disarmament. The students would stage protests and demand better teaching, a voice in the administration, better accommodation and lower tuition, among other things. These demands would be heard by the higher-ups, with mixed results: the first four students were elected to the University Senate in 1967, but tuition continued its steady climb.

7:00 pm The “extra-curricular” antics of the engineers were legendary by now. They had just kidnapped the AMS President, Doug Stewart, and were busy planning their next prank. At every event they would win the “boat races” if folks were playing, and they would put on a good showing in the Intramural Sports Program, winning a few events every year. Social life, despite the academic pressure, was not neglected. In the spring, this would culminate in the famous Engineer’s Ball, which still has some traditions carried over to the present day from decades ago.

11:00 pm–Late If the night was conducive to hijinks, the engineers might sneak into the swimming pool for some diving contests or to pour bubble bath into the circulation system. If it was too cold for swimming, they would get up to some mischief somewhere near the Forestry Building. Otherwise, it would be time for bed. Engineers would head home or to the dorms for a good night’s sleep.

YEARBOOKS

In 1915, the UBC Alma Mater Society (AMS) began publishing a student yearbook, simply titled The Annual. Concerned that the publication lacked a distinctive title, the students renamed it The Totem in 1926. The publication included individual photographs of every graduating student as well as group photographs and student-life descriptions.

With the exception of a brief hiatus during World War II, the publication provides a rich source of history.

In light of financial issues and the emergence of several Faculty-based yearbooks, including the Slipstick, the AMS stopped producing The Totem in 1966.

SLIPSTICK

In 1951, the Engineering Undergraduate Society started producing their own yearbook, the Slipstick, named for the old analog computer that students used to do quick calculations. Published to this day, the Slipstick contains photos of students, clubs and messages from student executives and the dean.

Digital collection of over 1,700 yearbook photos can be found at:
In January 2015, thanks to a gift from S-FRAME Software Inc., students in the Civil Engineering 228 "Introduction to Structural Engineering" course began using S-FRAME’s industry-leading suite of structural engineering software for their class projects. S-FRAME’s substantial gift includes five years’ worth of 50 network licences for Civil Engineering’s computer labs and 150 annual student licences, which students can download directly to their personal computers.

Students in CIVL 228 used the S-FRAME software to design a Douglas fir truss, which they then prototyped and tested in the lab. The use of S-FRAME software allowed students to compare how their design held up under virtual conditions with how their prototype held up in the lab, results they were able to predict with greater accuracy than in previous years.

“S-FRAME helps students understand the course content and provides them with an opportunity to learn how to model structures using software, which will be very useful in their future careers,” says Jason Lin, CIVL 228 teaching assistant. Student Brian Tingley concurs, “The S-FRAME software was important to understanding many [structural engineering] concepts.”

For the 2015/16 academic year, the entire CIVL 228 class will use S-FRAME software to design and analyze their course projects, and software installed in the computer labs will enable students outside of the course to use S-FRAME in other capacities, such as capstone design projects. The Department is also working with S-FRAME to expand its gift to benefit other structural engineering courses.

The Faculty thanks S-FRAME Software Inc.; its founder, George Casoli, P.Eng. (BSc ’75 PHYS, BASc ’80 CIVL); and its CEO, Marinos Stylianou, for enabling this opportunity through their tremendous gift and support of student learning in UBC Engineering.

In 1981, George Casoli founded SOFTEK Services, now S-FRAME Software, and launched P-FRAME, the first commercially available 2-D analysis software. The tallest building in the world at the time was the Sears Tower, now known as the Willis Tower, in Chicago, Illinois. More recently, S-FRAME software was used to create structural models during the design of today’s tallest building, the Burj Khalifa, located in Dubai, United Arab Emirates.
FACULTY

DEAN’S ADVISORY COUNCIL

In fall 2014, Dean Marc Parlange convened his first Dean’s Advisory Council (DAC). The council, made up of leaders from a wide variety of applied science-related industries, supports the Faculty in achieving its goals by sharing their perspective and understanding the needs of society and the role of the Faculty supporting research, education and community service. Members also support the Faculty through advocacy within the larger community.

The DAC has now formally met twice, working with the Dean and the Faculty leadership to provide critical advice on key priorities, such as the new strategic plan—ENGAGE 2020—industry and provincial research partnerships and the Master of Engineering Leadership program.

Current members of the DAC include:

- Chair: Ken Spencer*
- Stephen Burges, Professor Emeritus, Civil and Environmental Engineering, University of Washington
- Armiee Chan, President & CEO, Norsat International*
- Kim Code, Vice President, Shell Canada Ltd.*
- Denis Connor, Former Chairman and Founding CEO, QuestAir*
- Harold Copping, President, Copping Services*
- Andre De Leebeeck, Owner, De Leebeeck Holdings Ltd.*
- Paul Farrow, Senior Vice President, People and Safety, Goldcorp Inc.
- Randy Findlay, Corporate Director*
- Paul Geyer, CEO, LightIntegra Technology*
- James Gorman, Vice President, Corporate and Government Relations
- West Fraser
- Marian Hanna, Vice-President, Canadian Society of Exploration Geophysicists

Ossama Hassanein, General Partner, Newbury Ventures*
G. M. (Bud) Homsy, Affiliate Professor, University of Washington
G. Alan Hutton, Corporate Director and Advisor*
Fred Kaiser, Chairman & CEO, Alpha Technologies*
Greg Kovacs, Professor of Electrical Engineering, Stanford University*
Adam Lorant, VP Marketing and Product Management, PHEMI Health Systems
Henry Man, President & CEO, Magellen Developments 20/20 Inc*
Malcolm Metcalfe, Founder and Chief Technology Officer, Enbala Power Networks*
Om Nalamasu, Senior Vice President, Chief Technology Officer, Applied Materials Inc.*
Ajai Sehgal, Chief Technology Officer, Hootsuite
Bing Thom, Principal, Bing Thom Architects Inc*
John Thompson, PetraScience Consultants Inc. and Wold Family Professor in Environmental Balance for Human Sustainability, Cornell University
Marianne Wu, Managing Director, GE Ventures*
Susan Yurkovich, President and CEO, Council of Forest Industries

*UBC Alumni

FACULTY

APPLIED SCIENCE SHARES ENGAGE 2020

ENGAGE 2020—the result of consultation with students and alumni, faculty and staff, and industry and community partners—outlines Applied Science’s vision and course of action for the next five years.

The strategic plan showcases how the Faculty aligns our strengths to create positive change in the world through the generation, professional embodiment and innovative application of new knowledge. It shares our vision of an unparalleled research and learning environment in which creative minds from all disciplines that comprise Applied Science—engineering, nursing, architecture, landscape architecture and community and regional planning—work together to address current challenges.

Read ENGAGE 2020 at www.strategicplan.apsc.ubc.ca, or email reception@apsc.ubc.ca for a print copy.
NEW INSTITUTE AT UBC TO PROVIDE TRAINING AND RESEARCH TOWARD PIPELINE INTEGRITY

The University of British Columbia launched the Pipeline Integrity Institute this spring, with the goal of providing education and research on safer pipelines. Supported by partners from government and industry, the Institute is aimed at contributing to the pipeline sector through teaching and training, applied outcome research and the dissemination of reliable information.

“Pipelines are the safest way of effectively transporting fluids, whether those fluids are potable water, oil, natural gas or wastewater,” says Dharma Wijewickreme (MASc ’86 CIVL, PhD ’90 CIVL), P.Eng., professor of Civil Engineering and institute co-director. “It’s in the best interests of our communities to ensure pipelines are safe and secure. By protecting pipeline integrity, we protect the surrounding environment.”

“Our vision is to champion global pipeline best practices and innovation through advanced education, training and applied research,” says Akram Alfantazi, P.Eng., professor of Materials Engineering and institute co-director.

Wijewickreme’s research focuses on the performance of pipelines subject to ground movement, such as movement that results from landslides and earthquakes. Alfantazi’s expertise is in pipe materials and the protection of pipelines against corrosion.

In addition to research, the Institute is offering new engineering classes for undergraduate and graduate students to ensure that industry has the skilled professionals necessary to manufacture, design and construct pipelines that meet today’s industry needs and environmental-safety requirements.

The Institute is undertaking this work with the support of foundation partners BC Oil and Gas Commission, Ledcor, Michels Canada, Specialty Polymer Coatings and TransCanada Pipelines, and associate partners Alliance Pipeline, Baker Hughes, EVRAZ, FortisBC, ShawCor, SNC-Lavalin and Stantec. For more information about the Pipeline Integrity Institute, visit www.pii.engineering.ubc.ca.

UBC APPLIED SCIENCE LAUNCHES NEW PROFESSIONAL PROGRAMS

The Faculty of Applied Science is launching eight new professional master’s degree programs: seven Master of Engineering Leadership (MEL) programs and one Master of Health Leadership and Policy (MHLP) program.

After extensive consultation with industry and other stakeholders, these programs address the need for professionals to have both integrative technical knowledge across an industry sector and the ability to manage projects and people in a business environment.

Focusing on the needs of a mid-career professional seeking to advance his or her technical leadership capacity in a particular area of practice, these new programs also deliver management tools and processes. Each program is composed of a “platform” comprising the business and management content, jointly offered with the Sauder School of Business, and a “pillar” that encompasses the technical and discipline-specific content.

The new Faculty of Applied Science professional master’s programs are:

Master of Engineering Leadership in:
- Advanced Materials Manufacturing
- Clean Energy Engineering
- Dependable Software Systems
- Green Bio-Products
- Integrated Water Management
- Naval Architecture and Marine Engineering
- Urban Systems

Master of Health Leadership and Policy in:
- Seniors Care

All engineering programs will begin January 2016. Applications are now being accepted. For more information, visit www.mel.ubc.ca.
Since joining UBC in 1979, Professor Rabab Ward, P.Eng., has earned a distinguished reputation in the signal-processing field. A winner of multiple awards, including the R. A. McLachlan Memorial Award from APEGBC, and a fellow of the Royal Society of Canada and the Institute of Electrical and Electronics Engineers, Ward and her research have had a wide impact on society.

Ward developed an improved method of processing mammograms, so that 68 per cent of cancers can now be detected a year earlier than was previously possible; a brain-computer interface that allows people with mobility impairments to control various devices; and a way for cable-television providers to test their systems without turning all channels off during early-morning hours. She also worked on taking the “noise” out of analog television.

With such an illustrious career, it may be difficult to believe that Ward’s engineering career almost didn’t happen. “I wanted to go to the American University of Beirut to study engineering, but they did not allow women in engineering there then,” Ward says. Instead, she went to the University of Cairo.

Samarasekera’s expertise in heat transfer and stress analysis of materials has been implemented by industry around the world. She has been recognized for her research achievements by the Royal Society of Canada, the Canadian Academy of Engineering and the National Academy of Engineering, resulting in her selection as an officer of the Order of Canada and six honorary degrees.

She is currently a Director of the Bank of Nova Scotia and Magna International.

Samarasekera will be a featured speaker at the Department of Materials Engineering’s 100th Anniversary Celebration, Friday, October 2, 2015. For more information, visit mtrl.ubc.ca/centennial.

After earning her bachelor’s degree in 1966, she returned to Lebanon and became the country’s first certified female engineer. And in 1972, Ward earned her PhD in electrical engineering from UC Berkeley.

After becoming the first female engineering faculty member at the University of Zimbabwe, she returned to North America and came to UBC, where she took on a sessional lecturer position. Two years later, she was appointed an assistant professor in the Department of Electrical Engineering, becoming the first female engineering professor at UBC—and in British Columbia.

Ward has been successful outside of engineering, serving from 1996 to 2006 as the director of UBC’s Institute for Computing, Information and Cognitive Systems (ICICS). During her term, she secured $22.2 million in funding from the Canada Foundation for Innovation and the British Columbia Knowledge Development Fund, monies used to build the X-Wing of ICICS and equip the space with state-of-the-art technology.

She has graduated 38 PhD candidates and 50 master’s students. For her dedication, Ward was honoured with the 2014 UBC Killam Senior Mentoring Award, a most meaningful prize for her.
MECH ALUM TIPS HIS HARD HAT TO STUDENT SAFETY

Andre De Leebeeck (BASc ’76 MECH), P.Eng., spent more than 25 years working overseas as an executive in the oil and gas industries before returning to Canada in 2006. After time spent working in senior leadership roles in domestic oil and gas firms, he now helps start-ups in the industry with business development and investor relations. Since 2009, De Leebeeck has lent his expertise to the Applied Science Dean’s Advisory Council.

In early 2015, De Leebeeck and his wife, Barbara, donated $32,000 toward student-team safety initiatives in the Faculty of Applied Science. “I have seen a significant evolution in the attitude toward safety throughout my career from one of ‘accidents happen’ to one of ‘accidents are caused — and so are preventable,’” says De Leebeeck. “It is important that safety, health and the environment are top of mind in any project right from the conceptual phase. I believe the safety initiative is a means of driving home this concept as an integral part of any design.”

Hundreds of undergraduate students participate on more than 24 extracurricular engineering design student teams. Student safety has always been a priority for the Faculty, which recently hired a safety officer. The gift from the De Leebeecks will help the safety officer and each of the Faculty’s student teams increase and enhance safety measures and awareness.

This gift is in addition to De Leebeeck’s continuous support for the Faculty and the University since his graduation. When asked about giving back to his alma mater, he says, “I hope, through my support, to make it possible for at least one more student to get that same education that has meant so much to me.”

The Faculty of Applied Science sincerely thanks Mr. and Mrs. De Leebeeck for their generous support.

UBC OKANAGAN’S SCHOOL OF ENGINEERING BESTOWS FIRST DR. GORDON SPRINGATE SR. AWARD IN ENGINEERING

Bret Nestor (BASc ’15 MECH) received the inaugural Dr. Gordon Springate Sr. Award in Engineering, at the June convocation ceremonies on UBC’s Okanagan campus. Gordon L. Springate Jr. (BASc ’81 CHML) created the generous award endowment in memory of his late father.

The award, valued at $5,000 annually, is awarded to a student completing a Bachelor of Applied Science degree in the School of Engineering who has demonstrated a material contribution to his or her community outside of the program.

Nestor earned the Springate Award as a result of his leadership of Engineers Without Borders (EWB). He was selected as an EWB Junior Fellow in 2014 and worked in Zambia as a business consulting intern evaluating shared value projects between farmers and buyers. He also served as an Advocacy Representative in Canada for EWB and co-directed EWB’s Run to End Poverty in Kelowna.

Gordon Springate Jr. and the family wished to establish a legacy in memory of Gordon Springate Sr., who had been very active in the community throughout his career. Gordon Springate Sr., one-time Dean of the Division of Applied Studies at Okanagan University College (now UBC Okanagan), was an avid volunteer who offered leadership services to Cathedral Church of St. Michaels and All Angels, Scouts Canada, Canada Power and Sail Squadron, Canadian Council of Professional Engineers, Westbank Toastmasters Club, Kelowna Probus Club, Canadian Red Cross and Rotary Club of Kelowna.

He held an undergraduate degree in Electrical Engineering and Engineering Physics from McGill University, an MBA from Simon Fraser University and a PhD from Nova Southeastern University.

Gordon Springate Jr. has been employed by Chevron for 10 years, currently serving as their Technology R&D Manager in Houston, Texas. Prior to Chevron, he worked for several other oil and gas companies in Western Canada, the US, UK, South America and South East Asia.

ALUMNI

MECH ALUM TIPS HIS HARD HAT TO STUDENT SAFETY
CHEMICAL AND BIOLOGICAL ENGINEERING

Professor Savvas Hatzikiriakos, P.Eng., received the 2014 Stanley G. Mason Award from the Canadian Society of Rheology for outstanding contributions toward advancing the science of rheology.

Assistant Professor Vikramaditya Yadav was named a 2015/16 UBC Peter Wall Institute Scholar. He was also named a Top 100 Most Influential Medicine Maker by the 2015 Medicine Maker Power List for his biosynthonics research.

CIVIL ENGINEERING

Instructor Yahya Nazhat received a Key Scientific Article award from Advances in Engineering for his paper “The Kinematics of Granular Soils Subjected to Rapid Impact Loading.”

Adjunct Professor Alex Sy (MEng ‘85 CIVL, PhD ‘93 CIVL), P.Eng., was inducted as a Fellow of the Engineering Institute of Canada.

Professor Carlos Ventura, P.Eng., was inducted as a Fellow of the Engineering Institute of Canada.

ELECTRICAL AND COMPUTER ENGINEERING

Professor Purang Abolmaesumi (PhD ‘02 ECE), P.Eng., was awarded a 2014 UBC Killam Research Fellowship for his ultrasound data research.

Professor Vijay Bhargava received the 2015 Killam Prize for his achievements in the field of wireless communications.

Professor Guy Dumont, P.Eng., and UBC Electrical and Computer Engineering in Medicine Lab researchers received the 2015 Connected to the Community Award from the Canadian Wireless Telecommunication Association for their RR rate respiration measurement mobile application.

Associate Professor David Michelson (BASc ‘82, MASC ‘86, PhD ‘94 ELEC), P.Eng., and Ibrahim Gedeon (Hon JD ‘10 Law) received the IEEE Conference Leadership Award.

Professor Vincent Wong (PhD ‘00 ELEC), P.Eng., was awarded a 2014 UBC Killam Research Fellowship to assist him in his wireless network design and performance evaluation research.

Associate Professor Alireza Nojeh, P.Eng., was named a 2015/16 UBC Peter Wall Institute Scholar.

MECHANICAL ENGINEERING

Professor of Teaching Peter Ostafichuk (BASc ’97 ENPH, PhD ’04 MECH), P.Eng., was named a 3M Teaching Fellow by the Society for Teaching and Learning in Higher Education and 3M Canada.

Professor and Associate Dean for Education and Professional Development Elizabeth Croft (BASc ’88 MECH), P.Eng., received the Just Desserts award from UBC’s Alma Mater Society for going above and beyond to serve students.

SCHOOL OF ENGINEERING

Professor Shahria Alam, P.Eng., Associate Professor Solomon Tesfamariam, P.Eng., and Research Assistant Samy Reza (MASC ’06 CIVL) received the 2014 Canadian Society for Civil Engineering P. L. Pratley Award for best paper published in the field of bridge engineering in Canada.

Associate Professor Abbas Milani, P.Eng., was named the 2015 UBC Okanagan Researcher of the Year.

Professor and Acting Director Rehan Sadiq, P.Eng., received the Queen Elizabeth II Diamond Jubilee UBC Scholarship to support his three-year international project on sustainable transport infrastructure in South Asia.

Senior instructor Ray Taheri, P.Eng., received UBC Okanagan’s 2015 Junior Faculty Award for Teaching Excellence and Innovation.

IN MEMORIAM — ALAN STEEVES

Alan Owen Steeves provided 35 years of dedicated IT support to the Department of Mechanical Engineering. He was not only an exceptional staff member, he was also a wonderful artist, conservationist and master chef. In 2009, Alan received the President’s Service Award for Excellence for his outstanding contributions to UBC and for his personal achievements. In 2011 he received the Applied Science Dean’s Award for Excellence in Service. To read more about Alan and contribute to an award in his memory, please visit: memorial.supporting.ubc.ca/alan-steeves.
Dean Marc Parlange hosted the sixth annual Engineering Excellence event on April 9, 2015, at the Four Seasons Hotel Vancouver. With nearly 200 guests at the event MC’d by Bill Weymark, (BASc ’77 MINE), Applied Science recognized seven outstanding members of the UBC Engineering community for their contributions to engineering, UBC and society.

Two Lifetime Achievement Award winners were honoured: Amit Chakma (MASc ’84, PhD ’87 CHML), P.Eng., and Indira Samarasekera (PhD ’80 MTRL), P.Eng. Chakma was unable to attend, but he sent his warm regards through a video message. Samarasekera graciously accepted her award and shared her memorable stories of the milestones in her career and of the people who had a lasting impact on her.

Other award winners included:
- Daniel Bowditch (BASc ’71 ELEC), P.Eng. – Community Service (alumni)
- Colin O’Neill (BASc ’10 IGEN, BA ’10) - Young Alumnus (alumni under 35 years)
- Andrea Palmer (BASc ’15 MECH) and M. Hafizur Rahman (PhD ’15 CHBE) - Future Alumnus (current UBC Engineering student)
- Richard Kerekes, CHBE - Emeriti Faculty (retired or emeriti)

The award recipients have made significant contributions to society and exemplify the mission of UBC and Applied Science. Biographies for all recipients are available at www.engineering.ubc.ca/engineeringexcellence.

In addition to the Engineering Excellence awards, the McEwen Family Teacher Recognition Award was presented to Angie McTague of Lower left: L.V. Rogers Secondary School, Nelson, B.C., and posthumously to Gordon Trousdell (April 23, 1980–January 21, 2015) of West Vancouver Secondary School. Presented annually by UBC’s Faculty of Applied Science, the award was established by James McEwen (BASc ’71, PhD ’75 ELEC), P.Eng., and his family and celebrates teachers and their influence on students both academically and personally. Rob Olson of Carson Graham Secondary in North Vancouver and Andrea Yeo of Seycove Secondary School, also in North Vancouver, were recognized as finalists.

McTague was nominated by UBC Engineering student Carli Hall (CHBE) and supported by Lindsay Jennings (CIVL) for consistently bringing the curriculum to life to engage her students. McTague takes her physics students on a field trip to Silverwood Theme Park in Athol, Idaho, where they predict and calculate the acceleration of roller coasters and estimate G-forces. And each year, McTague drives more than eight hours with a busload of students from Nelson to Vancouver to attend UBC Engineering’s Open House.

Lilian Trousdell accepted the McEwen award on behalf of her late husband, Gordon. Gordon Trousdell was nominated independently by two UBC Engineering students, Josh Baker (ECE) and Luc Millaray Burns Silva (MTRL). Known for his infectious passion for physics and engagement, Trousdell dedicated his time to students both inside and outside the classroom. Armed with quirky examples, a sense of humour and an unwavering belief in the individuals he taught, Trousdell inspired many of his students to take up the path of engineering and science.

The Faculty thanks all those who attended and looks forward to seeing you next year.

2016 Alumni Awards: call for submissions! Tell us which of our alumni, students or emeriti faculty should be recognized. For nomination information, visit www.engineering.ubc.ca/alumni-awards.
Event Highlights

Family, friends and alumni joined a large contingent of industry professionals for an evening of innovation and inspiration at the 2015 Integrated Engineering (IGEN) Project Showcase. The event featured 23 multidisciplinary team projects, which were completed by 160 second-, third- and fourth-year IGEN students over their two-term Capstone design courses. The wide variety of technical solutions, designs and prototypes exemplified the IGEN students’ breadth of creativity and design skills. Highlights included the Garbage Fullness Indicator, which senses and wirelessly broadcasts levels of trash in garbage bins; an Intussusception Reduction Device that aims to standardize this important surgical procedure; and Project Sky Fall, an unmanned aerial vehicle (drone) that measures air contaminants in order to map their distribution in 3-D space.

Industry professionals voted for the “Most Innovative Project,” this year choosing the Baja Technical Performance Team, which designed a data-analysis and sensor-feedback system to enhance the performance of the UBC Baja team’s off-road vehicle.

The showcase also highlighted the results of this year’s IGEN Challenge, a unique curricular initiative in which student teams work in competition throughout the year to solve technical problems provided by industry partners. Students gain valuable project-management, teamwork and real-world industry experience, while industry partners benefit from the solutions and reward the best projects with prize money. Representatives from this year’s industry partner, Brighter Mechanical, were on hand to view the innovative solutions to their challenge, the Construction Demolition Containment Unit.

IGEN’s faculty and students thank alumni and industry professionals for their interest and their contributions to a successful year.
ALUMNI UPDATES

GEOLOGICAL ENGINEERING ALUMNI AND INDUSTRY DINNER
JANUARY 17, 2015

More than 120 alumni, industry representatives and students attended the 13th annual Geological Engineering Alumni and Industry Dinner at the University Golf Club. Evening highlights included an industry presentation by alumnus Peter Bullock (BASc ’03 GEOE), P.Eng. We’re looking forward to next year’s dinner and to catching up with colleagues and the next generation of UBC geological engineers!

CANADIAN SOCIETY OF CIVIL ENGINEERING - UBC STUDENT CHAPTER — INDUSTRY NIGHT
JANUARY 22, 2015

The Canadian Society of Civil Engineering (CSCE) UBC Student Chapter held their annual reception with record attendance. The chapter focuses on providing students with practical opportunities to understand and increase their knowledge of civil engineering applications and industries that relate to their studies. The 2015 industry night welcomed alumni, representatives from 50 companies and over 250 students in the Life Sciences Centre atrium on the UBC Vancouver campus. Join the CSCE Student Chapter for their next industry night in early 2016.

UBC ALUMNI & FRIENDS APPRECIATION RECEPTION AT ROUNDUPT 2015
JANUARY 27, 2015

The UBC Faculties of Applied Science and Science teamed up at the conference this year to host a social for UBC alumni attending RoundUp 2015. Thanks to the hundreds of alumni, students and industry partners who came to Mahony & Sons at Burrard Landing to enjoy the reception.

MATERIALS ENGINEERING INDUSTRY NIGHT
JANUARY 29, 2015

In its new venue at the Wayne and William White Engineering Design Centre, the seventh annual Materials Engineering Industry Night was a great success. Year after year, this event provides students with the opportunity to network with engineers working in the industry, discuss career and study opportunities and for alumni to share their stories. This year, we welcomed Laura Gill, PhD, P.Eng., from Mercedes-Benz Canada; Eric R. Lalli, P.Eng., from LWG Consulting; and Mojan Sohi (BASc ’10 MTRL MASc ’12 MTRL) from Powertech Labs, who spoke to the crowd of over 100 students, alumni and industry representatives. Keep an eye out for your invitation to the 2016 Materials Engineering Industry Night later this year.

MINING ALUMNI DINNER
JANUARY 31, 2015

Over 150 guests including mining faculty, students, industry guests and alumni attended the 19th annual Mining Alumni Dinner at the Four Seasons Hotel Vancouver. Keynote speaker and alumnus Ross Pritchard (BASc ’85 MINE), P.Eng., spoke about the opportunities awaiting graduates as mining engineering professionals. He reflected on his own experiences working in remote parts of the province, encouraged students to remember they are part of a unique professional community and of the importance of engaging with community at every level. Graduating mining students were also celebrated, with awards for the top academic students, mining games and mine rescue teams.

OLD RED NEW RED
FEBRUARY 7, 2015

Old Red New Red welcomed over 100 alumni to the Vancouver campus on the Thursday of E-Week. Each year, this event provides alumni with the opportunity to reconnect with the UBC community and gives current engineering students the opportunity to meet alumni from different generations, learn about the history of UBC and the Engineering Undergraduate Society and discover how student life was in years past. This year’s theme, “Old Traditions, New Traditions,” included remarks by alumnus Don Ehrenholz (BASc ’81 CIVL), P.Eng., who told a tale of the speaker’s chair stunt.

DISTINGUISHED ALUMNI LECTURE: DR. GANE KA-SHU WONG
FEBRUARY 12, 2015

This past February, the Faculty hosted a lecture with alumnus Gane Ka-Shu Wong (BASc ’83 ENPH), an AITF/iCore Strategic Chair at the University of Alberta. Alumni, faculty and students from Applied Science, Medicine, Science and Pharmaceutical Sciences gathered at the Michael Smith Labs on the Vancouver campus to hear Wong speak about his experience developing novel applications for DNA/RNA sequencing. His lecture was a unique opportunity to learn about his groundbreaking interdisciplinary research and to hear from an alumnus who has taken his engineering background in a unique direction.

GEOLOGICAL ENGINEERING DISTINGUISHED LECTURE
MARCH 11, 2015

On March 11, UBC Geological Engineering and the Vancouver Geotechnical Society hosted the 2015 Geological Engineering Distinguished Lecture. This year’s lecture, “Geomorphology As an Integrating Tool for Failure and Post-Failure Analysis of Submarine Mass Movements,” was presented by Professor Jacques Locat of Université Laval. Locat spoke to a room of over 65 students, alumni and industry guests. Look for next year’s public lecture on the Applied Science calendar in early 2016.

WISE: WOMEN IN SCIENCE AND ENGINEERING
MARCH 12, 2015

Hosted by Women in Engineering at UBC, this mentoring event brought 39 industry professionals together with 88 UBC Science and Engineering students. Our students were given the opportunity to meet with three different industry professionals during the course of the event. This year, the event was held at the beautiful UBC Longhouse. If you are interested in acting as a mentor for WISE 2016, email wie@apsc.ubc.ca.
UBC ENGINEERING MENTORING CLOSING EVENT
MARCH 31, 2015
On March 31, the Engineering Mentoring Program celebrated a successful year. The program matches engineering students with local professionals throughout the course of the academic year. There were 75 mentors and 150 students in attendance. Our closing event brought all program participants back together for a celebration of mentoring and an opportunity for students to network with diverse professionals and their peers. The program is currently recruiting new participants and mentors. For more information, visit engineering.ubc.ca/mentoring or contact mentoring@apsc.ubc.ca.

ENGINEERING PHYSICS SOCIAL NIGHT
APRIL 7, 2015
This year, the 14th annual “Fizz” social night found a new home in UBC’s Abdul Ladha Science Student Centre. Fizz students, alumni, industry and friends packed the new venue for an evening of networking, mingling, good food and fun. Student-built robots were on display, and students mixed with industry professionals, several of whom were looking to hire some of the best students and graduates that UBC Engineering has to offer. A highlight of the night came when the student organizers drew several impressive door prizes, and the event was capped off by a day at the track with ENPH Program Director Andre Marziali (BASc ’89 ENPH), P.Eng., and his race car. Be sure to keep your schedule free next April so that you don’t miss out on this fun and eventful night.

CHEMICAL ENGINEERING ’65 50TH REUNION
MAY 18-19, 2015
We had a relatively small class that year, and of the 17 graduates, ten attended. Three have passed away (Dale Maranda, Brian Thorpe and Tom Easton), and four others were unable to attend.

The reunion started on the first afternoon at the Tsawwassen home of Gunnvor Felland (widow of Dale Maranda) and included a salmon and steak BBQ by Wayne MacDonald. Many thanks are due to Gunnvor for graciously hosting this event.

The second day started with a morning campus walkabout. Some were very surprised to see that our then brand new state-of-the-art Chemical Engineering Building on the Main Mall had been replaced by a huge whale skeleton.

In the afternoon, the Head of the Department, Peter Englezos, brought us up to date on the history of the program and the plans for the future, and hosted a tour of the building. The labs seemed to be quite a bit more complex than we had 50 years ago. In addition, it is no longer required to punch the computer programs on cards and take them in large boxes to the only computer on campus, as several of our classmates had to do.

A highlight of the visit was being joined by Professors Norman Epstein and Richard Branion. Our class was the first year Richard taught at UBC. Both men still have their sense of humour. Dr. Epstein presented Gord Stockman with a copy of a paper he had published in 2001 which was based on Gord’s 1965 thesis.

Submitted by Keith Morrison (BASc ’65 CHML, MBA ’68)

GRADUATION DAY, UBC VANCOUVER
MAY 26, 2015
Each spring, UBC Engineering graduates over 1,000 students at the Point Grey campus. Welcoming the students at the graduation ceremonies were Dan Bowditch (BASc ’71 ELEC), P.Eng.; Vikram Devdas (BASc ’96 ELEC, MASc ’99 ELEC); Patrick Cheng (BASC ’83 MECH), P.Eng.; Alfred Hills (BASc ’77 MINE), P.Eng.; Beth Renwick (BASc ’84 CIVL), P.Eng.; and Tim Watson (BASc ’82 CHML), P.Eng., who greeted all new engineering alumni as they crossed the stage and joined the UBC alumni community. UBC Applied Science Alumni Relations congratulates all of you, our newest alumni, on your recent graduation and hope that you’ll keep in touch with us through your career and beyond. Congratulations to the class of 2015!

GRADUATION DAY, UBC OKANAGAN
JUNE 4, 2015
The School of Engineering held its annual Undergraduate Graduation Reception on Convocation Day. All graduating undergraduates and their families were invited to celebrate this milestone with faculty and staff. During the day’s awards ceremony, the following graduates received awards:

• Blake Veerman — APEGBC Gold Medal Award
• Thomas Creron — APEGBC Award in Engineering: Civil
• Daly Heath — APEGBC Award in Engineering: Electrical
• Craig Jee — APEGBC Award in Engineering: Mechanical, and the Canadian Society for Mechanical Engineering Gold Medal
• Bret Nestor — Dr. Gordon Springate Sr. Award in Engineering

After the reception, all attended Convocation, where Randall Fairey (BSc ’65, MD ’69) and Dan Toolsie (BSc ’11) welcomed the 152 Bachelor of Applied Science, 23 Master’s of Applied Science, and 11 PhD newly conferred degree holders to the alumni community. The School of Engineering congratulates all graduates on their achievement and looks forward to watching these graduates impact our world.
Upcoming Events

Here’s a snapshot of some upcoming events, but there will be more. Visit our web calendar at engineering.ubc.ca/events or subscribe to our monthly e-newsletter at www.apsc.ubc.ca/ATM.

GEERING UP AFTER-SCHOOL CLUBS
SEPTEMBER 2015–APRIL 2016
Get kids excited about science and engineering! Geering Up After-School Clubs are offered during the school year, in two sessions — fall and spring. At club meetings, held once every two weeks, students engage with mentors, go on tours and field trips and do some really cool science, technology, engineering and math activities. The goal is to create a safe and educational space for kids to hang out in, have fun with science and learn about engineering! Clubs cater to Grades 4–6, 7–9 and 10–12. For more information, visit www.geeringup.aps.c.ca.

HOMECOMING
SEPTEMBER 12, 2015
As UBC Athletics says, “Come for the Fun. Stay for the Game.” Homecoming 2016 promises to be a great day of fun, camaraderie, and of course (fingers crossed!), a win for the home team! Join UBC students, faculty, staff and fellow alumni in cheering for the UBC Thunderbirds as they take on the University of Regina Rams at 6 p.m. Check out www.homecoming.ubc.ca for more information about event-day festivities.

ELECTRICAL ENGINEERING CLASS OF 1985 REUNION
SEPTEMBER 12, 2015
Reunion organizers for the ELEC ’85 class are busy putting plans together to celebrate the class’ 30th anniversary on September 12, 2015. For more information on the reunion, contact Herb Yang at herbyang@shaw.ca.

CIVIL ENGINEERING CLASS OF 1949 REUNION
SEPTEMBER 16, 2015
The 1949 Civil Engineering class voted last year to keep their tradition going and continue to get together every year to celebrate their reunion! Classmates, spouses, children and grandchildren will come together to celebrate the class’ 66th reunion on September 16, 2015.

CLEAN ENERGY ENGINEERING COMMUNITY NETWORKING NIGHT
SEPTEMBER 17, 2015
Early in the fall, Clean Energy Engineering (CEEN) students gather for an evening with industry partners, alumni and faculty of the Clean Energy Engineering program to mix, mingle and network. The CEEN Alumni & Student Networking Night offers the chance to catch up with colleagues and classmates and meet industry representatives during a reception after the formal program. For more information, contact Courtney Smith at courtney.smith@ubc.ca.

ENGINEERING STUDENT CENTRE OPENING
SEPTEMBER 24, 2015, 5–8 P.M.
The Faculty of Applied Science is pleased to announce that the long-awaited Engineering Student Centre will be open for students this September, and we will be holding an official opening event from 5–8 p.m. on September 24, 2015. We are excited to showcase this milestone facility to all engineering alumni at Old Red New Red on February 4, 2016.

CHEMICAL & BIOLOGICAL ENGINEERING RESEARCH DAY
OCTOBER 2015
Research Day is a graduate student-driven initiative hosted by the Chemical and Biological Engineering (CHBE) Graduate Students Club. This full day of events will feature keynote speakers, a technical presentation session and a panel discussion on job-search strategies for graduate students. For more information, contact alumni@apsc.ubc.ca.

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EVENING CONVERSATIONS — GRAD SCHOOL AWARENESS EVENING
OCTOBER 1, 2015, 4–8 P.M.
As part of the Canadian Graduate Engineering Consortium, UBC Engineering joins forces with the University of Alberta, McGill University, University of Toronto and University of Waterloo to introduce opportunities available in graduate studies in engineering. Explore the diverse offerings of professional master’s and research programs without having to travel across Canada! The evening will include booth displays, a panel discussion and an informal reception. For more details, visit engineering.ubc.ca/gradconnects.

MATERIALS ENGINEERING CENTENNIAL CELEBRATION
OCTOBER 2, 2015
UBC Materials Engineering is turning 100! Join us on October 2, 2015, for a full day of Materials Engineering activities, including presentations from distinguished leaders in their respective fields on the future of materials engineering, panel discussions from esteemed grads, tours of the groundbreaking labs on campus and an evening of food and great company. This is an excellent opportunity to interact with current students, recent grads and memorable professors and to catch up with fellow alumni. For more information, visit mtrl.ubc.ca/centennial or contact Vivian Cheung at materials.centennial@ubc.ca.

EARTHQUAKE DAY
OCTOBER 15, 2015, 10:15 A.M.–5 P.M.
Hosted by the City of Vancouver, Vancouver Public Library and UBC, Earthquake Day is a community outreach event that aims to raise earthquake awareness and achieve earthquake resilience. The event is part of UBC’s Centennial celebration, and seeks to educate the public on Canadian seismic design provisions, earthquake mitigations, and Vancouver’s own earthquake resilience strategies, along with gathering professionals to discuss working towards community resilience. Everyone is welcome. More details are available at earthquake.day.ubc.ca.

alumni UBC ANNUAL GENERAL MEETING
OCTOBER 15, 2015
You are invited to join alumni UBC for the 98th alumni UBC Annual General Meeting. This
year’s meeting will mark the first in the new Robert H. Lee Alumni Centre. Come to hear what we’ve been up to this year. Visit www.alumni.ubc.ca to learn more.

APEGB conference & AGM 2015
OCTOBER 15–17, 2015

UBC Engineering will be in Kelowna for this year’s APEGBC Conference from October 15–17. Come by our UBC Engineering booth to say hi, learn more about UBC Engineering, Alumni Relations, Co-op and the new Master of Engineering Leadership (MEL) degree programs. We look forward to seeing you there.

ENGINEERING EXPLORATIONS 9 (EE9)
(IN COLLABORATION WITH GO ENG GIRL)
OCTOBER 17, 2015

EE9 is an exciting opportunity for Grade 9 girls to learn about the wonderful world of engineering from women in the field. While students enjoy fun hands-on activities and engineering student exhibits, parents can attend an informative session to learn about the paths to a career in engineering. For more information, visit engineering.ubc.ca/connects.

INNOVATE 2015
OCTOBER 20, 2015

The Faculty of Applied Science will host the second annual Innovate 2015 event to showcase the groundbreaking research being undertaken by faculty members. Through thought-provoking seven-minute presentations, learn why these subjects inspire such passion in our researchers and how you can get involved in innovations that will change engineering for the next generation. Visit innovate.apsc.ubc.ca for details including a list of speakers.

TEACHER PRO-D WORKSHOP
OCTOBER 23, 2015

UBC Engineering invites Grade 6 and 7 elementary school teachers for a workshop on engaging students’ interest in math and science. Use engineering to bring math and science lessons to life, connect classroom learning with real-life applications, and take home free kits to use with your students. Visit engineering.ubc.ca/connects to learn about this and other events for teachers.

alumni UBC Achievement Awards
OCTOBER 27, 2015

UBC is proud to recognize its alumni at the annual alumni UBC Achievement Awards. Honours are given to recipients in seven categories, including the Blythe Eagles Volunteer Leadership Award, Outstanding Faculty Community Service Award, Global Citizenship Award and the Alumni Award of Distinction. Do you know someone deserving who should be recognized? Visit alumni.ubc.ca/events/awards for nomination criteria.

Chemical & Biological Engineering Industry Networking Mixer
NOVEMBER 2015

Last fall saw a very successful Chemical and Biological Engineering (CHBE) Industry Networking Mixer, and we’re inviting all CHBE alumni and industry to join us again this fall. Current CHBE students will have the opportunity to learn and network from alumni and industry members at this annual event. More information will be available soon — be sure to check out our online event calendar for the most up-to-date information on all our Engineering events: engineering.ubc.ca/events.

UBC Engineering Open House
NOVEMBER 28, 2015

High school students, transfer students, friends and families are invited to explore UBC Engineering and our undergraduate programs. Find out how engineers are improving our world from the everyday to the extraordinary. Meet our professors, students and staff as they introduce you to the wonderful and diverse world of engineering. For more info visit engineering.ubc.ca/connects.

Old Red New Red 2016
FEBRUARY 4, 2016

Old Red New Red is back in February — and this year in the new Engineering Student Centre! This beloved annual Engineering event is a great excuse to dust off your Red, reminisce about your time in UBC Engineering and help judge student Ball Models during E-Week. Join us for Old Red New Red at the Engineering Student Centre on February 4th!

Engineering Excellence 2016
APRIL 7, 2016

At the annual Engineering Excellence celebration, awards are handed out in the categories of Lifetime Achievement (alumni), Community Service (alumni), Young Alumni (alumni under 35 years), Future Alumni (current UBC Engineering student) and Emeriti Faculty (retired or emeriti). Do you know an engineer who should be nominated for an Engineering Excellence Award? Visit engineering.ubc.ca/alumni-awards for more information on the nomination criteria and the deadline for submissions.

Alumni Engagement

The Faculty of Applied Science is committed to keeping in touch with our alumni. Whether helping you organize a class reunion, connecting you with long-lost classmates, engaging you in faculty and student activities or keeping you abreast of your alma mater through the web, newsletters or regional events, we are pleased to help. Contact Christina Salvatori in the Alumni Relations office at christina.salvatori@ubc.ca for more information.

Civil Engineering Centennial History Project

Civil Engineering has been part of UBC since the beginning. To commemorate this, Civil Engineering is publishing an e-book documenting the department’s history. Tell us your place in Civil’s history by contributing your photos and stories or participating in an interview. For more information, please contact centennial@civil.ubc.ca.

Reunions

Have you ever wondered what happened to your old classmates? Reunions are a great way to reminisce, catch up and network. If you are interested in planning a reunion, or are already in the planning stages, let us know! Contact Courtney Smith in the Alumni Relations office at courtney.smith@ubc.ca for more information.
A YEAR can CHANGE EVERYTHING

Join us INNOVATE 2015 innovate.apsc.ubc.ca Robson Square Oct 20

UBC’S MASTER OF ENGINEERING LEADERSHIP This one-year degree program combines intensive technical training with a focus on enhancing individual leadership ability. If you want to excel in your career, broaden your technical perspectives and gain new business skills — apply now.

Degree programs offered include: Advanced Materials Manufacturing · Clean Energy Engineering · Dependable Software Systems · Green Bio-Products · Integrated Water Management · Naval Architecture & Marine Engineering

mel.ubc.ca