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MEDIA RELEASE

Tech innovation on tap: from Virtual Reality and mobility advances to tracking fake news and driver behavior

May 15, 2018

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www.sfu.ca/university-communications
778.782.3210
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Contact:

Tia O'Grady, Office of the Vice-President, Research, 604.763.3276; tia_ogrady@sfu.ca (*will be on site and can connect with researchers*)

Marianne Meadahl, University Communications, 778.782.9017; Marianne_Meadahl@sfu.ca

Tech innovation on tap: from Virtual Reality and mobility advances to tracking fake news and driver behavior

Simon Fraser University researchers will showcase their latest innovations in technology at this week's [#BC Tech Summit](#), the largest tech conference of its kind in Western Canada. SFU researchers will be on site **May 15 and 16**. Some examples:

- Professor **Wolfgang Stuerzlinger** is turning VR from a typically isolating experience into a collective one. A leader in three-dimensional (3D) user interfaces, his project TIVES (Temporary Immersive Virtual Environment at SFU: A Non-Permanent CAVE) is a fully immersive experience: four walls and four projectors surround the viewers, engulfing them in the virtual environment;
- SFU researchers in the Bio Mechatronic Systems Lab are advancing exoskeletons to make full mobility a reality for paralyzed and mobility disabled people. Led by **Siamak Arzanpour and Edward Park**, they've designed a full mobility, wearable robotic exoskeleton called Exomotion (full name: Wearable Lower Limb Anthropomorphic Exoskeleton System). The system has a full range of motion for hips and ankles, allowing a natural walking motion;
- Professor **Maite Taboada** uses a big data approach to linguistics to build applications to help detect fake news and toxic comments. She creates programs that understand and classify words, and also exploit contextual information that helps machines better understand the nuances of language;
- Since most advanced vehicle safety systems are passively triggered and react to dangerous road conditions or driving behaviors after they happen and are observed, "last chances" to avoid collisions are limited. In **Jiangchuan Liu's** NetMedia lab, experiments suggest that a driver's "gaze" patterns appear prior to, and correlate with, the driving behaviors, enabling driving behavior prediction. Researchers are developing GazMon, an active driving behavior monitoring and prediction framework with fast edge computing for driving assistance applications;
- Innovations from remote-controlled fuel cell cars to nanotech Security Corporation holograms will be demoed by researchers at **4D Labs**, SFU's state-of-the-art materials science and engineering research facility;

- **Paula MacDowell**, a design and technology specialist from the Faculty of Education, will showcase her research and advocacy initiatives that empower youth through education and technology;
- **Joy Johnson**, SFU VP Research and International, will present on **harnessing the power of data for innovation** (May 15 at 3:30 pm). She'll discuss the truth about big data: that it is disruptive and that the conversations that convene from partnerships—the ethical debates—are fundamental.

SFU student innovators will also be part of several venues.

NERO is a smart jewelry platform for public safety. The company's simply crafted pendants can connect wearers with local authorities in the event of danger. Company co-founder **Georgiy Sekretaryuk**, a computing science and math student (recently named one of the Surrey Board of Trade's Top 25 Under 25), will present on Wednesday (georgiy.sekretaryuk@gmail.com).

Among demos at the Youth Innovation booth: Novion Health, which is developing an assistive ultrasound device that eliminates the physical labor sonographers face at work. Co-founder and graduate student Rafayet Siam (rsiam@sfu.ca) says the company hopes to change the way ultrasound is performed so sonographers can continue to work without pain. Novion was recently recognized with B.C.'s Medical Device Development Center Award of Distinction.

From SFU RADIUS: Ophthalight Digital Solutions, a mobile eye examination company and **CityHive**, which engages youth in the planning, shaping and decision-making of their city.

SFU's Coast Capital Savings Venture Connection will be well-represented with client companies **SpexiGeo**, **BuzzIt**, **Frontrvnners** and **HockeyData**, a hockey analytics company.

ABOUT SIMON FRASER UNIVERSITY:

As Canada's engaged university, SFU is defined by its dynamic integration of innovative education, cutting-edge research and far-reaching community engagement. SFU was founded more than 50 years ago with a mission to be a different kind of university—to bring an interdisciplinary approach to learning, embrace bold initiatives, and engage with communities near and far. Today, SFU is Canada's leading comprehensive research university and is ranked one of the top universities in the world. With campuses in British Columbia's three largest cities – Vancouver, Burnaby and Surrey – SFU has eight faculties, delivers almost 150 programs to over 35,000 students, and boasts more than 150,000 alumni in 130 countries around the world.

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Simon Fraser University
8888 University Drive
Burnaby, B.C.
Canada V5A 1S6