

CARI YEAR IN REVIEW 2020/2021

APRIL 1, 2020-MARCH 31, 2021



RESEARCH STAFF AND LABS	45 staff 15 labs \$34M equipment 37,000 sq ft lab space
FACULTY AND STUDENTS	350 students engaged 16 student researchers 7 courses developed
EXTERNAL FUNDING	\$1,275,000 Government \$400,000 Industry \$1,675,000 Total
INDUSTRY LIAISON	25 industry projects
PROJECTS	45 active projects 20 prototypes
RECOGNITION	1 award 62 media highlights 31 publications/presentations conferences 6,000 social media impressions 16,264,203 total reach from media

Applied research at BCIT is exciting. It creates practical learning opportunities for BCIT's students, provides innovative solutions to industry challenges, and produces new, commercially relevant technology products and applications.

BCIT researchers and research groups have been working with industry clients for more than 30 years of helping companies and organizations develop new technologies, products and services.

For more information visit bcit.ca/applied-research



MAKE+ TEAM



NATURAL HEALTH AND FOOD PRODUCTS RESEARCH GROUP (NRG)



SMART MICROGRID APPLIED RESEARCH TEAM (SMART)



APPLIED RESEARCH LIAISON OFFICE TEAM (ARLO)

BCIT CENTRE FOR APPLIED RESEARCH AND INNOVATION

4355 Mathissi Place
Burnaby, BC V5G 4S8

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The Centre for Applied Research and Innovation (CARI) is home to: MAKE+, NRG, SMART, Dr. Jaimie Borisoff's Rehabilitation Engineering Design Lab, the Centre for the Internet of Things, and ARLO — the research office providing support to researchers across BCIT.

As part of digital transformation, BCIT introduced the Centre for Internet of Things (IoT). The Centre for Internet of Things will keep BCIT at the forefront of this emerging technology, and enhance hands-on education and training, industry collaboration, and research.

MAKE+ is an interdisciplinary research group focused on product development, applied research, and education. The team optimizes the functionality, user experience, value, and commercial success of emerging health, consumer, and industrial products.

Natural Health and Food Products Research Group (NRG) concentrates on issues related to natural health and food product quality, process improvement, and human health ensuring all Canadians can achieve the potential health and economic benefits offered by natural health products, medicinal plants, and food products.

The Smart Microgrid Applied Research Team (SMART) converges expertise in the information technology, communications engineering, and energy management fields to develop prototypes and solutions for complex applied research problems. SMART has a reputation for unique experience in three strategic research themes: smart microgrid and energy management systems, electric vehicle infrastructure, and critical infrastructure cybersecurity.

A FEW 2020/2021 HIGHLIGHTS

- [BCIT received the CIGan Applied Research and Innovation Excellence Award.](#)
- [The next generation of innovators and entrepreneurs.](#) Exciting and diverse student submissions were received for the 2021 BCIT Student Innovation Challenge.
- [COVID-19 face shield guidance.](#) To ensure the safety and effectiveness, a COVID-19 Face Shield Design Guidance Document was developed by the experts at the MAKE+ for anyone wishing to make a face shield.
- [BCIT researchers receive \\$2-million in funding for Shock-proofing the Future of Work.](#)
- [The Natural Health and Food Products Research Group \(NRG\) collaborated with the BC Centre for Disease Control \(BCCDC\)](#) to evaluate ethanol levels in kombucha beverages.
- [BCIT launches the Centre for the Internet of Things \(IoT\)](#) to support ongoing digital transformation.
- [BCIT SMART Team wins ECO Canada Community Impact Award](#) for their project on Master your EV etiquette: the Do's and Don'ts of EV charging.
- [BCIT researcher collaborates to develop rowing machine for people with mobility impairments.](#) BCIT researcher Dr. Jaimie Borisoff along with other researchers developed a rowing ergometer for people with disabilities.
- [Smart Microgrid Applied Research Team \(SMART\)](#) teamed up with three BCIT Digital Design and Development students to design three short videos on the do's and don'ts for EV charging.
- Matt Greig, MAKE+ Research Associate, has been instrumental in the development of the [electronics associated with a self-calibrating quantum sensor.](#)
- BCIT researchers developed an enhanced version of the [Baby Calmer](#) and delivered it to the BC Women's Hospital + Health Centre.
- Dr. Jaimie Borisoff, in collaboration with UBC/ICORD researchers are examining the [impact of COVID-19 on individuals with spinal cord injury.](#)
- [Global ventilator shortage recommendations.](#) Nancy Paris, Director of MAKE+, helped to provide strategic recommendations for the global shortage of ventilators.
- [NRG supported three BCIT Biotechnology students and one Food Technology student](#) in successfully completing their summer research.
- BCIT SMART department's EVID Team – Joey Dabell, Clay Howey, Kelly Carmichael served as Canadian representatives on International Energy Agency's Task 39 "Interoperability of E-mobility Services". They delivered their report to the IEA working group and to the Executive Council of the IEA Hybrid and Electric Vehicles branch .