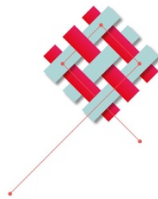# wearable tech hackathon

May 13-15, 2022

INFORMATION PACKAGE

Presented by

fibre FABRIC BASED RESEARCH PLATFORM

kite UHN

About the Event:

The FIBRE Wearable Tech Hackathon is a three-day event for students of all disciplines, creating space for inspiration, collaboration, and exploration of textile-related technologies and smart textile solutions to the most pressing healthcare and rehabilitation needs. Students will participate in multi-disciplinary teams and compete to win prizes for their innovative design concepts. During the event, they will receive mentorship from academic and industry experts, as well as feedback on product design ideas from patients through UHN's Patient Partner program to provide insight to health-related needs. Students will also learn about new technologies and tools to bring their concepts to life. Judging criteria will include detailed specifications about their concept, description of how it addresses the Challenge Area, physical prototypes, where possible, and a creative marketing pitch. This event aims to introduce students to future collaborative opportunities across the fields of science, engineering, healthcare, design, and beyond!

The event will be hosted online, **May 13-15, 2022**. Partner schools are invited to open their spaces to students for in-person access to facilities according to school and provincial health and safety guidelines.

The Challenge Area:

Participants are challenged to conceptualize textile-related solutions that address the event's Challenge Area; this year's focus is **pressure ulcers**. Pressure ulcers have a major impact on patient health as well as the health care system. They are caused by sustained pressure and friction on the skin, which can cause pain, decreased independence, and development of serious infections [1,2]. People are constantly surrounded by textiles: in their clothes, shoes, furniture, and more. Simple interactions with textile products can contribute to the creation of pressure ulcers in vulnerable patients. Combining innovative thinking, multidisciplinary expertise and cutting-edge technology will help situate textiles as part of the solution to pressure ulcers. Participants are challenged to develop concepts for smart textile and textile-related technologies to aid in the prevention of pressure ulcers and reduce the burden on patients, their families, caregivers, and our health care system.

[1] https://doi.org/10.1016/j.jaad.2018.12.069
[2] https://www.patientsafetyinstitute.ca/en/toolsResources/Hospital-Harm-Measure/Documents/Resource-Library/HHIR%20Pressure%20Ulcer.pdf

About FIBRE:

FIBRE is the first of its kind; an academic research platform in the field of textile-based technologies under The KITE Research Institute banner at Toronto Rehab. We are a member of University Health Network, the number one research hospital in Canada. Our main focus is human-centred design, accessibility and health. This new initiative will bring together fields of science, engineering, healthcare, and design to develop textile products that will revolutionize the way we prevent, monitor, and treat Canadians with healthcare needs. Our multidisciplinary ecosystem is interconnected and all-encompassing. From identifying individual needs to designing, prototyping, educating, testing and commercializing, **FIBRE is the future. FIBRE is an enabler. FIBRE is bold.**

FIBRE by the Numbers:
- 50+ Researchers
- 8 Academic Partners
- 4 Hospital Partners
- $13.5 B Medical Wearables Market

Recent & Upcoming FIBRE Workshops:
- Developing Smart Textiles for Healthcare – Textile Fundamentals (March 3, 2022)
- Design for Healthcare 1 – Introduction to Human-Centred Design (April 6, 2022)
- Design for Healthcare 2 – Doing Human-Centred Design (April 20, 2022)
- Design for Healthcare 3 – Analyzing & Applying Human-Centred Research (May 18, 2022)

About KITE:

KITE is a world leader in complex rehabilitation science and is dedicated to improving the lives of people living with the effects of disability, illness and aging. KITE is one of the principal research enterprises at the University Health Network (UHN), Canada's top research hospital with more than $490-million in total annual research expenditures (2020).

Schedule

Pre-Hackathon		
Teams Announced	8am EDT / 5:30pm IST	Thursday May 12

Teams will be composed of students from FIBRE partner institutions in Canada and India representing multiple disciplines across science, engineering, social sciences, design, and more! A multidisciplinary and international collaboration brings unique opportunities to develop innovative solutions to healthcare challenges. Participants will receive contact information for their assigned teams on Thursday and are encouraged to introduce themselves prior to the event to build team camaraderie and brainstorm collaborative ideas for the hack.

Hackathon		
Check-In	8:00am EDT / 5:30pm IST	Friday, May 13
Opening Ceremony	9:00am EDT / 6:30pm IST	Friday, May 13
Start of Hack	10am EDT / 7:30pm IST	Friday, May 13
End of Hack	9pm EDT / 6:30am IST	Saturday, May 14 / Sunday, May 15
Judging Opens	9pm EDT / 6:30am IST	Saturday, May 14 / Sunday, May 15
Awards Ceremony	10am EDT / 7:30pm IST	Sunday, May 15

The hackathon will include mini-sessions and demonstrations on new technologies that can enhance textile product development. Participants will also schedule team meetings with academic and industry experts across multiple disciplines. Patient Partners will be available to meet with teams to share insights with their experiences as patients and provide personal insights to the Challenge Area. Participants will also benefit from presentations by experts on human-centred design to help them think through how to develop a product that considers the experience of the people they aim to help, and on marketing strategies to help them develop an effective and impactful 1-minute pitch about their concept design. "Recharge" activities will occur intermittently to engage participants in games and trivia for prizes.

Why Sponsor?

Becoming an official sponsor of the 2022 FIBRE Wearable Tech Hackathon will position your company in the vital role of supporting collaborative, interdisciplinary innovation in healthcare. This event will connect you directly to talented designers, scientists, and forward-thinking students from all disciplines, and enable you to support and guide the development of new solutions for pressing industry challenges.

Sponsorship Benefits:

- **Connect** with talented, future-focused students and trainees from 9 academic institutions across the GTA and 1 in India, with specializations in a wide variety of disciplines related to healthcare and design

- **Build** relationships with KITE, Toronto Rehab, and the greater UHN community of scientists, clinicians, and healthcare specialists for future collaboration opportunities

- **Network** with other FIBRE academic and industry partners

- **Access** to potential future employees and innovative product concepts and designs

	Futurist $2000	Innovator $1000	Designer $500	Collaborator In-Kind
Impact				
Invitation to be a Mentor	✓	✓	✓	✓
Invitation to be a Judge	✓	✓	✓	
Named Prize Category	✓			
Invitation to Speak at				
Opening Ceremony	✓	✓	✓	
Special Topic Session	✓	✓		
Award Ceremony	✓			
Recharge Activity				✓
Invitation Demo Tools/Tech	✓	✓		
Visibility				
Logo, Profile & Link on Website	✓	✓	✓	✓
Mini Profile in Event Newsletter	✓	✓		
Logo in Event Newsletter	✓	✓	✓	✓
Event Virtual Booth	✓	✓	✓	✓
Social Media Mention	3	2	1	1

To learn more about becoming a sponsor please contact:
kirsten.schaefer@uhn.ca

How to Get Involved

Register as a Participant:
Open to students from any discipline and any level of study (undergraduate, graduate, postdoc) from academic institutions that are friends or official partners of FIBRE, including:

- Centennial College
- Conestoga College
- George Brown College
- Humber College
- OCADU
- Ryerson University
- Seneca College
- Sheridan College
- Sona College of Technology (India)
- University of Toronto

Students will join virtually from Canada and India, and may register individually or in pairs. Student teams of up to 5 students will be formed by the organizing committee to diversify expertise within teams and across countries.

Register as a Mentor / Judge:
Professionals from academia and industry are invited to volunteer as Mentors and Judges to guide student teams and evaluate submissions. Diverse areas of expertise are sought, including engineers, medical practitioners, scientists, artists, social scientists, marketing specialists, designers, and beyond! To register as a Mentor or Judge, please click here:

To register as a **student participant** or **mentor/judge**, visit:

kite-uhn.com/fibre/hackathon

General Inquiries
For additional questions and comments about this event, please contact:

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Event Director
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