



ENGINEERING CHANGE

Quarterly update highlighting the School of Engineering's signature projects and achievements during the past four months.

The end of 2020 couldn't come soon enough for many of us. A pandemic, and an overall sense of uncertainty, has impacted our lives in so many ways. Over the past year, School of Engineering faculty and staff have been working tirelessly to meet the high expectations of our students and research collaborators. Especially over the past eight or nine months, we have done so with a laser-like focus on ensuring appropriate protocols and safety procedures are maintained.

As researchers have slowly returned to campus while abiding to new safety guidelines, the majority of research has returned to pre-COVID levels. Our researchers are busy uncovering solutions to many new pandemic-related challenges, but have not lost sight on existing innovative projects.

In July, the School welcomed its newest Manufacturing faculty member, Ahmad Al-Dabbagh. Dr. Al-Dabbagh is a Principal's Research Chair (Tier 2) in Control Systems. His research focuses on control systems, specifically networked cyber-physical systems and process data analytics.

In January 2021, four new faculty will join the School: Michael Benoit, Vicki Komisar, Alon Eisenstein and Babak Tosarkani. Benoit will join the Manufacturing program, and add his metallurgical research expertise. Komisar is a biomedical engineer who specializes in developing safe and independent mobility solutions will join Mechanical. Eisenstein will serve as the School's first Entrepreneurship member of faculty. Tosarkani will bring his expertise in manufacturing operations including supply chain management to the Manufacturing Engineering program.

Together these new members of faculty will bolster the School's strategic research clusters while building upon existing inter-disciplinary research initiatives.

Our newest member of staff joined the School over the summer. As Professional Development Officer, Grant Topor is in the process of reaching out to industry and alumni to build initiatives that meet the needs of our students and partners. We are looking forward to growth in this important area that will empower our students for future success.

Visit engineering.ok.ubc.ca for program details & collaborative research opportunities

SCHOOL OF ENGINEERING LEADERSHIP TEAM

Rehan Sadiq - Executive Associate Dean
Mina Hoorfar - School Director
Yang Cao - Associate Director, Undergraduate Studies
Sumi Siddiqua - Associate Director, Graduate Studies
Lukas Bichler - Associate Director, Research and Industrial Partnerships
Rudolf Seethaler - MEng Coordinator
Dwayne Tannant - Civil Engineering Program Chair
Julian Cheng - Electrical Engineering Program Chair
Dimitry Sediako - Mechanical Engineering Program Chair
Homayoun Najjaran - Manufacturing Engineering, Program Chair
Colin Wilson - Director, Research and Industry Partnerships (250-317-7688)

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UBC Engineering - Okanagan (Group)



THE UNIVERSITY OF BRITISH COLUMBIA

School of Engineering

Faculty of Applied Science
Okanagan Campus



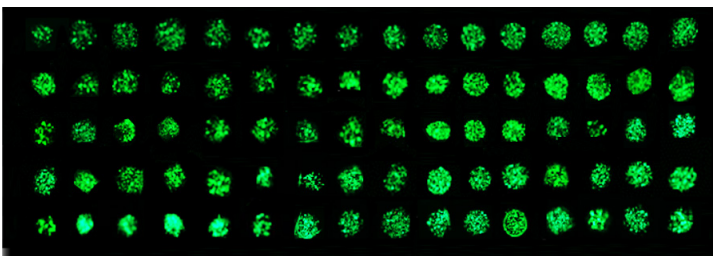
Alexander Graham Bell Scholarships award to two students

Both Mechanical Engineering PhD student Negin Kazemeian and Electrical Engineering PhD student Levi Bieber have received Alexander Graham Bell Scholarships. The \$105,000 NSERC award is presented annually to top-ranked, post-graduate students based on their academic excellence, research potential, and leadership abilities.



Combating climate change to keep the lights on

As power grids are increasingly being impacted by climate change factors such as forest fires and severe weather, UBC researchers are investigating ways to make power systems more resilient. The researchers are developing methods to improve reliability and performance through establishing mini-systems called microgrids.



New 3D stretchable synthetic cell generation platform

In an effort to replicate human tissue cells for improved artificial tissue transplantation, UBC researchers have developed an inkjet bioprinted 3D platform that allows them to engineer more advanced artificial tissue. The new tissue shows more elasticity and sets it apart from the current foundation of artificial tissue lending itself to transplants.



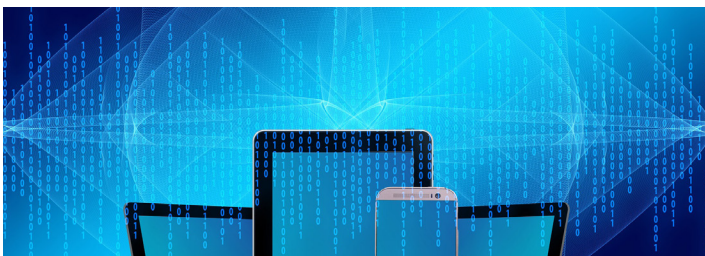
EGBC recognition for Professor Gord Lovegrove

The Engineers and Geoscientists of British Columbia recognize Gord Lovegrove with its 2020 President's Award for Community Service. He received the award for his community contributions and research related to developing sustainable communities. According to EGBC, "Gord has made a lasting impact on his community."



Making engines roar

UBC researchers have laid the ground-work to improve gas turbine engine design through debunking a 40-year old theory used as a basis of understanding how combustion is calculated. Their findings explain where the lost fuel is potentially going, and why thick flame surfaces form in engine flow-relevant conditions.



Researchers harness new schemes to improve 6G networks

With data traffic expected to continue to grow as a result of increased smartphone and machine-type communication, researchers at UBC and KAUST are looking at ways to adapt current and future technology to address the impending crunch. Testing is underway to merge existing networks with new technology to optimize the efficiency and enhance performance.

For the latest information related to COVID-19 and the School of Engineering visit engineering.ok.ubc.ca/covid-19/. For UBC-wide updates, FAQs and resources, visit ubc.ca. For UBC Okanagan-specific updates, visit ok.ubc.ca/covid19.

