

TRANSFORMATION

Innovation and Impact in
U of T Scarborough Research

2022-2023

Annual Report





We wish to acknowledge this land on which the University of Toronto operates. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca and, most recently, the Mississaugas of the Credit. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land.

Transformation

Looking around the University of Toronto Scarborough campus, it's clear that transformation is underway. New buildings, new programs, and new initiatives.

A unifying theme is sustainability. Our faculty, students and staff are enthusiastic participants in the global effort towards achieving the United Nations' 17 Sustainable Development Goals (SDGs). This is evident in the incredible leadership and stories of sustainability ambassadors on this campus. We have successfully incorporated sustainability into every aspect of our campus life, and this is especially true of the research being conducted here.

To facilitate transformation on a global scale and build on our research strengths, this year OVPRI consulted with the U of T community to establish a new tri-campus network called institutes for *Resilient and Inclusive Societies and Ecosystems* (iRISE).

The network includes three research institutes — the Institute for Environment, Conservation, and Sustainability, the Institute for Inclusive Health and Well-Being and the Institute for Inclusive Economies and Sustainable Livelihoods. The institutional strategic initiative hosted by U of T Scarborough, SDGs@UofT, and its Scholars

Academy will attract Fellows intent on creating novel research frameworks relevant to the SDGs, with the goal of influencing public discourse and shaping policy and practical solutions.

While this report looks back on key achievements of the past year, transformation is always about looking ahead. We are delighted to include a look at the new donor-funded Centre for Inclusive Excellence in Entrepreneurship, Innovation and Leadership (CIEEIL), which will expand entrepreneurship at our campus.

OVPRI is also transforming our relationships with the surrounding communities, institutions and organizations through our developing regional innovation districts, including the Environmental and Related Technologies Hub (EaRTH), and the Scarborough Academy of Medicine and Integrated Health (SAMIH).

I hope these stories of exploration, excellence and achievement will excite you as much as they do me.

Irena F. Creed, PhD, FRSC
Vice-Principal Research & Innovation



IMPACT NUMBERS

Highlighting the impact of our research



General Statistics

	2022-23
Research Funds (Number of Grants and Contracts)	357
Funding Applications	219
Total Funding Sponsors	52
Total Private Sector Partners	3
Total Number of Funding Programs	87



Total Research Funding: \$17,504,995

\$9,191,551
(52.5%)
Federal Granting Agencies

\$3,040,762
(17.4%)
Federal Govt., Other

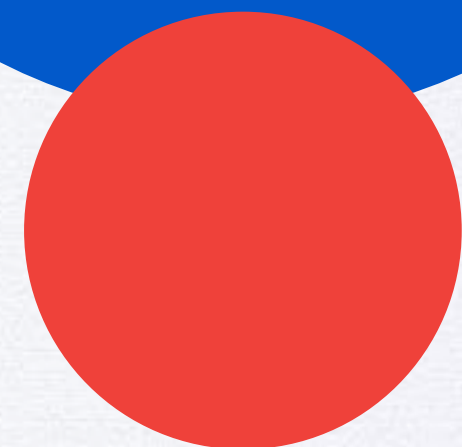
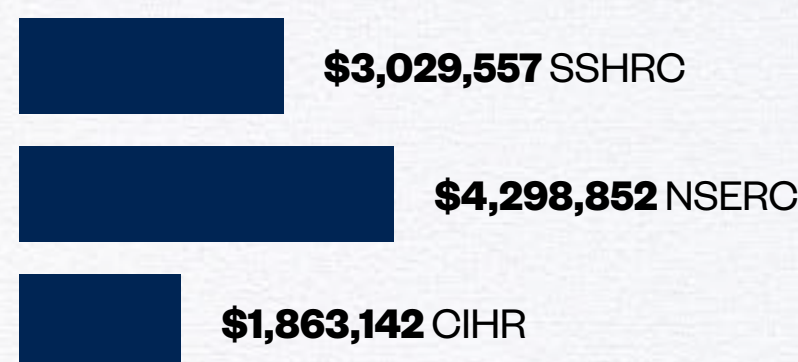
\$1,679,512
(9.6%)
Not-for-Profit

\$948,400
(5.4%)
Research & Academic Sector

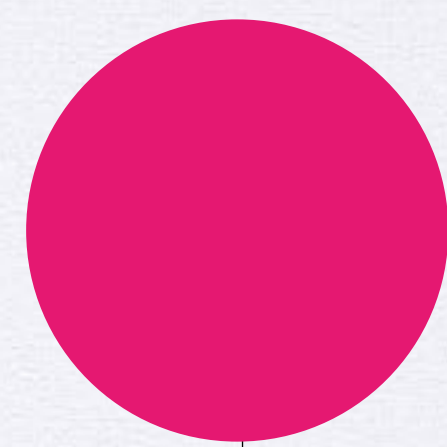
\$919,604
(5.3%)
Other

\$528,753
(3%)
Internal

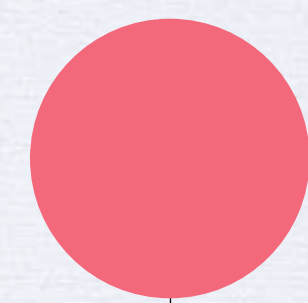
\$ 9,191,551
Total Tri-Agency Funding



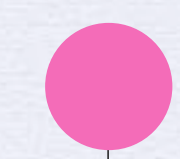
\$496,504
(2.8%)
Ontario Prov. Govt.



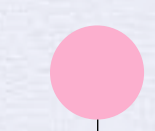
\$457,396
(2.6%)
Connaught Fund



\$202,022
(1.1%)
Private Sector



\$31,491
(0.2%)
Foreign Govt.



\$9,000
(0.1%)
Prov. Govt., Other

Grant Success

Funding rates for the most competitive Tri-Agency grants from the federal government

2022-23	NATIONAL	SCARBOROUGH
NSERC Discovery Grant	64%	81%
SSHRC Insight Development Grant	48%	75%
SSHRC Insight Grant	44%	33%
CIHR Project Grant	21%	25%

2022-23

Supervisions by U of T Scarborough Faculty Totals

944

- 197 Master's
- 587 Doctoral
- 160 Postdoctoral

Research Faculty Total

301

Published Journal Articles Total

593

Top International Research Locations

43
United States

2
Belize

5
Costa Rica

4
France

8
United Kingdom

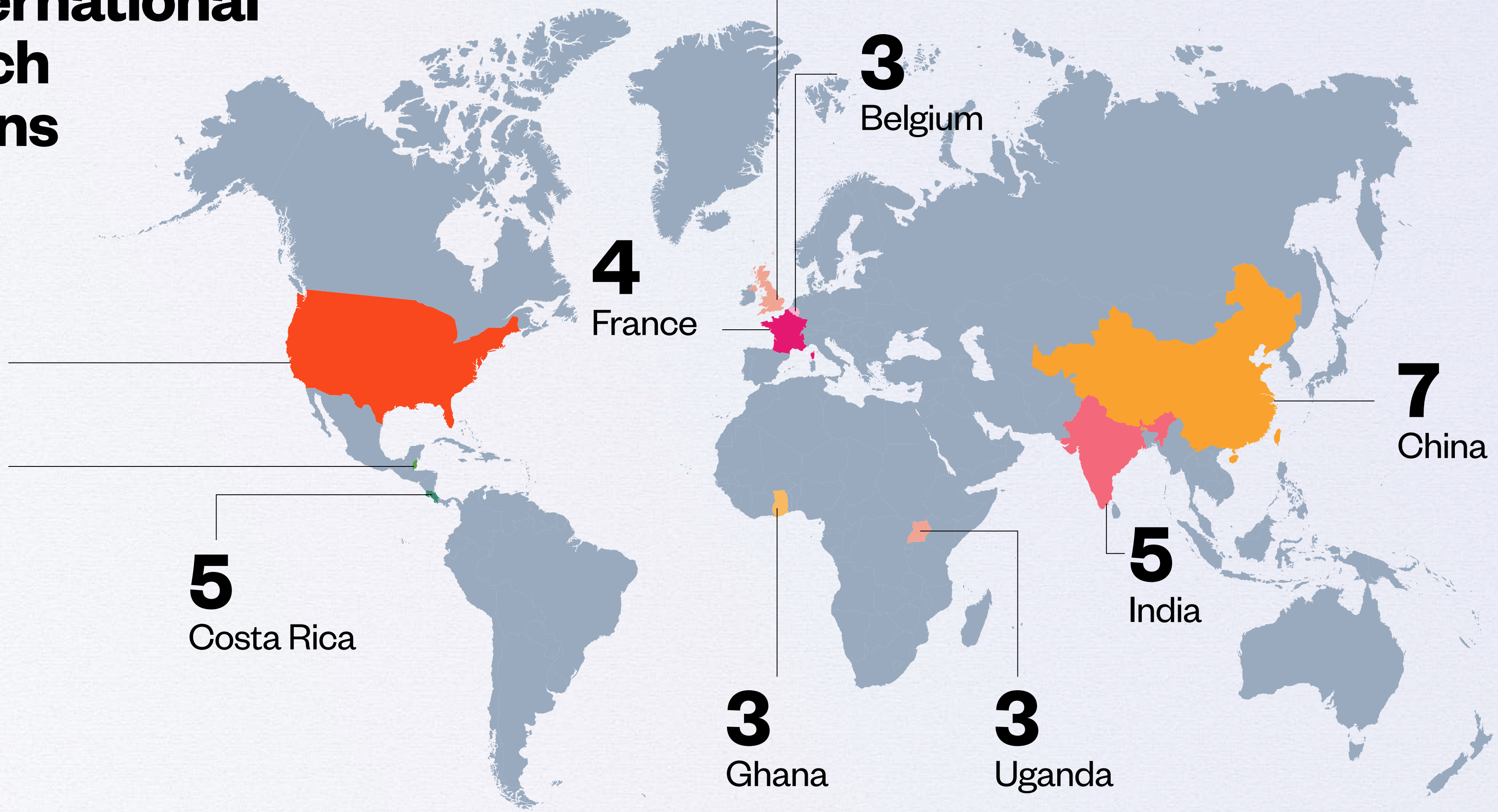
3
Belgium

3
Ghana

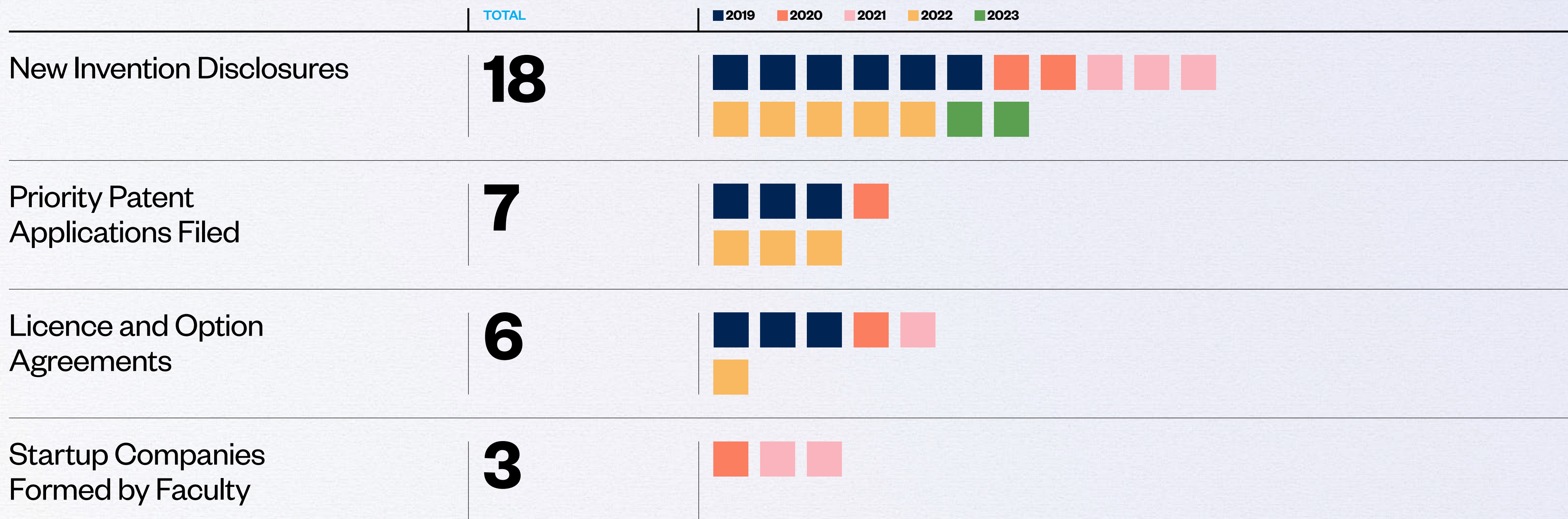
3
Uganda

5
India

7
China



Commercialization





STRATEGIC INITIATIVES

Advancing areas of importance and long-term goals

Institutes for Resilient and Inclusive Societies and Ecosystems (iRISE)

The institutes for Resilient and Inclusive Societies and Ecosystems (iRISE) bring together U of T’s outstanding scholarly strengths under a shared umbrella to address the environment, health and well-being, and sustainable economies and livelihoods.

A key priority for advancing U of T Scarborough’s global prominence and impact, iRISE and its components will collectively serve as a hub for game-changing multidisciplinary research and scholarly activities that span the university and beyond. In so doing, it will help create new narratives of our future and the realization of socially-just and equitable transitions towards that future. It will engage with global frameworks, such as the United Nations Sustainable Development Goals, already foundational to U of T Scarborough’s strategic plan, *Inspiring Inclusive Excellence*. It will amplify the global impact of the exceptional work that is going on across the three campuses.

iRISE will provide support for research and innovation at U of T Scarborough by facilitating internal and external collaborative research partnerships; identifying and pursuing research funding opportunities; fostering entrepreneurship and commercialization of scholarly endeavours; and heightening the visibility of the accomplishments of U of T Scarborough scholars. This year, hundreds of faculty, staff and students provided input that influenced the development of iRISE. They participated in online forums, faculty meetings, workshops, “Zoom Cafés” and one-on-one meetings and will continue to participate in shaping its future.



Institutes for Resilient and Inclusive Societies and Ecosystems (iRISE)

Institute for Environment, Conservation, and Sustainability

The Institute for Environment, Conservation, and Sustainability, led by Inaugural Director Professor **Imre Szeman**, will explore the causes and consequences of climate change and develop mitigation and adaptation strategies. Its potential research themes include interactions among plants, soil, water and air; the effects of climate change from the cellular to the ecosystem levels; ecological restoration; environmental sustainability; nature-based climate solutions; carbon markets; Indigenous perspectives on the natural world; and understanding the Earth through the exploration of other planets.

Institute for Inclusive Economies and Sustainable Livelihoods

The Institute for Inclusive Economies and Sustainable Livelihoods was led this year by Interim Director and Associate Professor **Caroline Hossein**, with Associate Professor **Sergio Montero** due to assume his position as Inaugural Director in July. This Institute will imagine, explore and share alternative economic futures from unique perspectives. Its potential research themes include alternative and cooperative economic practices of Indigenous and racialized communities; data science methods for greater, more equitable prosperity; training and skills development strategies that encourage personal and economic development; and advanced understanding of the complex interdependencies among nations, localities, and economic agents to facilitate more transparent decision-making.

Institute for Inclusive Health and Well-Being

The Institute for Inclusive Health and Well-Being is led by Interim Director Professor **Charles Trick** and will explore the many determinants of health of people living in the Anthropocene. Potential research themes for this institute include fundamental science explorations of aging, elder care, and mental health; policy and program pathways to change health inequities; innovative solutions to complex health issues, including arts-based health approaches; and translating knowledge of the relationship between environment factors and well-being into practice and policy.



UN’s Sustainable Development Goals shaping U of T Scarborough



In 2015, the United Nations (UN) created a blueprint of what it would take to make the world a better place and established 17 goals that have guided the University of Toronto Scarborough ever since. The [Sustainable Development Goals](#) (SDGs) established targets and the urgency to combat climate change, using affordable and clean energy, consuming and producing sustainably, and protecting the natural world.

“Universities are an amazing place for the pursuit of the SDGs because they’re about bringing people together, identifying solutions, infusing hopefulness and unleashing the power of youth,” says Professor **Irena Creed**, Vice-Principal of Research and Innovation at U of T Scarborough. “They’re both incubators and accelerators of the change needed across the world.”

Despite the name, the SDGs cover much more than environmentalism. Among the 17 goals are “reduce inequality” and “ensure inclusive and equitable quality education,” the latter of which is central to U of T Scarborough’s strategic plan, [Inspiring Inclusive Excellence](#), a framework that unites the school in the overarching pursuit of social justice and equity.

“Social consciousness is really part of U of T Scarborough’s DNA,” says Creed. “Inclusivity is about including different perspectives and ensuring equity. And if you look at the SDGs, they’re rooted in ensuring equity. We have the potential to become a model of inclusivity for other institutions.”

UN's Sustainable Development Goals shaping U of T Scarborough

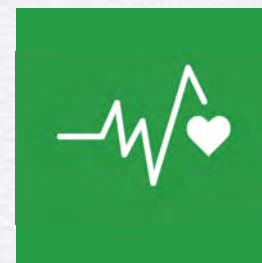
Research across the University spans combatting climate change, creating sustainable food, water and energy systems, discoveries in health, fostering social wellness, addressing inequalities and more.

“Many research programs, if not all, are aligned to the SDGs. We believe that in the next few years, with these new research institutes, there’s going to be a major uptick in the excitement, energy and resources to really support research that moves us toward the SDGs,” Creed says.

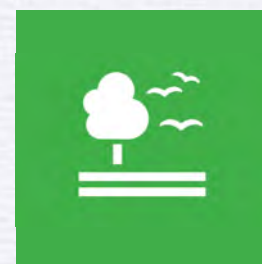
The newly established Institutional Strategic Initiative (ISI) SDGs@UofT, housed under iRISE, is led by Associate Professor **Erica Di Ruggiero** and will be dedicated to the United Nations’ [17 Sustainable Development Goals](#), global targets to end poverty, improve health and education, reduce inequality, spur economic growth and tackle climate change.

Publications by SDGs

U of T Scarborough researchers and scholars have published a wealth of work on the multitude of topics related to the UN’s Sustainable Development Goals — close to 500 papers, studies, reports and articles. These publications are an important testament to the breadth of our community’s expertise.



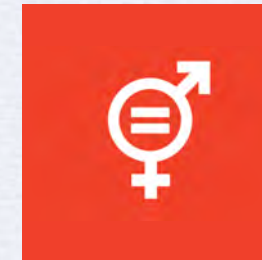
150
Goal 3: Good Health and Well-Being



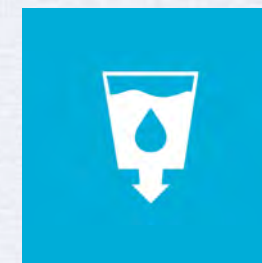
98
Goal 15: Life on Land



88
Goal 13: Climate Action



27
Goal 5: Gender Equality



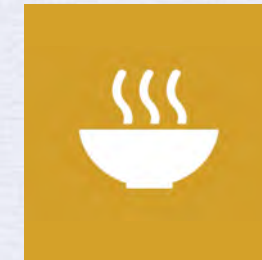
26
Goal 6: Clean Water and Sanitation



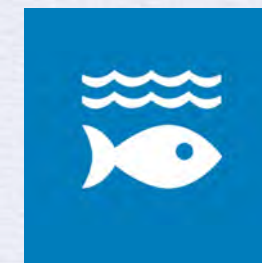
25
Goal 11: Sustainable Cities and Communities



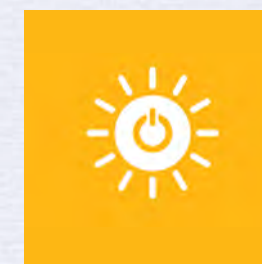
24
Goal 4: Quality Education



19
Goal 2: Zero Hunger



18
Goal 14: Life Below Water



13
Goal 7: Affordable and Clean Energy

Scarborough Academy of Medicine and Integrated Health (SAMIH)



The Scarborough Academy of Medicine and Integrated Health (SAMIH) received final approval from U of T’s Governing Council in early 2023. This represents the last governance step in establishing SAMIH, which will help fill a need for health-care professionals in Scarborough and the eastern GTA. This rapidly growing and diverse region now faces a critical shortfall of family physicians, nurse practitioners and specialists, as well as aging health-care facilities.

“I share the community’s enthusiasm about having on our campus a world-class facility for training high-quality health-care professionals. Even more exciting is the opportunity to proactively bring in a diverse group of talented individuals from our neighbourhoods who will train and serve in their own communities,” says **Wisdom Tettey**, U of T Vice-President and Principal of U of T Scarborough.

First announced in March 2022, SAMIH is a partnership with U of T’s Temerty Faculty of Medicine, Lawrence S. Bloomberg Faculty of Nursing, and Leslie Dan Faculty of Pharmacy, along with local hospitals and health networks. It received funding last March as part of the Ontario government’s plan to increase the number of doctors and other health-care professionals in the province.

In September 2022, the Orlando Corporation announced a \$25-million donation to support the construction of a new building with state-of-the-art facilities at U of T Scarborough for SAMIH. The donation was part of [a larger \\$75-million gift](#) that will advance the health needs of the region’s nearly 1.3 million residents.

Scarborough Academy of Medicine and Integrated Health

The new Scarborough Academy of Medicine and Integrated Health will help the university realize its vision for up to 1,520 students per year in the life sciences, medicine, nursing and other health professional programs. SAMIH will contribute to the government of Ontario’s plan to increase the number of doctors in the province, with support for 30 new medical school seats by 2025 and 45 new postgraduate specialty positions by 2027. The government has also confirmed a commitment of \$19.8 million per year at steady state in operating costs for the academy. It is a key supporter of numerous priorities at Scarborough Health Network as well, and is making considerable investments in Centenary Hospital, Scarborough General Hospital and the Birchmount redevelopment project.

“On behalf of the University of Toronto, I would like to express our profound gratitude to Orlando Corporation for this outstanding act of philanthropy,” says U of T President **Meric Gertler**. “Your leadership will make a major difference in the lives of people and communities in Scarborough and the eastern GTA, strengthening health care and improving the quality of life for generations to come.”



The Environmental and Related Technologies Hub (EaRTH) District



U of T Scarborough has partnered with **Centennial College**, **Ontario Tech University**, **Fleming College** and **Trent University** to establish the [Environmental and Related Technologies Hub \(EaRTH\)](#) District. EaRTH's goal is to develop the region's green and sustainable technology sector through research, academic programming and commercialization of advanced technology. This partnership will foster world-class environmental science research, training opportunities for existing and future jobs in the green-tech sector, as well as translating new knowledge and innovation into entrepreneurship.

The District is located on the U of T Scarborough campus and includes currently available as well as future facilities for research, training, and innovation. The partnership institutions will also work with the public and private sectors as well as Indigenous communities in the development of green and sustainable technologies. Each institution will contribute their unique expertise and training in the environmental sciences, advanced technology and emerging areas of the green-tech economy.

A major priority of the EaRTH District is to address an urgent need for sustainable solutions to tackle the challenges of climate change by developing technological and social innovations. It will do that by filling a skills gap that currently exists through access to educational programs in the green-tech sector including joint degrees, micro-credentialing, and experiential learning. An important step has been made with the launch of the [EaRTH Switch Program](#).

Funded by the **Ontario Vehicle Innovation Network (OVIN)** through their pilot, the Regional Future Workforce Program, the EaRTH Switch Program has been developed in conjunction with school boards, industry, and other partners to provide students with accessible information and fun and innovative learning tools to expand their understanding of the industry and career possibilities in Ontario's emerging electric vehicle and mobility climate economy. The program will include 600 students from grades 10 to 12 and 500 post-secondary students in three geographic nodes: Scarborough, the Durham Region, and Peterborough and the Kawarthas. The program consists of industry tours, trade events, problem-solving hackathons and internships offering industry-led work-integrated learning opportunities.

Canada's \$61.9-billion green-tech industry currently employs more than 282,000 people, mostly in waste management services, energy efficient technologies, transportation, environmental remediation and renewable energy services. EaRTH has the potential to generate \$8.4 billion in economic output, educate 35,000 students and create more than 4,400 direct jobs once fully operational. Creating an environment where new and innovative technologies are being developed locally will help generate high quality, in-demand jobs for residents of Scarborough and the Durham Region.

Strategic Partnerships at U of T Scarborough

STRATEGIC PARTNERSHIPS

Canadian Black Scientists Network (CBSN) partners with U of T Scarborough



When **Maydianne Andrade** co-founded the non-profit [Canadian Black Scientists Network \(CBSN\)](#) in the summer of 2020 with other Black scientists across Canada, she knew there was a need to create a larger sense of community. What she didn't anticipate was the rapid growth.

"We just see momentum building and building every year," says Andrade, a professor in the Department of Biological Sciences at U of T Scarborough.

By the time the CBSN held its first annual national conference for Black Excellence in Science, Technology, Engineering, Math and Medicine (BE-STEMM) virtually in 2022, it had already grown from 20 members to 150 and now has more than 500 members. The conference also includes a science fair where middle school and high school students can connect with Black mentors.

←
Left, **Olamide Falomo** CBSN's Program Administrator
Right, **Maydianne Andrade** Professor, Department of Biological Sciences

"It's important to have mentors of all sorts," Andrade says. "But particularly having someone who looks like you who has succeeded in this field is encouraging for youth."

As the CBSN was looking for a university partner to host the network for a five-year term, the U of T Scarborough was an ideal choice. It had already been the virtual host for the first BE-STEMM conference, and as the home of the [Scarborough Charter](#) — a commitment from more than 50 Canadian universities to address anti-Black racism and to promote Black inclusion — there was a symbolic and practical alignment with the network's goals to remove barriers facing Black researchers and practitioners in STEM.

Strategic Partnerships at U of T Scarborough

STRATEGIC PARTNERSHIPS

U of T Scarborough partners with the Federation of Black Canadians (FBC)



↑
Principal **Wisdom Tettey**, MP **Gary Anandasangaree** and MP **Filomena Tassi**

U of T Scarborough and the Federation of Black Canadians (FBC) are partnering on a new project that will support the next generation of Black entrepreneurs.

The partnership is part of a \$1.3-million investment announced by the federal government for the FBC, a Black-led non-profit organization aimed at enhancing services that support and mentor Black youth and young adult entrepreneurs.

The FBC will collaborate with U of T Scarborough, The [BRIDGE](#) and U of T's [Black Founders Network](#) (BFN) to research and conduct surveys in Black communities across Ontario, Alberta and Quebec. The findings will help create programming, including a four-month entrepreneurial program focused on business planning, finance, risk management, legislation and commercialization, all aimed at supporting the success of Black entrepreneurs.

The BRIDGE will also partner with FBC to support the creation of a 12-month mentorship program that offers one-on-one support from leaders in the Black community aimed at building professional networks

and expanding social capital. Topics will include managing stress, debt, technology, brand and business development, and mental wellness.

The investment by the federal government, which was made through the Black Entrepreneurship Program (BEP) Ecosystem Fund, will support the FBC to provide tools and resources to 170 Black youth entrepreneurs in Toronto, Montreal and Edmonton.

Wisdom Tettey, Principal of U of T Scarborough, said the funding will help provide a lift to Black youth entrepreneurs and help them access resources that might otherwise be beyond their reach.

“It’s important to recognize that Black entrepreneurship is Canadian entrepreneurship, and that Canadian entrepreneurship is worse when there is no space for Black entrepreneurs to thrive and flourish,” said Tettey.

Clusters of Scholarly Prominence Program (CSPP)

ABOUT

The Clusters of Scholarly Prominence Program (CSPP) is U of T Scarborough’s flagship program for supporting the pursuit of strategic initiatives. The CSPP serves to promote self-sustaining, interdisciplinary, inter-departmental, collaborative clusters of scholarship in areas of established and emerging strength at U of T Scarborough that have a demonstrable capacity to augment U of T’s global standing through prominence in research, creative activity and exceptional learning.

2022 CLUSTER

The third competition in 2022 awarded \$600,000 to the following cluster:

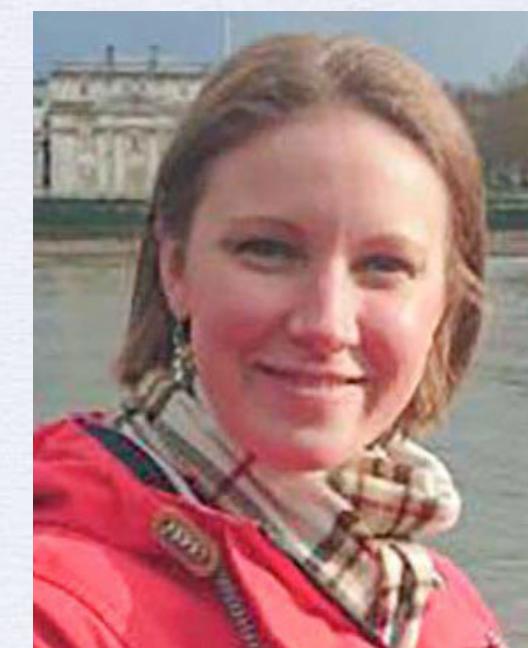
Water Pathways Cluster

The Water Pathways research cluster brings together a diverse team of researchers to confront a growing number of water quality problems posed by population growth, pollution, climate change, and invasive species. By combining physical and social science perspectives, this cluster will be bigger than the sum of its parts and can make transformational change. The Water Pathways group will be positioned as leaders in Ontario that can work with community groups and conservation agencies to identify pollution problems and to determine effective social and scientific strategies to restore water quality.

CLUSTER LEADS



Mathew Wells,
Professor, Department of Physical & Environmental Sciences



Cosima Porteus,
Assistant Professor, Department of Biological Sciences

OUR RESEARCH

Impactful research driving our deeper understanding



Brain stimulation treatment plus talk therapy may reduce suicidal thoughts in people with BPD



An emerging brain stimulation technology called magnetic seizure therapy could significantly reduce suicidal thoughts in people with borderline personality disorder (BPD), a mental illness associated with one of the highest rates of suicide. Treating the condition, which is characterized by unstable relationships, impulsivity and difficulty with emotion regulation, can be complex.

“People with borderline personality disorder experience depression at a high rate, and antidepressant medications are not particularly effective for many patients,” says Professor **Anthony Ruocco**,

co-author of the study and director of clinical training in the Department of Psychology at U of T Scarborough. “There are several aspects about this treatment that potentially make it a very promising option for people with BPD.”

The study, published in the journal *Nature Mental Health* and conducted at the Centre for Addiction and Mental Health (CAMH), is the first of its kind. It examined 21 participants with BPD and treatment-resistant depression who were divided into two groups. Both groups completed up to five weeks of dialectical behaviour therapy, a talk therapy focused on coping skills, while one group also underwent brain stimulation up to three times per week.

The participants who completed both treatments had a rapid decline in their suicidal thinking — a result that remained four months later at a follow-up evaluation. The group that completed only dialectical behaviour therapy had a modest decrease in suicidal thoughts. The researchers note the talk therapy is still an effective treatment, but the benefits to suicidal thinking might be boosted sooner in patients when combined with magnetic seizure therapy.

“Borderline personality disorder is highly stigmatized and tends to benefit less from new technological advances in treatment,” says Ruocco, who is also a Families for BPD Research Investigator, a role that funds research into the diagnosis.



Benefits to suicidal thinking might be boosted sooner in patients when combined with magnetic seizure therapy.



Anthony Ruocco, Professor, Department of Psychology

Community research project to explore art-wellness programs for Scarborough’s 2SLGBTQ+ youth

A project exploring ways that arts-wellness programs can support 2SLGBTQ+ youth in Scarborough has received funding from the Connaught Community Partnerships Research Program. **Andrea Charise**, an Associate Professor in the Department of Health and Society at U of T Scarborough, will co-lead the project with **Dirk Rodricks**, Assistant Professor, teaching stream, in the Department of Curriculum, Teaching, and Learning at OISE. Researchers from the [FLOURISH Collective](#), an interdisciplinary arts-based research cluster, will collaborate with community partners, and use arts-based programming to look at existing barriers for 2SLGBTQ+ youth in Scarborough. They will also explore culturally sustaining arts-based interventions and generate knowledge that can help inform public policy on social wellness through these programs.

Charise’s research explores health, illness and aging through the arts and humanities, and she notes that community arts engagement is often not viewed as an important tool in supporting health and wellness. “Our research leads with the tenet that flourishing is deeply embedded in community spaces, resources, and access to culturally sustaining activities — arts engagement foremost among them,” says Charise, who was the lead developer of Canada’s first undergraduate program in health humanities.

The researchers have been working with 2SLGBTQ+ youth participating in EAST H.E.A.R.T., an art-focused, peer-to-peer mentorship program run by [Scarborough Arts](#). They are looking at how arts engagement might help with learning and understanding about a variety of topics, including consent, negotiating intimate relationships, HIV and STI prevention, community building, and belonging.



Our research leads with the tenet that flourishing is deeply embedded in community spaces, resources, and access to culturally-sustaining activities.

Andrea Charise, Associate Professor, Department of Health and Society



\$2.8-million study to test if microbes can grow in Canada’s national facility for nuclear waste

Canada is getting closer to moving all its used nuclear fuel to a single facility and encasing every fuel container in bentonite clay. Researchers are studying whether that clay could support microbial life — and lead to corrosion of the containers. The proposed facility, called a deep geological repository (DGR), will sit 500 to 800 metres underground in one of two Ontario sites. Every room storing nuclear waste will be packed and sealed with bentonite clay, a swelling material that helps dissipate heat and reduces water movement when packed tightly.

To test if the microbes can grow, the group constructing Canada’s DGR, the [Nuclear Waste Management Organization \(NWMO\)](#), brought together Professor **Myrna Simpson** from the Department of Physical and Environmental Sciences at U of T Scarborough and Professors Josh Neufeld and Greg Slater from the University of Waterloo and McMaster University, respectively. Their five-year study was recently awarded almost \$3 million from the new NSERC [Alliance grant program](#).



Canada has about [three million](#) bundles of used nuclear fuel, which contain the solid uranium that powers nuclear reactors. They are stored in above-ground containers at seven facilities across the country, with 90,000 bundles added every year. The containers only last about 50 to 100 years, but used nuclear fuel must be stored for one million years before its radiation levels return to that of naturally occurring uranium ore. For Canada, and almost every country that commercially produces nuclear power, the solution is a DGR.

The team will study samples of groundwater and surrounding rock at the two proposed sites for the DGR, near Ignace in northern Ontario and in southwestern Ontario’s South Bruce area. Their results will add to a data set that will help the NWMO decide on a location, along with other aspects of the project.



←
Myrna Simpson,
Professor, Department
of Physical and
Environmental Sciences

\$10-million project to study role wetlands play in combating climate change

It's hard to overstate the importance of wetlands. They provide habitat for wildlife, filtration for water and even play a role in protecting us from drought. Now a group of Canadian researchers led by Professor **Irena Creed**, Vice-Principal Research & Innovation, Professor, Department of Physical and Environmental Sciences, will study them to better understand their exact role in combating climate change.

Wetlands offer essential ecological services for wildlife, humans and climate. They protect and improve water quality, provide habitats for fish and wildlife, store floodwaters and maintain surface water during dry periods.

The project is being funded in part by the Government of Canada Climate Action and Awareness Fund. The fund is an investment of up to \$206 million over five years to support Canadian-made projects that help reduce Canada's greenhouse gas emissions. The partnership will include researchers from six universities from across Canada and seven non-academic organizations representing government and conservation agencies led by Ducks Unlimited Canada. Creed's project will receive \$6 million from the fund, while an additional \$4 million will be invested in the project by various non-academic partners.



As part of the project, multiple flux towers will be used in freshwater wetlands across Canada. The towers, which resemble small radio towers, have sensors positioned above the vegetation to record the flow of chemicals between the ground and the atmosphere. They will help measure how much carbon, methane and other greenhouse gas emissions are both stored and released by the wetlands.

The data collected will help inform policymakers how well Canada is doing with its climate change goals, particularly those under the [Paris Agreement](#). It will also help in creating more accurate greenhouse gas inventory reporting, which is a requirement under the agreement.



Irena F. Creed,
Vice-Principal Research & Innovation,
Professor, Department
of Physical & Environmental Sciences

Study finds safety, mobility and local services most important to suburban Toronto residents



A new study found residents of Toronto’s inner suburban communities value the same three things most in their neighbourhoods: safety, transportation and mobility, and local services — in that order.

In a project titled [Community Voices](#), created through a partnership between U of T Scarborough, [U of T’s School of Cities](#) and the [Wellesley Institute](#), researchers went door-to-door to almost 700 randomly selected homes. Using different survey techniques, they set out to explore residents’ top priorities for their neighbourhoods.

Feeling safe was the most desirable aspect of a neighbourhood, largely defined through violent crime and road safety. Concerns around violence were raised twice as often in the west end, though actual violent crime rates are similar among both areas of the city. West end residents also believed their communities were unfairly associated with crime.



←
Dan Silver,
Professor, Department of Sociology

“People’s perception of violence, I think, is not just driven by the numbers. More traumatic events can really impact communities,” says **Dan Silver**, co-author of the study and Professor in the Department of Sociology.

Throughout the 80-page study, the researchers aligned those opinions with policies that promote social determinants of health — the non-medical factors that impact well-being. They offered policymakers nine priorities to bridge the health equity gap in Toronto’s inner suburbs and make community policies grounded in local voices.

The study’s policy recommendations included a focus on the assets that exist in these communities, and respecting the individuality and lifestyle choices of residents, rather than trying to force a downtown-centric vision of healthy communities. In the short-term, they suggested prioritizing physical public spaces, such as roads and buildings, while increasing access to the essential local services and amenities that residents valued.

Researchers want to know how this little fish survives in our deepest, coldest lakes

Researchers at U of T Scarborough are sequencing the deepwater sculpin's entire genome to see how this seemingly unremarkable fish has been able to adapt to living at the bottom of Canada's deepest and coldest lakes since the last ice age.

"It's an iconic Canadian survivor," says **Nathan Lovejoy**, a Professor in the Department of Biological Sciences whose lab is conducting genetics research on the sculpin thanks to a grant from the [CanSeq150](#) initiative.

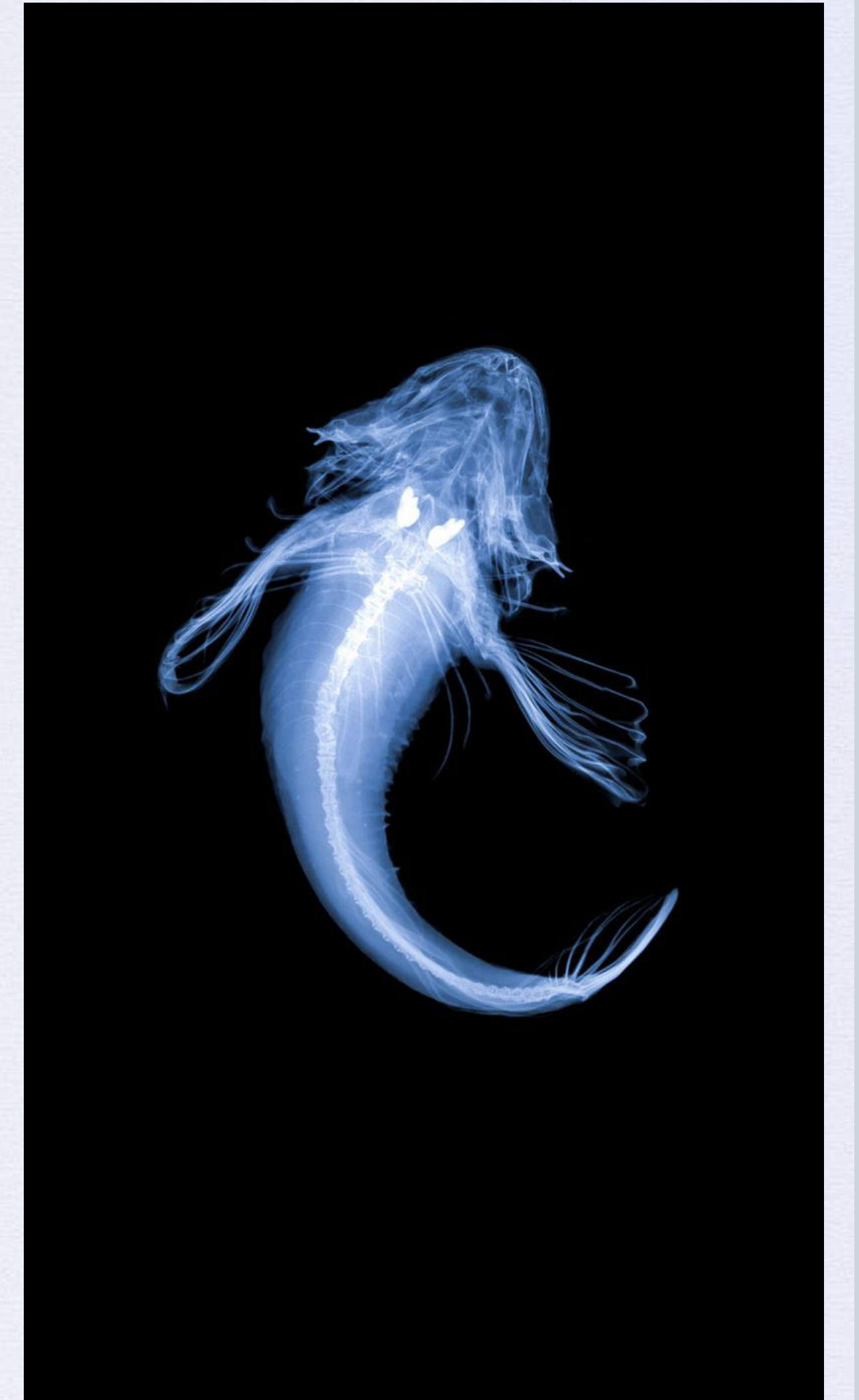
Deepwater sculpins live almost exclusively in lakes with depths greater than 35 metres and temperatures colder than 8C. Its range extends from the Laurentian Great Lakes and the Gatineau region, through the deepest lakes of Ontario, Manitoba and Saskatchewan to the Northwest Territories. Despite its unexceptional appearance, the deepwater sculpin plays an important role in the Great Lakes food chain, connecting the tiny crustaceans and aquatic insects it feeds on to the lake trout and larger predatory fish.



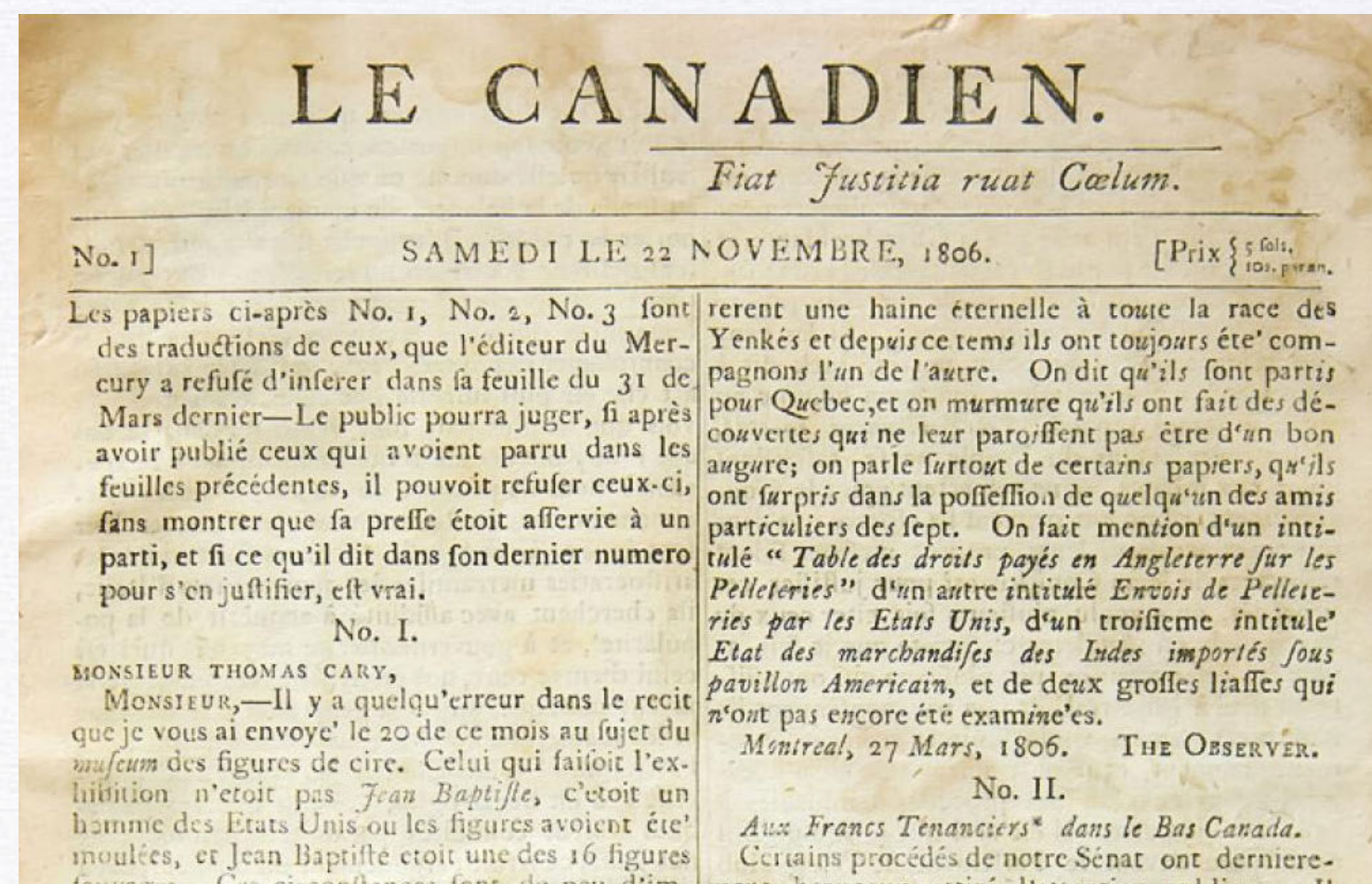
Nathan Lovejoy, Professor, Department of Biological Sciences ↑

Alex Van Nynatten, a postdoc in the Lovejoy lab, is currently undertaking the enormous task of poring over reams of data in an effort to sequence the fish's genome. Collaborating with **Belinda Chang**, Professor from the Department of Cell & Systems Biology, Van Nynatten is particularly interested in studying the fish's vision genes, specifically those for seeing in cold, low light conditions. In an effort to help with monitoring, Lovejoy's lab is working with **Nicholas Mandrak**, Professor in the Department of Biological Sciences at U of T Scarborough, on developing a technique that relies on environmental DNA analysis.

Despite showing remarkable success in adapting to its environment over time, the deepwater sculpin's future might be in jeopardy from climate change and invasive species like the round goby and zebra mussels. It's currently listed as a species of special concern under Canada's Species at Risk Act.



Student-led project provides rare insight into Canadian history with some of its first newspapers



U of T Scarborough researchers are providing valuable insight into Canadian history by creating an accessible, free database of the nation’s first newspapers. Spearheaded by **Sébastien Drouin**, an Associate Professor in the Department of Language Studies, the bilingual project, “Early Modern Canadian Newspapers Online,” is a collection of newspapers from 1752 to 1810, printed in Nova Scotia, New Brunswick, Prince Edward Island, Quebec and Ontario.

“We’re very excited about giving access to documents that are almost impossible to find right now,” says Drouin, an expert in early modern French literature and early modern journalism.

The project is [one of five](#) at U of T Scarborough recently supported by the [Jackman Scholars-in-Residence](#) (SiR) program. It took a multi-disciplinary team of students in early modern and Canadian histories, book history and the computer sciences to drive the project. Five U of T students worked on populating the database with the microfilms to create searchable bio-bibliographical profiles of the newspapers, including its printers, first journalists and the context of publication.



U of T Scarborough researchers are providing valuable insight into Canadian history by creating an accessible, free database of the nation’s first newspapers.

U of T Scarborough Library’s [Digital Scholarship Unit](#) (DSU) was a key partner in helping the SiR team achieve this.

There are 30 copies of various newspapers in the database, the majority being full-runs published in 1752 — the year that the *Halifax Gazette*, Canada’s first newspaper, was printed in Nova Scotia. Another find was 18th-century subscriber lists to the Québec Gazette, manuscripts that showed that most readers were men who settled in the then British colony.

The team will continue to develop the database, and the UTSC Library will work with student staff through its [Emerging Professionals program](#) to provide additional opportunities for U of T students to gain experience in software programming and processing work utilized in the SiR project.



← **Sébastien Drouin**, Associate Professor, Department of Language Studies

Study finds what we think we like in a romantic partner — and what we actually prefer — don't always match up

According to new U of T Scarborough research, it turns out what people think they like in a romantic partner and what they *actually* like can often be two different things. “Ideas about the qualities we like are somewhat grounded in experience,” says **Andre Wang**, an Assistant Professor in the Department of Psychology at U of T Scarborough and co-author of a new study looking at where our ideas about liking something originate. The research suggests that the qualities we think we like also depend on the social context in which we encounter these qualities, says Aline da Silva Frost, a PhD student at the University of California, Davis, and co-author of the study.

The research, published in the [Journal of Experimental Psychology: General](#), found what people think they like versus what drives their actual liking are only weakly related. In fact, their ideas about liking and their experiences of liking can end up predicting different decisions and actions.

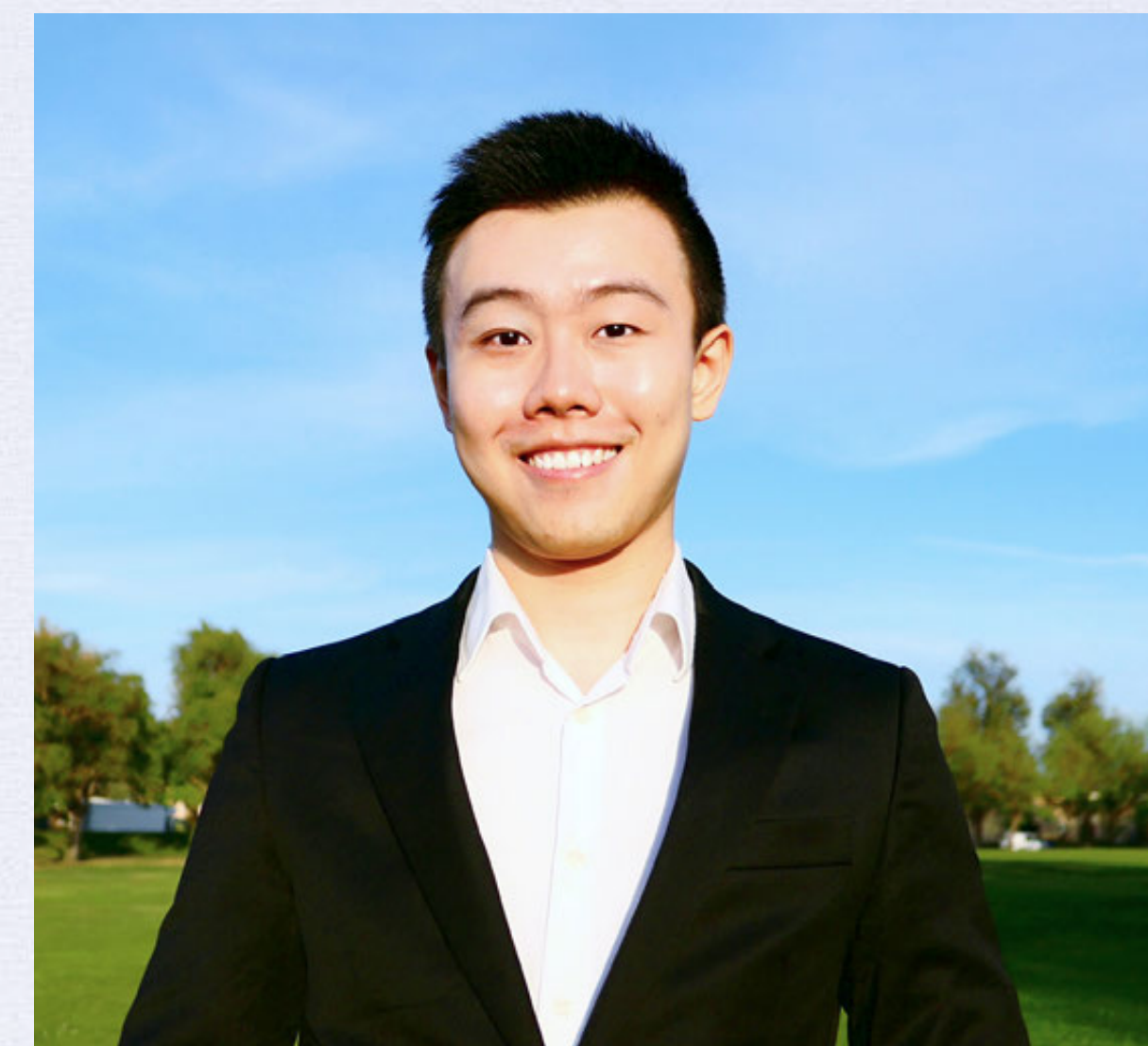
Wang and his colleagues tested this effect across four separate studies involving more than 1,300 participants. The results showed that what participants thought they liked and what they actually liked predicted different kinds of decisions. For example, their ideas about how much they liked confidence did not predict their interest in signing up for a free trial of a dating website featuring photos of confident people. It was the degree to which participants liked confidence after experiencing it that predicted their willingness to dive into that dating pool.

Wang adds that it's possible people are ruling out potential partners based simply on certain traits they *think* they like, without considering whether they've actually experienced those qualities in person.

“They could be filtering out people in advance who might actually make them truly happy.”



↓ **Andre Wang**, Assistant Professor, Department of Psychology



Here’s how cities can make green infrastructure the new normal — equitably and sustainably



Cities can be places of people flourishing together with nature, and we can tackle sustainability challenges by deepening and broadening the amount of nature that we have in cities.

U of T Scarborough researchers teamed up with the environmental organization [Green Communities Canada](#) (GCC) to create *Pathways to Living Cities*, a new green infrastructure (GI) framework. GI uses the natural world to deliver community services, from managing flooding with bioswales to growing food in urban gardens. This [new framework](#) intends to help policymakers, city planners, managers and engineers with the information and resources they need to make GI an integral part of their communities. It describes the vision of a “living city” — a place where GI is widespread, well-maintained and prioritizes underserved communities.

“Cities can be places of people flourishing together with nature, and we can tackle sustainability challenges by deepening and broadening the amount of nature that we have in cities,” says **Laura Tozer**, Assistant Professor in the Department of Physical and Environmental Sciences at the U of T Scarborough.

The team put together a series of best practices, recommendations, strategies, guiding questions and links to more than 250 studies and resources. The framework provides ideas and tips to guide high-level

planning, including long-term funding options, data monitoring and raising public support. It highlights the importance of maintenance, both of the GI itself and of the partnerships and relationships that support it. A third of the framework is dedicated to equity, and identifying the areas where GI is most needed and putting them first, while ensuring decision-making is driven by collaborating with the people it will impact.

Though the framework was only recently made public, it’s been at the centre of [a pilot project](#) to create living cities across Canada. A team from GCC and U of T are working with five communities of varying sizes in Ontario, Alberta and New Brunswick to tailor the framework into custom plans for increasing and maintaining GI in ways that prioritize the people and places most vulnerable to the impacts of climate change.



Laura Tozer, Assistant Professor, Department of Physical and Environmental Sciences

A daily dose of politics is stressing Americans out, but dealing with it might jeopardize motivation to act



← **Brett Ford,**
Assistant Professor,
Department of Psychology

New research finds that daily exposure to politics can cause chronic stress. What’s more, strategies aimed at avoiding those negative emotions might result in becoming less politically engaged. “The stress of daily politics poses an unfortunate dilemma,” says **Brett Ford**, an Assistant Professor in the Department of Psychology at U of T Scarborough who co-authored the study with Rotman School of Management Assistant Professor **Matthew Feinberg**.

The research, published in the *Journal of Personality and Social Psychology*, surveyed more than 1,000 Americans as they experienced daily political events such as statements from the president, laws debated in Congress and conflicts with foreign countries. In additional experiments, another group of participants watched clips of popular political shows such as *Tucker Carlson Tonight* and *The Rachel Maddow Show* before being surveyed. Some participants were asked to just respond naturally to the shows, while others were asked to use different strategies to help them regulate their emotions during the clips including distraction and cognitive reappraisal.

Ford says cognitive reappraisal is a type of coping strategy that can help reduce stress or anxiety by reinterpreting or thinking about



Cognitive reappraisal is a type of coping strategy that can help reduce stress or anxiety by reinterpreting or thinking about something in a different way.

something in a different way — for example, by downplaying its significance. Distraction, on the other hand, involves avoiding thinking about the content altogether.

The researchers found the strategies were effective in lowering negative emotions, and while that predicted greater well-being, it also meant participants were less likely to take action.

One strategy to stay politically engaged could be emotional acceptance, which is the idea of staying in touch with your emotions rather than immediately trying to get rid of them. This might involve viewing emotions as a valid and natural response to a stressful situation. This response, according to the researchers, tends to predict better mental health without coming at the cost of taking action.



U of T Scarborough researchers use AI to speed up discovery of materials for clean energy



Alex Voznyy, Assistant Professor, Department of Physical & Environmental Sciences



Researchers at U of T Scarborough have developed a method of harnessing artificial intelligence (AI) to discover new and more efficient materials for clean energy technology. Developed by a team led by **Alex Voznyy**, an Assistant Professor in the Department of Physical & Environmental Sciences, the researchers used an AI process called machine learning to help find new materials with desired properties in a significantly shorter amount of time.

“We are trying to find better alternatives to the materials we currently have,” says Voznyy, who runs the Clean Energy Lab at U of T Scarborough and whose research looks at developing new materials for lithium-ion batteries, hydrogen storage, CO₂ capture and solar cells. A major problem with materials currently used in clean energy technology is that many of them are expensive, inefficient or at the limit of their capabilities.

The machine learning model relies on data found in [The Materials Project](#), an open-source database developed over the past decade of more than 140,000 known materials. It has information about the components of known materials including crystal structure, molecular composition, density, energy conductivity and stability. To figure out

what combination of existing materials can lead to a better lithium-ion battery, for example, Voznyy says, may require figuring out the stability of the new material and how much energy it can store.

The challenge is that the calculations required to do this work do not scale very well. Doing these types of calculations currently relies on a quantum chemistry approach, which takes a lot of computing resources and is very slow. The model developed by Voznyy’s team can do these calculations 1,000 times faster. Voznyy’s team used Niagara, U of T’s supercomputer located at the [SciNet centre](#), and the research, [which is published](#) in the *journal Patterns*, was also supported by a grant from the Natural Sciences and Engineering Research Council of Canada (NSERC).



Researchers at U of T Scarborough have developed a method of harnessing artificial intelligence (AI) to discover new and more efficient materials for clean energy technology.

Discovery of non-native bees in Canada could pose a serious threat to native mason bees



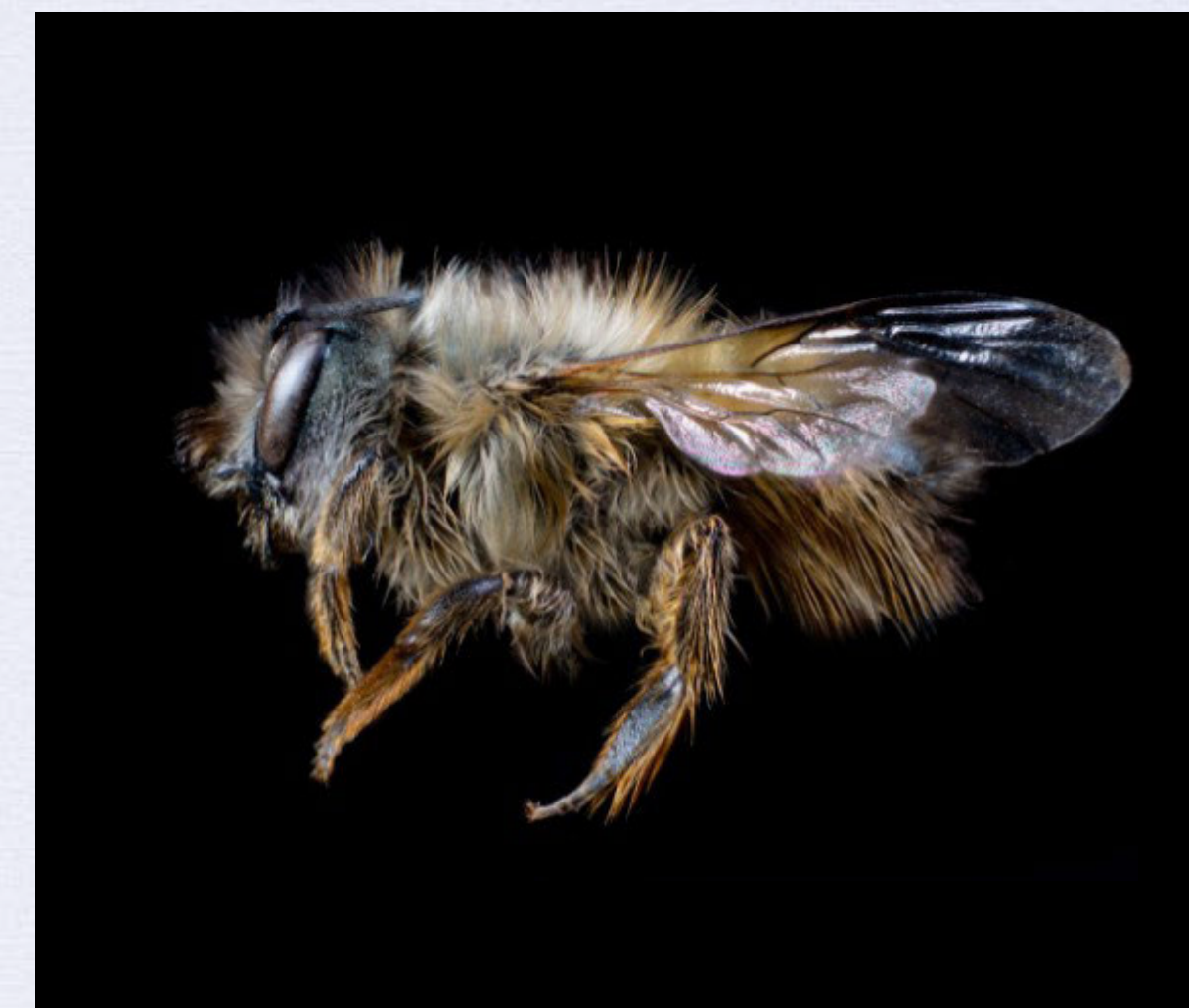
←
Scott MacIvor,
Assistant Professor,
Department of Biological Sciences

A recent study identified populations of non-native mason bees, *Osmia cornifrons* and *Osmia taurus*, in Canada for the first time. They originate from Northern Asia, and were introduced to the United States more than 50 years ago as crop pollinators.

The growing presence of *O. taurus* is the most concerning, says **Scott MacIvor**, an Assistant Professor in the Department Biological Sciences at U of T Scarborough and lead author of the study published in the journal *PeerJ Life & Environment*. He referenced a recent [study](#) in the U.S. that found an 800 per cent increase in *O. taurus* coincided with a 90 per cent decline in six different species of native mason bees. The study was done across multiple mid-Atlantic states over a 13-year period.

MacIvor says the bees likely crossed natural land borders connecting Michigan and New York to Ontario. While the bees have existed in large numbers in the U.S. for decades, it begs the question why they have only recently turned up in Canada. One reason could be the recent popularity of bee hotels that people are using to support native bees that nest in cavities in urban areas. Another potential way they have ended up in Canada could be the online sale of bee cocoons to gardeners and bee hotel owners. MacIvor says it's possible they could be inadvertently sold as non-native species instead of native mason bees.

Protecting native mason bees is critical due to the important role they play in pollinating native plants, as well as spring-flowering orchard crops. MacIvor adds that the best way to support native mason bees isn't necessarily to set up a bee hotel since many native bee species make their nests elsewhere, such as decaying wood or underground. Rather, focusing on plants that flower in the spring, such as lupine, beardtongue, raspberry or redbud, will attract native mason bees and help them thrive.



Faces of dominance: The faces of women and men are perceived differently by liberals and conservatives

A new study finds that liberals and conservatives differ in how they perceive dominance in women, which may influence their likelihood to vote them into political office.

“We found that conservatives and liberals read dominance signals differently in the faces of men and women,” says **Pankaj Aggarwal**, Professor in the Department of Management at U of T Scarborough. Aggarwal and co-author Ahreum Maeng, an Associate Professor at the University of Kansas, looked at the width-to-height ratio of a face to measure perceptions of dominance.

The researchers found conservatives showed a stronger bias against women’s faces to the point that they were less likely to elect a woman candidate due to a perceived association with lower dominance. Liberals indicated they were more likely to vote for a woman, but like conservatives, they also didn’t perceive women with a wider face as more dominant.



Aggarwal says that one reason for this difference may come down to conservatives’ beliefs in maintaining gendered social hierarchies compared to liberals’ attempts to override bias and create a less hierarchical society.

As for why people perceive a wider face as more dominant and worthy of leadership, Aggarwal says the explanation is likely rooted in evolutionary psychology. In traditional societies, men held leadership roles through aggression and were perceived as more dominant. He adds that traditionally, men have been perceived as more dominant and aggressive, while women have been stereotyped as more submissive and nurturing.

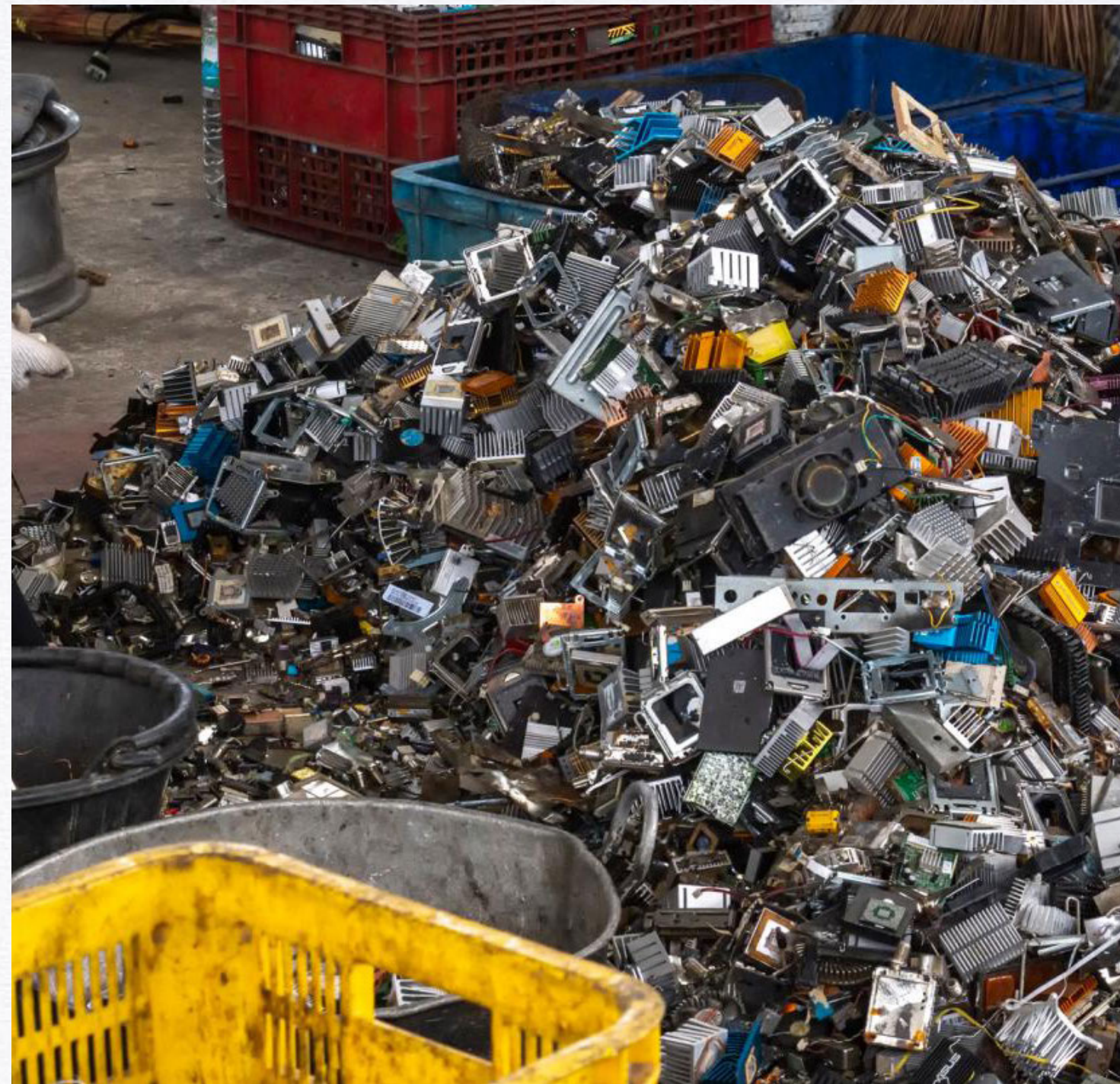
Although gender equality has improved in many societies, women are still nominated to leadership less frequently than men. One of the reasons may come down to how people read the facial cues of candidates. Aggarwal says it’s important to be aware of inherent biases

and stereotypes and try to counter them. He said it’s also important not to let them cloud judgment about a candidate’s electability.



← **Pankaj Aggarwal**,
Professor,
Department of Management

“It’s unethical”: Why developed countries need to take more responsibility in disposing of their e-waste



A new U of T Scarborough study finds that a group of people living in the developing world suffer high levels of toxic emissions from chemicals commonly used in our consumer goods.

The study, published in the journal *Environmental Science Letters*, looked at emissions of PBDEs, a group of chemicals commonly used as flame retardants in cell phones, computers, textiles and furniture.

The researchers found that countries in Europe, North America and parts of Asia often “offload” the toxic emissions associated with disposing of these products by sending electronic waste to the developing world. PBDE emissions are highest in China, India, Bangladesh and Western Africa and the majority takes place during disposal. The operations are hazardous for workers, who must manually separate products to salvage valuable materials such as gold, tungsten, cobalt and other precious metals. This is often done without proper safety or personal protective equipment.

“It’s unethical to send our waste to developing countries or less wealthy parts of the world. If we rely on these chemicals for our products, then we should be responsible for disposing of them,”



←
Frank Wania,
Professor, Department of Physical and
Environmental Sciences

says **Frank Wania**, a Professor in the Department of Physical and Environmental Sciences at U of T Scarborough and author of the study.

The research also highlights how a connected global economy means countries are trading not only products and chemicals but waste. For example, emissions in China from 2000 to 2020 were approximately 300 tonnes, with about half of that linked to imported e-waste. By comparison, PBDE emissions in Europe during that time were only about 5.5 tonnes, with more than 100 tonnes offloaded to other parts of the world.

Women living near natural gas operations experience greater likelihood of depression and substance use during pregnancy

Women living close to natural gas operations experienced higher rates of depression and substance use during pregnancy, according to a new study. The study looked at more than 6,300 women who gave birth in northeastern British Columbia, an area known for its natural gas industry.

“Living near natural gas operations has been associated with an array of negative health outcomes, but little is known about the potential impact on maternal mental health,” says **Élyse Caron-Beaudoin**, an Assistant Professor in the Department of Health and Society and one of the study’s authors.

“This adds to a growing body of evidence that living near unconventional natural gas operations is linked to adverse health outcomes.”



Natural gas operations in general are highly disruptive to a community.

The study, published in the *International Journal of Hygiene and Environmental Health*, included women who gave birth at Fort St. John Hospital, the largest in northeastern British Columbia, over a 10-year period. Mental health data came from the local health network while information about substance use came from a self-reported questionnaire.

Caron-Beaudoin says there are many potential reasons why living close to these operations can lead to higher rates of depression and substance use. While exposure to chemicals might be a factor, she says natural gas operations in general are highly disruptive to a community. She points to research done on oil and gas boom towns in the U.S. that experienced increases in violent crimes, alcohol and substance use, and other community health crises.

“There is a big disturbance in the social fabric of those communities,” she says. “Studies in the U.S. identified higher levels of anxiety and a loss of community cohesion among residents because their communities were upended.”

Recently, a [study](#) from the University of Calgary found that proximity to fracking operations was associated with greater risk of preterm birth in Alberta. This echoes findings on birth outcomes in northeastern B.C. [published last year](#) by Caron-Beaudoin.

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Élyse Caron-Beaudoin,
Assistant Professor, Department of Health and Society



Newborns of women with disabilities more likely to have health complications, study finds



One of the [largest studies of its kind](#) has found babies of women with disabilities have a higher chance of having rare health complications and needing intensive care. A paper co-authored by **Hilary Brown**, Assistant Professor in the Department of Health and Society at U of T Scarborough and published by the [American Academy of Pediatrics](#), found the greatest risks were in newborns of women with intellectual or developmental disabilities, and multiple disabilities.

There are several reasons why a baby may have health complications, and many risk factors are more common in mothers with disabilities. The study found women with intellectual or developmental disabilities tended to live in the lowest-income neighbourhoods; they and those with multiple disabilities also had higher rates of substance use. Women with disabilities were more likely to have unstable chronic health conditions and mental illness, and to smoke during pregnancy.

Researchers had to account for these risk factors, and the odds that they were the cause of a newborn's health condition. After factoring these into their analysis, there was still a moderately higher risk of health complications in newborns of mothers with disabilities.

Brown says the lack of research is part of a problematic larger belief that pregnancy in those with disabilities is rare. Meanwhile, [her 2020 study](#) found one in eight pregnancies in Ontario were to a person with a disability and that number is rising. About 12 per cent of women of childbearing age live with a disability, and fertility rates among the group are rising due to advancements in medicine and human rights. While laws have reformed, these women often face barriers to reproductive health care.

“We know that a lot of disparities in maternal and newborn outcomes really are driven by socioeconomic factors, and that speaks to the importance of all sorts of social programs.”

Accessible transportation, for example, can impact the ability to make it to prenatal care appointments. Physicians’ knowledge and attitudes can also significantly shape one’s experience in the health-care system.

“Physicians also need more resources and training on disability and pregnancy so they can provide high-quality care,” Brown says. “Structural changes need to happen across the system.”



←
Hilary Brown,
Assistant Professor,
Department of Health and Society

A lifeline for an endangered language

The Delaware Nation, a community of about 550 in southwestern Ontario, is one of the oldest settlements in the region. But most members of the community are no longer able to converse in the language of their ancestors.

Bruce Stonefish, a member of the Delaware Nation, fears that losing the language would permanently close a window onto how his ancestors lived and their worldview.

Stonefish recalls picking up a few Munsee words and phrases at an early age, though his parents didn't speak it, and learning more in his early 20s as part of a cultural program. Throughout his life, he says, he has felt motivated by a sense of personal duty to help preserve the dialect: "I want to honour the language."

Now, he is working with **Juvénał Ndayiragije**, an Associate Professor and Chair of Language Studies at U of T Scarborough. Ndayiragije and his research team have developed an online tool they think could help save Munsee and other critically endangered languages in Canada



Bruce Stonefish, Member of the Delaware Nation ↑

Juvénał Ndayiragije, Associate Professor and Chair, Language Studies



and around the world. The tool, which they are testing with Ojibwe (also an Algonquin language), contains 378 English sentences that were meticulously constructed to capture most of a language's grammatical elements.

The researchers enlisted primary speakers of Ojibwe to translate the 378 sentences and then read them aloud in Ojibwe. Then they saved the audio recordings to a database. Having almost completed the data collection for Ojibwe, the researchers recruited a Delaware tribal council member from Oklahoma who speaks Unami, a dialect closely related to Munsee, to translate the sentences into Unami and then read them aloud. Eventually, by creating a language database of the two dialects, as well as Ojibwe, the researchers will be able to conduct a comparative analysis. "It may end up being similar to comparing two dialects of German with English," Ndayiragije says.

Under the guidance of **Jed Meltzer**, an Associate Professor at the Department of Psychology at U of T who specializes in language processing, and **Safieh Moghaddam**, an Assistant Professor in the Department of Language Studies at U of T Scarborough, the research team is using the knowledge they've collected to develop online teaching and learning tools that will enable people to learn Ojibwe from scratch. Once they have proof that the concept works, they'll expand to Munsee and other languages.

Written before Bruce Stonefish passed away in May 2022.

Professor’s research and advocacy focuses on land grabbing — and those fighting it

“When we think about land grabbing, we often think of the land itself,” says **Sharlene Mollett**, Chair of the Department of Global Studies and Associate Professor in the Department of Human Geography at U of T Scarborough.

“I wanted to think about the relationship between land and [human] bodies, and not only when there is land dispossession. There’s an embodied process that is happening to the people who exist on the land.”

Published in *The Routledge Handbook of Critical Resource Geography*, Mollett’s latest chapter, “Resistance Against the Land Grab,” traces the lives of Garifuna Defensoras, women who serve as land and community defenders on the north coast of Honduras. The chapter focuses on the tourism industry and criminalization of Garifuna women.

Communities in coastal regions, often prime real estate for tourism corporations, have a constitutional right to communal lands. And yet, Garifuna people — particularly women — are often and mistakenly

seen as trespassers while they travel along coastal beaches that have been appropriated by hotels. Often, Garifuna women and girls are harassed by hotel staff and security, and experience sexual harassment by tourists.

Mollett’s work also follows the Miskito peoples, an Indigenous community in the Honduran Mosquitia region, located in the easternmost part of the country. She explains that, although Miskito and Garifuna lands and territories are organized along matriarchal forms of inheritance, the state uses a patrilineal framework for land registration. In discussing land struggles in the Rio Platano Biosphere Reserve, Mollett notes, “The state is not only appropriating land in the name of biodiversity conservation but using patriarchal and racial ideologies to justify the disruption of matriarchal landforms in the Mosquitia.”

Along with other scholars who focus on Honduras, Mollett serves as an expert witness for North American asylum cases involving Hondurans seeking to flee the country.



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Sharlene Mollett,
Chair of the Department of
Global Studies



FACULTY & STUDENT AWARDS

Celebrating our achievements



Aisha Ahmad appointed to Royal Society of Canada for work on extremist economy

Aisha Ahmad, an Associate Professor in the Department of Political Science, has been elected to the College of New Scholars, Artists and Scientists with the Royal Society of Canada. Ahmad's scholarly research and advisory work with governments and international stakeholders has focused on the intersection of Islamists and economies. Her research has taken her across the Middle East and Africa, where she had one-on-one interviews with jihadist financiers in Somalia and tracked cocaine-smuggling groups in Mali. She found that in war-torn areas, local businesses often had no option but to work with Islamists, and the profits from these relationships were similarly crucial to jihadists' growing control. The research culminated in her 2017 award-winning book *Jihad & Co.: Black Markets and Islamist Power*, which detailed how jihadist groups rise to power during civil wars by forging deals with local businesses.

"Living in a conflict zone is expensive and gruelling. Most folks are struggling to survive and make ends meet amid the violence. Their government has completely failed them, and citizens are desperate for any type of security," says Ahmad. "When ordinary people choose to support that jihadist option, it is not because they are extremists, but almost always because of their desperate need for stability."



↑
Aisha Ahmad, Associate Professor, Department of Political Science

Members and Fellows of the Royal Society of Canada

- **Marc Cadotte**, Professor, Department of Biological Sciences, Member of College of New Scholars, Artists and Scientists
- **John Friedlander**, Professor, Department of Computer and Mathematical Sciences, Fellow
- **Diana Fu**, Associate Professor, Department of Political Science, Member of College of New Scholars, Artists and Scientists
- **Marlene Goldman**, Professor, Department of English, Fellow
- **Lisa Jeffrey**, Professor, Department of Computer and Mathematical Sciences, Fellow
- **Bernie Kraatz**, Professor, Department of Physical & Environmental Sciences, Fellow
- **Michael Lambek**, Professor Emeritus, Department of Anthropology, Fellow
- **Katherine Larson**, Professor, Department of English, Member of College of New Scholars, Artists and Scientists
- **Natalie Rothman**, Associate Professor, Department of Historical and Cultural Studies, Member of College of New Scholars, Artists and Scientists
- **Judith Teichman**, Professor, Department of Political Science, Fellow
- **Frank Wania**, Professor, Department of Physical and Environmental Sciences, Fellow

Researcher using first-of-its-kind data to uncover how planets form earns Guggenheim Fellowship

Diana Valencia, Associate Professor in the Department of Physical and Environmental Sciences, was awarded the Guggenheim Fellowship. It is hard to win the award — only about 175 win each year from a field of 3,000 researchers, scholars and artist who are nominated. The fellowship financially supports projects in any field so long as they aim to create knowledge and/or art. Valencia was one of only two Canadians to win and the only winner in the category Astronomy – Astrophysics.

The study has her drawing on part of what made her a groundbreaker in her field — she was the first to study exoplanets by combining geophysics, the study of Earth’s physical properties and environments, with astrophysics. Valencia is looking at super-Earths, planets with a mass greater than Earth but less than Neptune, that have rocky compositions similar to Earth. Some of the data she’s receiving is on multi-planet systems, enabling her to compare different rocky planets orbiting the same star to find potential deviations in their composition.

Another key element of the project is determining the role of collisions in planet formation. Much of Valencia’s recent work has been on determining whether exoplanets are more like larger versions of Earth or smaller versions of Neptune — super-Earths and mini-Neptunes respectively.

“I am a woman of colour and the U of T Scarborough campus is so diverse that I want to showcase that. I want to show this is something that people from all walks of careers and life can achieve,” Valencia says.



↑
Diana Valencia,
Associate Professor, Department of Physical
and Environmental Sciences



I am a woman of colour and the U of T Scarborough campus is so diverse that I want to showcase that. I want to show this is something that people from all walks of careers and life can achieve.

Notisha Massaquoi wins prestigious award for fighting inequities in health care

Notisha Massaquoi, Assistant Professor in the Department of Health and Society, has been dedicated to spotlighting and fighting inequities Black women face in Canadian health-care. She was given the 2023 YWCA Toronto Women of Distinction Award, which celebrates women who further gender equality in their field.

She came to Toronto to attend graduate school when the city was in the throes of the HIV pandemic. The crisis disproportionately impacted gay men, and people from African, Caribbean and Black communities, so she initiated Canada's first counselling support programs for Africans living with HIV and helped to create Africans in Partnership Against AIDS, an organization that provides culturally grounded education on HIV/AIDS.

Massaquoi went on to serve as Executive Director of Women's Health in Women's Hands (WHIWH) for 22 years and many of the centre's clients were travelling from Scarborough, about an hour away. She then created the proposal and structure for what would become TAIBU Community Health Centre, a community-led organization, based in Malvern, that prioritizes Black communities across the GTA.

"Health equity for me is the understanding that people with the lived experience of inequity are the only experts who can help you find solutions," she says.

She joined U of T Scarborough and founded the Black Health Equity Lab (BHEL), a lab dedicated to not just researching health-care inequalities faced by the Black community in Toronto but co-creating solutions. Its inaugural project is a collaboration with TAIBU Community Health Centre to develop Ontario's first clinical program for Black people living with HIV, which will provide immediate and specialized support.



Notisha Massaquoi, Assistant Professor, Department of Health and Society



Health equity for me is the understanding that people with the lived experience of inequity are the only experts who can help you find solutions.

Alex Voznyy honoured by Chemical Institute of Canada

Alex Voznyy, an Assistant Professor in the Department of Physical and Environmental Sciences, has been honoured with the Strem Award from the Chemical Institute of Canada.

“This is a big honour for me,” says Voznyy, whose



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Alex Voznyy, Assistant Professor, Department of Physical and Environmental Sciences

research focuses on the development of materials for clean energy technologies.

Voznyy, who joined U of T Scarborough in 2018, has made significant contributions to the understanding of colloidal nanocrystals, which are tiny (nanometer-sized) inorganic particles. Due to their properties, these artificially grown particles are particularly useful in LEDs, solar cells and certain types of lasers, among other applications.

The Strem Award for Pure or Applied Inorganic Chemistry is presented annually to a researcher who has made an outstanding contribution to inorganic chemistry, demonstrating exceptional promise, while working in Canada.

“I’m really excited to be able to share my research with such a large and distinguished group of researchers.”

U of T Scarborough mathematicians’ win recognized for research

Two professors at U of T Scarborough’s Department of Computer and Mathematical Sciences have been recognized with awards by the Canadian Mathematical Society.

Associate Professor **Robert Haslhofer** is the recipient of the 2023 Coxeter-James Prize, given to an early career mathematician who has made outstanding

contributions to mathematical research. Associate Professor **Stefanos Aretakis** has been named the recipient of the 2023 Cathleen Synge Morawetz Prize. This prize is awarded for an outstanding research publication, or a series of closely related publications, on the topic of Applied Mathematics.

“We congratulate both Dr. Haslhofer and Dr. Aretakis. We’re tremendously proud of their outstanding contributions to mathematics. They both have promising careers ahead, and we are glad they can flourish at U of T Scarborough,” says **Irena Creed**, Vice-Principal of Research and Innovation at U of T Scarborough.



←

Robert Haslhofer and **Stefanos Aretakis**, Associate Professors, Department of Computer and Mathematical Sciences

Myrna Simpson receives Clair C. Patterson Award from Geochemical Society

Myrna Simpson, Professor of the Department of Physical and Environmental Sciences, is this year's recipient of the Clair C. Patterson Award from the Geochemical Society. This is the second time a U of T faculty member has received the Clair C. Patterson Award recently: Professor **Barbara Sherwood Lollar** from the Department of Earth Sciences was a recipient in 2019.

Named after Clair Cameron Patterson, the scientist who developed the uranium-lead dating method for rocks and minerals, the annual award celebrates innovative breakthrough research in the field of environmental geochemistry.

"This recognition is truly humbling, and I only hope that my research withstands the test of time to the same extent of that of Clair C. Patterson," said Simpson, who also becomes a fellow of the Geochemical Society as a result of receiving the award.

Simpson's earlier research focused on developing methods to unravel complex environmental processes at the molecular level to better understand how climate change and other human-caused activities were fundamentally changing the environment.

Over the past 15 years, her lab used a series of innovative techniques including nuclear magnetic resonance (NMR) and mass spectrometry to address knowledge gaps related to global environmental change, pollution of the environment and long-term storage of used nuclear fuel.

"I am particularly proud of how my group has been able to provide new insight into geochemical processes in the environment and uncover the 'why' behind so many processes. Knowing the 'why' means we are better prepared for protecting the earth," said Simpson.



↑
Myrna Simpson, Professor, Department of Physical and Environmental Sciences



This recognition is truly humbling, and I only hope that my research withstands the test of time to the same extent of that of Clair C. Patterson.

External Award Winners



- Outstanding Career Computer Science Research Prize, **Ashton Anderson**, Assistant Professor, Department of Computer and Mathematical Sciences
- 2023 Cathleen Synge Morawetz Prize, **Stefanos Aretakis**, Associate Professor, Department of Computer and Mathematical Sciences
- Public Scholarship Award, **Katherine Blouin**, Associate Professor, Department of Historical and Cultural Studies
- 2023 Coxeter-James Prize, **Robert Haslhofer**, Associate Professor, Department of Computer and Mathematical Sciences
- Women of Distinction Award, **Notisha Massaquoi**, Assistant Professor, Department of Health and Society

- President's Medal from Society for Experimental Biology, **Cosima Porteus**, Assistant Professor, Department of Biological Sciences
- Clair C. Patterson Award, **Myrna Simpson**, Professor, Department of Physical & Environmental Sciences
- DIMA Award, **Myrna Simpson**, Professor, Department of Physical & Environmental Sciences
- 2023 Strem Award, **Alex Voznyy**, Assistant Professor, Department of Physical & Environmental Sciences
- ICSA Outstanding Young Researcher Award, **Linbo Wang**, Assistant Professor, Department of Computer and Mathematical Sciences

New Research Chair at U of T Scarborough

New Canada Research Chair in Africana Development and Feminist Political Economy

For centuries, women of African descent have created economies that prioritize people over profits — **Caroline Shenaz Hossein**, Associate Professor in the Department of Global Development Studies, is spotlighting how they've done it. As Chair, she will document the ways women of African descent turn to their own communities when excluded by political and economic institutions such as banks. She aims to create a set of design principles that illustrate what it means to have a solidarity economy — an economy that places social benefit first.

“What I’m trying to do is to open our understanding of what it means to participate in the economy,” says Hossein.

Taking inventory of these often hidden and vilified economic activities will have Hossein conduct fieldwork in the U.S., Ghana and Trinidad and Tobago, along with forested areas of Karnataka, India, where an African diaspora community lives. She will also collaborate with researchers based in these areas through an international network of feminists, the Diverse Solidarity Economies (DiSE) Collective.

Hossein adds the CRC to a long list of roles. She acts as advisor to the Oxford University Press, which has published several of her papers, and she is an editorial board member for the UN Task Force for the Social and Solidarity Economy. A published author and co-author, she’s also won an Ontario Early Researcher Award and was the first Black Canadian elected to the board of the International Association for Feminist Economics, a global non-profit that highlights feminist economics.



↑ **Caroline Hossein**, Associate Professor, Department of Global and Development Studies, CRC in Africana Development and Feminist Political Economy 2022-2027



What I’m trying to do is to open our understanding of what it means to participate in the economy.

Current Canada Research Chairs at U of T Scarborough



Daniel Bender
Department of Historical and Cultural Studies,
CRC in Food and Culture,
2014-2028



Brian Connelly
Department of Management,
CRC in Integrative Perspectives on Personality,
2016-2026



Cendri Hutcherson
Department of Psychology,
CRC in Decision Neuroscience,
2018-2028



Marney Isaac
Department of Physical & Environmental Sciences
Centre for Critical Development Studies, CRC in Agroecosystems and Development,
2013-2024



Kagan Kerman
Department of Physical & Environmental Sciences,
CRC in the Bioelectrochemistry of Proteins,
2016-2026



Bianca Schroeder
Department of Computer and Mathematical Sciences,
CRC in Data Centre Technologies,
2014-2024



Bebhinn Treanor
Department of Biological Sciences,
CRC in Spatially Resolved Biochemistry,
2016-2026



Myrna Simpson
Department of Physical & Environmental Sciences,
CRC in Molecular Biogeochemistry,
2019-2026



Hilary Brown
Department of Health and Society,
CRC in Disability and Reproductive Health,
2019-2026

Internal Faculty Awards



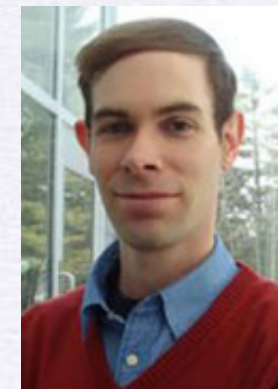
U of T Scarborough Principal's Research Award: Professor **Mark Schmuckler**, Department of Psychology



U of T Scarborough Research Recognition Award: Associate Professor **Cendri Hutcherson**, Department of Psychology



U of T Scarborough Pre-Tenure Faculty Research Award, Sciences: Assistant Professor **Christina Guzzo**, Department of Biological Sciences



U of T Scarborough Research Excellence Faculty Scholars Award: Professor **Patrick McGowan**, Department of Biological Sciences



U of T Scarborough Pre-Tenure Faculty Research Award, Humanities: Assistant Professor **Sara Saljoughi**, Department of English



U of T Scarborough Pre-Tenure Faculty Research Award, Sciences: Assistant Professor **Alex Voznyy**, Department of Physical & Environmental Sciences



U of T Scarborough Research Excellence Faculty Scholars Award: Associate Professor **Hanno Rein**, Department of Physical & Environmental Sciences



U of T Scarborough Pre-Tenure Faculty Research Award, Social Sciences: Assistant Professor **Cassandra Hartblay**, Department of Health & Society

Connaught New Researcher Award Winners



Élyse Caron-Beaudoin
Assistant Professor,
Department of Health &
Society

“Environmental Exposure to Contaminants During Pregnancy in a Region of Unconventional Natural Gas Operations: Impacts on Chronic Stress Biomarkers”



Dave Kush
Assistant Professor,
Department of
Language Studies

“Investigating Syntactic Prediction in Language Processing”



Nicole Latulippe
Assistant Professor,
Department of Human
Geography

“Exploring Treaty Citizenship in Scarborough”



Cosima Porteus
Assistant Professor,
Department of Biological
Sciences

“Can Hydrogen Sulfide Supplementation Improve the Health of Aging Turquoise Kill Fish?”



Robert Rozeske
Assistant Professor,
Department of
Psychology

“An Optical Method of Spatially-resolved Neural Recordings and Manipulations During Emotional Memory”



Yan Wang
Assistant Professor,
Department of Biological
Sciences

“Demystifying the Mosquito-fungus Interactions Using Comparative multi-Omics Approaches”

African Scholars Awards recipients celebrated at in-person ceremony



↑ **Wisdom Tettey**, Principal, and **Maydianne Andrade**, Professor, Department of Biological Sciences

U of T Scarborough Principal **Wisdom Tettey** and Professor **Maydianne Andrade** were among 17 U of T community members to be recognized at a recent African Scholars Awards ceremony presented by the U of T African Alumni Association.

Andrade, a Professor in the Department of Biological Sciences at U of T Scarborough, was recognized with a Distinguished African-Caribbean Award, while **Tettey** received the Distinguished Influencers Award.

Tettey said it was an honour to be recognized.

“I think it’s important to have the humility to say that this doesn’t just represent me,” he said.

“It represents all the people who motivate me every day to do what I do and hopefully carve a pathway for people to reach their aspirations and their potentials.”



I think it’s important to have the humility to say that this doesn’t just represent me.

Undergraduate Research Prize

The Undergraduate Research Prize celebrates UTSC students who have excelled in research, scholarship and creative activities during the course of their study. Sponsored by the UTSC Library and the Office of the Vice-Principal Research & Innovation, the award also recognizes the students' engagement with the library during their research or creative process. Students may express their achievements in many ways, such as a traditional paper, database, a website, digital project or creative form. They compete in one of four categories: Humanities, Social Sciences, Sciences and Creative Expression. This past year, 11 students submitted their projects, which were adjudicated by a diverse panel of faculty members in terms of discipline, gender, race and career stage. Three cash prizes of \$1,000 were given out to projects in the humanities, social sciences and sciences.



IN THE HUMANITIES

Kaitlyn Nicol

To “open up the vacant Crown lands”: Surveys, Property, and Settlement Along the Bobcaygeon Colonization Road (1840s to 1880s)

IN THE SOCIAL SCIENCES

Stephanie Domingo

The Psychology of Romantic Relationships

Sapolnach Prompiengchai

Bringing Student-Centered Learning to India: Initial Reactions from Teachers and Students

IN THE SCIENCES

Pionie Kwok

Two sides to every story: Adaxial and abaxial sides of Canadian wheat leaves respond differently to heat and drought stress

RESEARCH EVENTS

A recap of events hosted this year



Celebration of Research Excellence Lecture Series



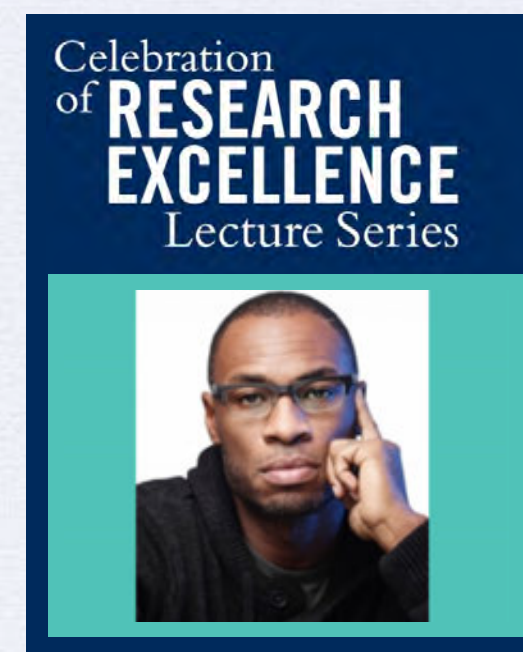
Over the past year, the Office of the Vice-Principal Research & Innovation brought the community together to advance the intellectual life of the campus through U of T Scarborough's Celebration of Research Excellence Lecture Series. This series showcases UTSC's innovative research environment and features award-winning U of T Scarborough faculty presenting cutting-edge research and sharing innovations and discoveries that are advancing new knowledge and improving lives in Canada and around the world. The 2022-2023 series was comprised of five lectures featuring emerging and established U of T Scarborough scholars, who reflected the diversity of faculty accomplishments in the humanities, social sciences and physical and life sciences. This series of virtual presentations was open to faculty, staff, and students from all three U of T campuses.



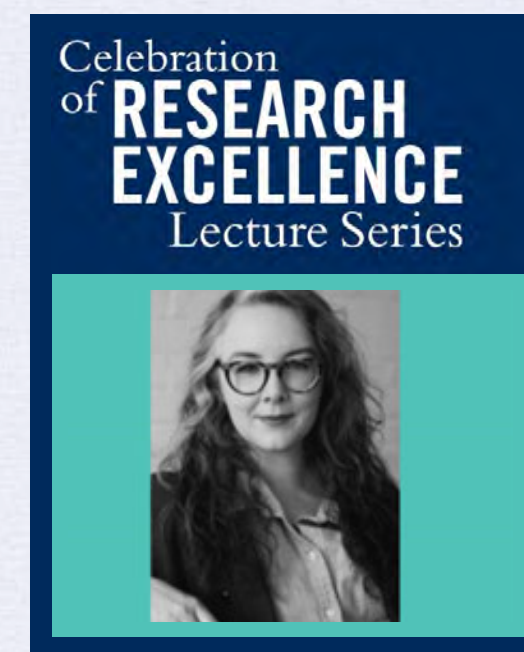
Talk 1 – Assistant Professor **Scott MacIvor** - Department of Biological Sciences: "Biodiversity and Urban Green Spaces – Trade Offs, Synergies, and Ways Forward."



Talk 2 – Professor **Jessica Wilson** - Department of Philosophy: "The Strong Emergence of Free Will."



Talk 3 – Assistant Professor **Mark V. Campbell** - Department of Arts, Culture and Media: "Doing the Knowledge: Preserving Hip-Hop Culture Beyond 'the Archive.'"



Talk 4 – Associate Professor **Andrea Charise** - Department of Health & Society: "Crafting Legacy: Arts, Wellness, and Intergenerational Storytelling."



Talk 5 – Professor **Alan Saks** – Department of Management: "The Need for Caring in and Around Organizations."

Science Rendezvous 2023

Science Rendezvous, a national celebration of science, technology, engineering, art, and math (STEAM), returned May 13th, 2023, marking the 12th anniversary of the partnership between U of T Scarborough, the Toronto Zoo, and Let's Talk Science. This was the first in-person Science Rendezvous event since 2019.

This year's event featured presentations from a trio of U of T Scarborough faculty, including Associate Professor **Julie Teichroeb**, Professor **Maydianne Andrade**, and Professor Emeritus **Rudy Boonstra**, discussing their exciting world-class research, as well as Toronto Zoo experts Jon Spero and Beth McGregor who presented on their fascinating work with animals.

More than 70 UTSC students acted as Let's Talk Science volunteers, engaged with the community and promoted science outreach through nine activity stations located throughout the Toronto Zoo.

This Science Rendezvous event was free with admission to the Toronto Zoo, and was dedicated to strengthening the quality, relevance and impact of science education and the outreach community in Canada. It was well-received, with 11,480 visitors attending the event, including two MPPs and Toronto's Deputy Mayor.



Let's Talk Science volunteers and Toronto Zoo expert **Jon Spero** engaging with the community during Science Rendezvous at the Toronto Zoo.

↓ Let's Talk Science volunteers with young learners.



THE HUB

Advancing innovation and entrepreneurship





The Hub is U of T Scarborough’s innovation centre and startup incubator, supporting students, recent alumni and community organizations to launch their ideas in research commercialization, social innovation, and business creation. In the last year, 62 new companies were formed and 38 graduated from The Hub. Since 2015, more than 300 emerging startups have been created, with a combined revenue and investment of over \$78 million.

The Hub facilitates workshops, events, coaching sessions, competitions and hack-a-thon/innovation challenges. The annual Startup Pitch Competition produced a wide range of ideas and innovation, ranging in applications from mental health to Spikeball to cosmetics and more.



Wearsos

Lynne Corvaglia is on a mission to turn thousands of old airline seats into high-end leather products — and job opportunities for women in rural parts of Costa Rica — with her startup Wearsos. More than 12,000 seats are being upcycled into bags and accessories through a program dedicated to teaching women in rural Costa Rica leatherworking and business skills.

TransCrypts

TransCrypts, founded by cousins **Zain Zaidi** and **Ali Zaheer**, is a document verification platform using blockchain that represents a way for Ukrainian refugees to access their medical records and employees to control the official documents usually kept by HR departments. Through Pitch Competitions at The Hub and U of T Entrepreneurship, they received early funding and continue to raise capital. Currently, they have raised nearly \$2.4 million (USD) in funding from backers including *Shark Tank* investor Mark Cuban.

INDAGGO

Melanie Ratnam is the founder of INDAGGO, a startup dedicated to easing pain points for lab researchers. This year, Ratnam represented the Society for Canadian Women in Science and Technology (SCWIST) in New York at the United Nations' annual Commission on the Status of Women. She grew her company in The Hub, where she now coaches other entrepreneurs, particularly those with businesses related to technology, life sciences and STEM, and hosts consulting sessions.

Mhapy

Mhapy is a startup with a proactive chatbot developed by mental health nurse **Chijindu Ukagwu**. He wants to automate mental health screenings without losing the feeling of conversation patients get from interactions with health-care staff. Ukagwu won top prizes at The Hub Startup Pitch Competition and Ontario Shores Hack-a-thon for Mental Health and Innovation in collaboration with The Hub. ↓



Neurokin

Neurokin is a platform for marginalized neurodivergent people who identify as women, 2SLGBTQ+ and/or people of colour. The company was co-founded by **Maria Khandaker & Shupa Rahman**, cousins and best friends living with autism and ADHD. The duo are trying to make the platform they needed as they struggled to get diagnosed and understand their brains. Khandaker and Rahman won top prize and the resiliency award at Mental Health and Innovation in collaboration with The Hub. ↓



EVOLVERE Mental Health

Tanisha Sylvester, U of T alum, founded EVOLVERE Mental Health, a digital platform where students share their experiences and access mental health resources. Core features include forums for posting reflections and links to resources, a blog feed for longer user articles and a section for challenges and prompts for students to actively practice mental health care. EVOLVERE won sixth place in U of T's 2023 Adams Sustainability Innovation Prize.

Bash Roundnet

Shayne Gryba, a recent PhD in theoretical physics at U of T, designed Bash Roundnet to optimize the key components for playing roundnet. Also commonly known as Spikeball, the sport centres on hitting a ball onto a trampoline-like net until the ball touches the ground or the net's rim. He won one of the top prizes at The Hub Pitch Competition.

Mounib Real Food Only

Mounib Real Food Only, alum **Iman Mounib's** chocolate hazelnut spread, is a new take on the iconic breakfast topping — it's made of three ingredients, has nearly plastic-free packaging and everything is sourced from Canadian companies. ↓



Innovation and Entrepreneurship by the Numbers

Combined revenues and investment of Hub startups since 2015 **\$78M**

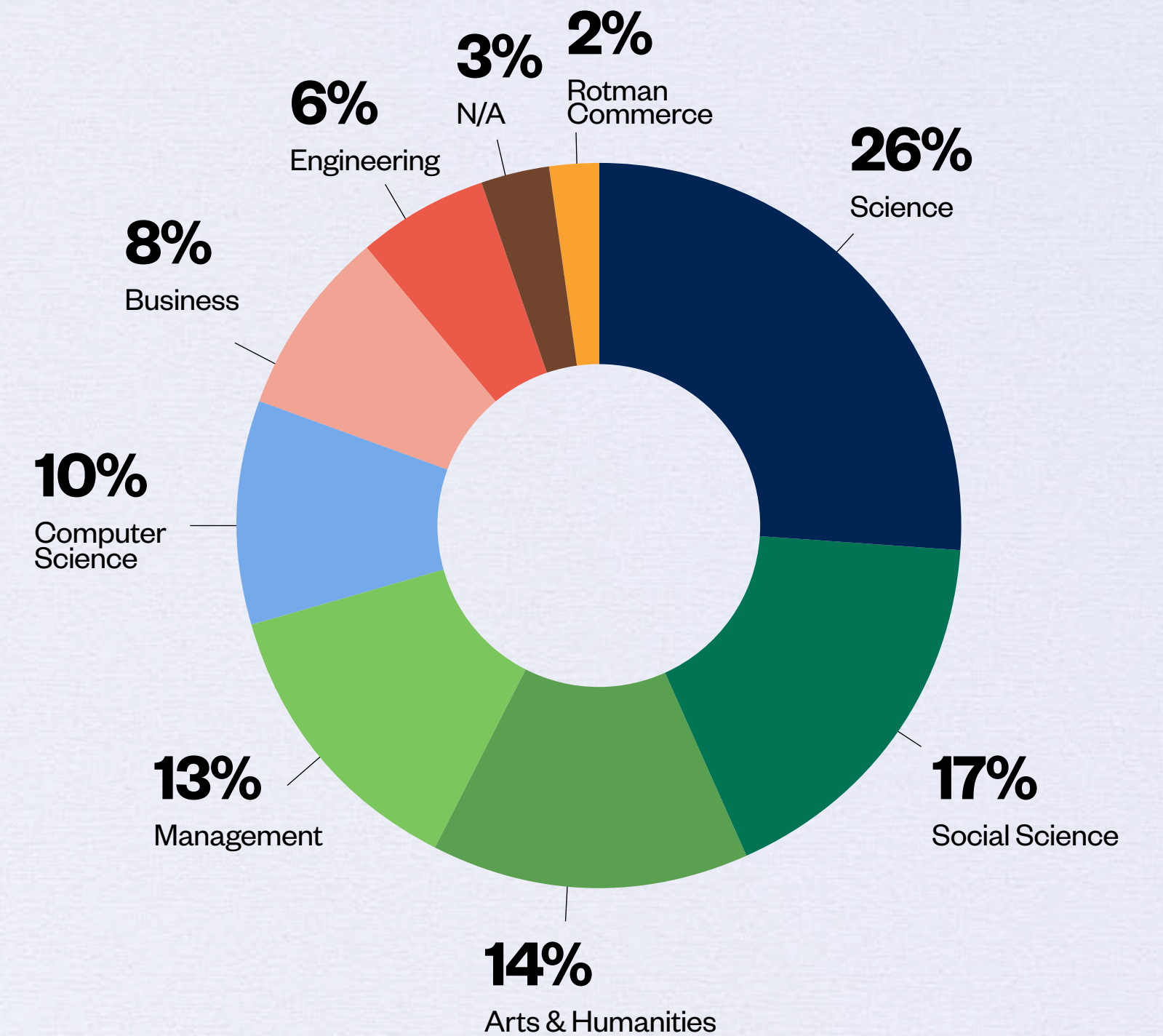
Current combined revenues and investment of Hub startups **\$3.05M**

Total companies in residence **\$87M**

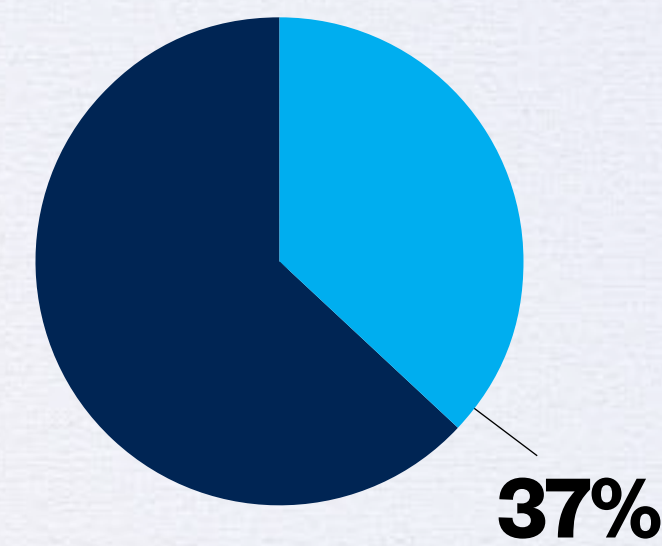
Companies graduated **38**

New companies **62**

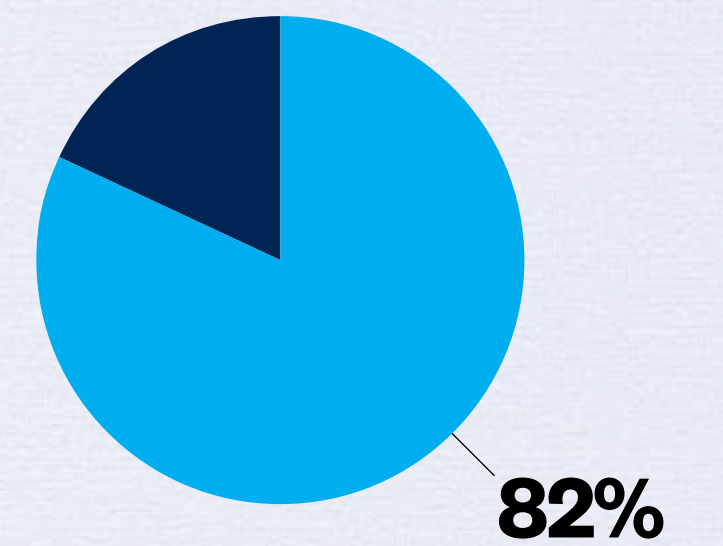
Founders in The Hub by discipline, 2022-23



Total percentage of companies with women founders



Total percentage of founders identifying as people of colour





LOOKING FORWARD

Exciting new initiatives at U of T Scarborough

Sam Ibrahim Centre for Inclusive Excellence in Entrepreneurship, Innovation and Leadership (CIEEIL)

The new Sam Ibrahim Centre for Inclusive Excellence in Entrepreneurship, Innovation and Leadership (CIEEIL) at the University of Toronto Scarborough will take the region’s innovation ecosystem to the next level and equip student entrepreneurs with the tools and resources they need to flourish.

With the historic donation of \$25 million by Sam Ibrahim, the CIEEIL, will leverage the university’s vast pool of research and innovation expertise and global networks to provide entrepreneurs at UTSC with connections, resources and learning opportunities that can help accelerate their ideas and ventures. It will also encourage student entrepreneurs to develop their ideas directly in Scarborough, helping to spur economic growth for the eastern GTA.

“This partnership will allow UTSC to play a key role in helping to develop the next generation of Scarborough-based entrepreneurs,” said **Wisdom Tettey**, Principal of U of T Scarborough. The Centre will convene renowned leaders and experts, including through two new positions established by this investment: the Sam Ibrahim Chair in Inclusive Entrepreneurship and Innovation, who will lead the vision for the Centre, and an entrepreneur-in-residence, who will provide valuable mentorship to up-and-coming innovators.

This new partnership will also support the construction of the Sam Ibrahim Building on Military Trail. Set to open in 2024, the building will act as a central hub for UTSC’s North Campus, housing the Sam Ibrahim Centre as well as Student Services offices and spaces for the Department of Computer and Mathematical Sciences.



Arrow Innovation Hall
(Rendering by CEBRA and ZAS ARCHITECTS + INTERIORS)

New SDG Scholars Academy: Institutional Strategic Initiative on UN Sustainable Development Goals

The University of Toronto launched SDGs@UofT, a new **Institutional Strategic Initiative (ISI)** aimed at having a substantive global impact by supporting Sustainable Development Goals (SDGs). SDGs@UofT will be led from U of T Scarborough and will be supported by a number of divisions and engage researchers, faculty, students and staff from across the university.

The initiative will also launch the SDGs Scholars Academy, a think tank bringing together researchers from various disciplines across U of T with the goal of advancing understanding and addressing issues critical to sustainable development. Its vision is to position U of T as leaders in convergence research that empowers positive actions on the SDGs and informs future global goals for an equitable and sustainable future. Its mission is to be a global powerhouse of knowledge that enhances learning, catalyzes equitable action, and facilitates inclusive outcomes on the SDGs through an innovative network of faculty, trainees, and partners.

The Academy will include distinguished fellows and fellows who will lead convergence research to create novel research frameworks relevant to the SDGs. The overarching goal is to influence intellectual and public discourse and shape evidence-based policy and practical solutions to global challenges that promote just, equitable and empowering outcomes. The SDGs Scholars Academy will combine the collective strengths and efforts of its members to advance the SDGs by supporting training programs, identifying new opportunities for joint research projects, synthesizing, and mobilizing their knowledge.



Our thanks go to everyone in the Office of the Vice-Principal Research & Innovation. 2022-2023 OVPRI Annual Report contributors: Everyone in the division of OVPRI, particularly Sharon George, Jovana Drinjakovic, Joshua van Ry, Feihan Dai, Suhail Asrar, Brice Rousseau, Jason Darby, Ariella Lukach, Joel Faber and Bridget Newsom. We would like to acknowledge U of T and U of T Scarborough Communications for their images and stories.

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RESEARCH & INNOVATION**