INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) CLUSTER

As one of the world’s leading ICT and media hubs, Toronto has a rich technology ecosystem with remarkable depth and breadth. Toronto is Canada’s largest, most dynamic and innovative ecosystem of technology-focused businesses, and the 3rd largest ICT cluster in North America. Toronto’s diverse ICT workforce, educational infrastructure and proximity to essential adjacent skills are critical to its competitive position. The Toronto Census Metropolitan Area (CMA) is home to 35% of Canada’s technology businesses—of the top 250 Canadian ICT companies listed on the 2016 Branham300, 37% are located in the Toronto CMA. All of the top multinationals such as Alphabet (Google), Facebook, IBM, Cisco Systems Canada, Symantec, Microsoft Canada, and AutoDesk have established offices in the GTA. Toronto is also home to one of the world’s biggest clusters of mobile-application companies in North America.

HOW U of T ENHANCES THE CLUSTER

U of T is at the forefront of this revolution in ICT, big data, machine learning, and advanced computation and is uniquely positioned to lead Canada into the data-driven future. U of T is also establishing an Advanced Research Computing centre that will serve as the new home for the SciNet HPC Consortium, a major hub in Compute Canada’s HPC network and the country’s largest supercomputing facility, as well as the Southern Ontario Smart Computing Innovation Platform, operator of Canada’s fastest supercomputer.

Our faculty members have an impressive record of recent entrepreneurial activity—235 inventions disclosed to U of T in the last 5 years are in ICT, and over the same period they secured 267 patents. Many U of T faculty members are also highly integrated within the Toronto Academic Health Science Network, where they oversee medical and bioinformatics research arising from the data associated with millions of patient visits per year and research funding close to a billion dollars per year.

KEY EDUCATIONAL AND RESEARCH PROGRAMS

- Applied Computing
- Applied Genomics
- Banting & Best Ctr Innovation and Entrepreneurship
- Citizen Lab
- Computational Biology Lab
- Computer Science
- Data Sciences
- Digital Curation Institute
- Dynamic Graphics Project Lab
- Electrical & Computer Engineering
- Genome Biology & Bioinformatics
- Global Change Science
- High-Performance/Advanced Research Computing
- HPC4Health
- Information Studies
- Mathematics & Applied Mathematics
- Quantum Information & Quantum Control Statistical Sciences & Applied Statistics

ON-THE-SPOT ADMISSIONS

KEY FACILITIES & INITIATIVES

- Centre for Computational Medicine
- Critical Making Lab
- Institute for Aerospace Studies
- Inst Clinical Evaluative Sciences
- MaRS Innovation
- SciNet
- Strategic Network for Smart Applications on Virtual Infrastructures
- Techna Institute (with UHN)
- Toronto Nanofabrication Centre
- Transportation Research Institute
ConferenceCloud
Founded in 2014 by U of T undergraduates and sister and brother team Olivia Simmons and John-Alan Simmons, ConferenceCloud is a virtual attendance platform that allows users to live-stream conferences or to watch the event on-demand afterwards. The platform also aggregates ticket sales, virtual networking and interactive content all in one location. While ConferenceCloud does support free events, its services are mostly geared to larger, paid conferences, promoting the platform as a new revenue stream for conference organizers. It provides a way for the organizers to expand their audience and get more value out of their content.

Nymi
Founded by U of T graduates Foteini Agrafioti and Karl Martin, Nymi uses the heartbeat as a biometric identifier for authentication. Nymi’s HeartID software detects and distinguishes a person’s unique heartbeat, or cardiac signal, through sensors. The technology can be used to secure various devices with greater than 99% accuracy—roughly the same as current fingerprint-enabled security systems. Nymi solves the privacy issue of protecting a person’s identifiable information by keeping their heart rhythm signature local to the hardware.

Whirlscape
Founded by Professor Khai Truong and alumnus Will Walmsley, Whirlscape has taken the QWERTY keyboard and reworked it to fit on a single line of text onscreen. The keyboard uses a specialized, auto-correction algorithm that corrects highly imprecise typing. This algorithm configures the difference between what you type and what you mean, in real time—getting it right even if you miss every single letter.