Class of 2020 A snapshot / Ancient English How we spoke a millennium ago / Money from Nothing The next Airbnb? Birding Pleasures Beauty in the everyday / Life of Rajiv The role that got away / Ice Queens Women's hockey in 1910

UofTMagazine

WINTER 2017

WHAT THE WORLD **NEEDS NOW**

How U of T's historic Boundless campaign is lifting the university, the city, Canada, and beyond

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Winter 2017

Volume 44, No. 2



25 What the World Needs Now

Discover *what's new* for Boundless: how U of T's historic \$2-billion fundraising campaign is lifting the university, the city and beyond.

Find out *what's next* as we expand the campaign to reach for a new goal of \$2.4 billion and strengthen U of T's standing as one of the best public universities in the world.

UofTMagazine

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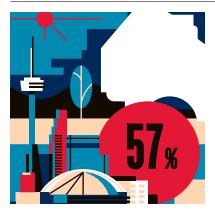




Departments

Technology is going to change how we deliver health care. We're on the cusp of something transformational.

- Dr. Joseph Cafazzo, a U of T prof of engineering and health informatics who is working on an app that allows heart patients to report vital information from home, p. 29.



11 A snapshot of U of T's new class of 15,000 undergraduates: who they are and where they're from



19 Engineering professor Brendan Frey is harnessing artificial intelligence to solve the mystery of genetic disease



61 Photographer Nick Kozak (BSc 2005 Trinity) and writer Jack Locke travelled more than 3,000 kilometres over icy northern Ontario roads to discover the powerful stories and resilient people of the First Nations near James Bay

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Letters





Fifty nations have banned the use of corporal punishment of children. To our shame, Canada is not among them.

RUTH MILLER

BA 1960 UC, MEd 1981, TORONTO

Ban Corporal Punishment

John Barber's interesting article "The Hidden Epidemic" (Autumn 2016), about Prof. Esme Fuller-Thomson's important work on adverse childhood experience, mentions section 43 of the Criminal Code, which gives parents and caregivers a defense against assault when corporal punishment is used against children.

Fifty nations have banned the use of corporal punishment of children. To our shame, Canada is not among them. Among the 94 calls to action by the Truth and Reconciliation Commission, number six is the repeal of section 43. Prime Minister Trudeau has promised to implement all 94. He could start by repealing section 43, bringing Canada in line with countries around the world that recognize the harm done by the use of corporal punishment.

RUTH MILLER

BA 1960 UC, MEd 1981, TORONTO

Winning Shots

Splendid composition marks every one of the winning photos in the magazine's "Take Your Best Shot!" contest (Autumn 2016). The viewer's eye is drawn into the heart of each photo. Well done!

CAROL SHETLER

BA 1981 UTSC, OSHAWA, ONTARIO

Questions about Biotechnology

Re: "Hungry for Hazardous Waste"

(Autumn 2016), I appreciate that *U of T Magazine* is trying to positively report on the valuable research taking place at the university. However, I think it is vitally important for a university magazine to promote critical thinking and ask questions of research, rather than simply accepting the claims of researchers at face value.

For instance, are there direct risks of this application of biotechnology? Are there uncertainties about how the organism will affect the ecosystem into which it is released, and the organism's potential to evolve in unforeseen ways?

Why is a biotechnological approach needed? Are there lower-tech approaches that would be equally effective at the remediation in question? How are the bio-safety and bioethics questions related to this research being considered and addressed?

I am not opposed to the use of biotechnology, and this case may represent a very helpful use. However, I am opposed to the lack of critical thought in this type of reporting about biotechnology.

MATTHEW LEGGE

BA 2006 VICTORIA, RICHMOND HILL, ONTARIO

Prof. Elizabeth Edwards responds:

Thank you for your important questions and I am happy to try to answer and clear up any confusion.

Biotechnology refers to any use of living systems to develop or make

products, but does not necessarily mean that organisms are genetically or otherwise modified. In our case, we are using naturally occurring microbes found in soil and groundwater. We grow them in the lab to boost the numbers of the most active benzene-degrading microbes, which allows them to do the same job as the resident microbial population, but more quickly. Since these more active organisms only grow on petroleum hydrocarbons, as soon as the contamination is gone, they will die back.

We are also taking the steps to obtain Environment Canada approval of our enriched cultures. My partners at SiREM and I have done this previously for another culture of microbes for treating chlorinated-solvent contaminated wastes, which we market under the name KB-1. We worked with Environment Canada to ensure our cultures comply with the same regulations as other specialized microbial cultures such as those used to make beer and cheese.

In terms of alternatives, our approach is actually the lowest-tech option possible, other than to do nothing and let nature take its course. Conventional treatment requires extensive digging and dumping and just moves the contamination from one location to another, whereas bioremediation actually destroys the contaminant in place. As with any remediation effort, regardless of the technology, careful monitoring is required to understand what is happening to the chemicals below the ground.

Understanding Crime

I was in one of the first classes taught at U of T Mississauga by Prof. Contreras, who was profiled in "The Inner Lives of Gang Members" (Autumn 2016). He was a great professor, and the course – a senior seminar on drugs in the city, if memory serves - was very compelling. By the end of the semester, the knowledge I'd gained made me look more analytically at crime and the sociological forces that can sustain, produce or circumvent criminal actions.

DAN DAVIS

BA 2015 UTM, OAKVILLE, ONTARIO

Women in Engineering

More women are now in engineering, which is great. But, as Kirsty Duncan points out in "Bringing Science Back" (Autumn 2016), we need to be forceful about our abilities and our desire to succeed, even if there are professors or colleagues - male or female - who try to tell us that we cannot do it. Women

need to have a great deal of confidence, and should avoid negative people in their life and career. I encourage more women to pursue science and engineering.

MARIANA GRINBLAT

MEng 1986, TORONTO

Correction

Kirsty Duncan, Canada's minister of science, graduated with a BA from University College at U of T in 1989, not 1986, as was reported in the Autumn 2016 issue ("Bringing Science Back").

Write to us!

U of T Magazine welcomes letters at uoft.magazine@utoronto.ca. All letters may be edited for clarity, civility and length.

Our readers tweeted about some of the impressive people profiled in our most recent issue:

On Science Minister Kirsty Duncan:

Great profile of @ScienceMin in @uoftmagazine. Her dedication to discovery science & #womeninSTEM is inspiring! Plus she's run eight Boston marathons. Props and mad respect for her as a scientist and as a runner!

Betty Zou @BisousZou

Nice opening my email and seeing @KirstyDuncanMP

Celina C-Chavannes @MPCelina

On our tribute to psychiatry professor Paula Goering, who died recently due to cancer:

Great U of T Magazine piece on a remarkable person.

David Gratzer @DavidGratzer

On Robin Mazumder, the occupational therapy grad who tries to make urban life a little better:

> Just love this guy! Watch out for him: a game changer, leader and visionary! Skye Barbic @skye_barbic

This reader also loved the Teabot, created by PhD student Rehman Merali:

It's things like this that ensure I remain a proud alumna. Thx for making my day @myteabot **#UofTea #prioriteas**

Niya B @destiniya

Follow U of T Magazine on Twitter @uoftmagazine



A Place to Reimagine the World

The Boundless campaign is helping U of T – and Canada – shine as a beacon of inclusion and hope



At the time, we did not expect to surpass the campaign's \$2-billion target so quickly. We did not predict the unprecedented number of volunteers, or the record level of alumni engagement, that it has attracted. Nor could we have predicted the many new opportunities that our deans, principals and other academic leaders would uncover to extend U of T's impact as a global powerhouse of learning and discovery.

As Boundless progressed, we identified *Three Priorities* for the university, to help us achieve our strategic plan. First, we are leveraging our three locations in one of the world's most vibrant and dynamic city-regions, for the mutual benefit of the university and the city. Second, we are strengthening our partnerships with leading peer institutions around the world, to provide more opportunities for our students to gain international experience and for our faculty members to collaborate with global colleagues. And third, we are reimagining undergraduate education, better enabling our students to make the most of their experience at U of T to help them prepare for a lifetime of success.

These *Three Priorities* have been embraced energetically across our three campuses and throughout the university. And the success of the Boundless campaign has created an unprecedented wave of momentum.

In light of this, recently I announced that, with the unanimous support of our volunteer Campaign Executive Closing Committee, and our Principals and Deans Advisory Group, we have decided to expand the Boundless campaign to achieve a total goal of \$2.4 billion for the advancement of the University of Toronto.

As I've said before, U of T defies gravity. This institution somehow competes with, and even outperforms, some of the greatest (and wealthiest) universities in the world, with a small fraction of their budgets. And we remain staunchly committed to ensuring that all qualified students can complete their studies at U of T, regardless of their financial means.

Through the expansion of Boundless, together we can reach even higher – as a world leader in regenerative medicine, genomics, computational medicine and machine learning; as a hub of new thinking on the future of the Toronto region and other major urban regions around the globe; as a key source of groundbreaking research across the humanities, the sciences and the social sciences; as a massive engine of innovation and entrepreneurship; and as a global portal for the talent, creativity and collaboration on which the future of our world depends.

We launched Boundless in the wake of the Great Recession, a time of enormous uncertainty in the world. We believed that the challenges of that time gave us all the more reason to press onward. And our alumni and friends rallied to the cause.

The year 2016 has also been a time of astonishing and unsettling change. Some of the world's most powerful and progressive countries are turning inward, and the temptation to build walls and burn bridges seems to be unstoppable. In my travels on behalf of the university, I hear my international colleagues express concern. But they also express their admiration – for U of T, and for the wonderfully successful experiment in diversity we call Toronto.

And so, in a new time of challenge, we are once again presented with an opportunity. It is Canada's moment to shine, as a beacon of inclusion and hope. These values are our values, as Canadians and as members of the global U of T community. We have so much to contribute, so much more we can accomplish together, to help reimagine the world – as a world of equality and justice, health and prosperity, wisdom and wonder.

I invite you to join us in this new and final stage of our campaign for the University of Toronto. And I thank you for the historic, *boundless* progress that you have made possible.

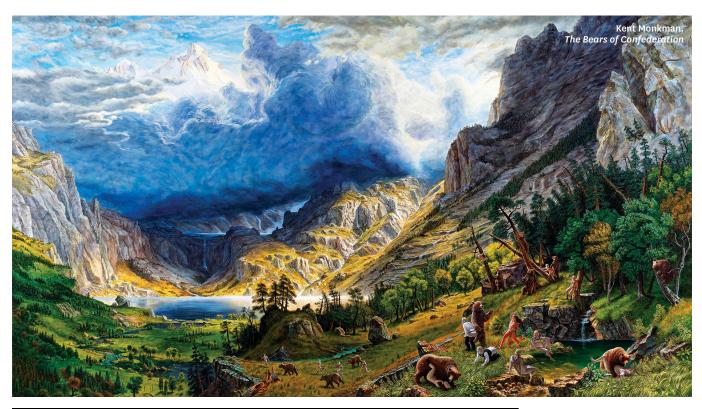
Sincerely, Meric Gertler

Adapted from a speech delivered December 8 at Varsity Centre.

Calendar

MORE EVENTS!

Check out the latest campus happenings at **utoronto.ca.**



JANUARY 26 TO MARCH 4

Shame and Prejudice: A Story of Resilience

The exhibition – organized by the Art Museum at the University of Toronto for Canada's sesquicentennial – narrates a story of the country through the lens of First Nations resilience. Curator and artist Kent Monkman's exhibition starts with contemporary life on the reserve and travels back 150 years before Confederation – to New France and the fur trade. Monkman, who is of Cree ancestry, includes his own paintings, drawings and sculptural works, in dialogue with historical artifacts and artworks borrowed from museums across the country.

Exhibition: Free. U of T Art Centre. Tues. to Sat., 12–5 p.m.; Wed. 12–8 p.m. 416-978-1838, artmuseum@utoronto.ca or artmuseum.utoronto.ca. Opening reception: Free. Jan. 26. 6:30–8:30 p.m. Art Lounge, U of T Art Centre. R.K. Teetzel Lecture by Kent Monkman: Free. Feb. 1. 4:30–6 p.m. University College, Rm. 140. Curator's tour with Kent Monkman: Free. Feb. 4. 2 p.m. Meet at U of T Art Centre. 15 King's College Circle.

Alumni

January 25
Rosewater Room, Toronto
Institute for Management and
Innovation (IMI) Alumni Mixer.
Mingle with commerce and

management alumni and other IMI grads. Free. Enjoy complimentary non-alcoholic drinks and hors d'oeuvres. Cash bar, but the first drink is free. 5:30–7:30 p.m. 19 Toronto St. Please RSVP by January 23: imiuoft.eventbrite.ca.

January 29 University College

UC Dog Days of Winter. Bring your dog and meet fellow UC alumni at the off-leash dog park in the UC Quadrangle. Free. 2 p.m. 15 King's College Circle. 416-978-2968.

January 31 Dallas

Dallas Stars vs. Toronto Maple Leafs Game. Pick a team to cheer for with U of T alumni and friends. \$60. 6:30–10 p.m. American Airlines Center, 2500 Victory Ave. Register at alumni.utoronto.ca/events/regional.

February 4 Phoenix

65th Annual Great Canadian Picnic. Enjoy live music, food, games and other fun activities with U of T alumni and friends. Register at alumni.utoronto.ca/events/regional.

alumni.utoronto.ca/events/regional. Free. 10 a.m. South Mountain Park, 10919 South Central Ave.

February 19 New York

Evening of Music with Hart House Orchestra for alumni and friends. \$35–\$41. 3–5 p.m. Carnegie Hall, 881 Seventh Ave. Register at alumni.utoronto.ca/events/regional.



March 16 Tampa

Tampa Bay Lightning vs. Toronto Maple Leafs Game. Pick a team to cheer for with U of T alumni and friends. Price TBA. 6:30–10 p.m. Amalie Arena, 401 Channelside Dr. alumni.utoronto.ca/events/regional.

Exhibitions

To February 24 Thomas Fisher Rare Book Library "Moments of Vision": The Life and Work of Thomas Hardy.

Free. Mon. to Fri., 9 a.m. - 5 p.m., Thurs. to 8 p.m. 120 St. George St. 416-978-5285.

March 20 to September 1 Thomas Fisher Rare Book Library Struggle and Story: Canada in Print. In celebration of Canada's 150th anniversary. Free. Mon. to Fri., 9 a.m.-5 p.m., Thurs. to 8 p.m. (during term). 120 St. George St.

Lectures and Symposia

416-978-5285.

January 19 Isabel Bader Theatre

What is the Geography of Energy? with Pierre Bélanger, Harvard University, and Jessica Green, New York University. Free, but registration required. 6:30–8:30 p.m. 93 Charles St. W. 416-978-2253, pamela.walls@daniels.utoronto.ca or daniels.utoronto.ca/events.

Beginning January 31 Carlton Cinema, Toronto

Canadian Perspectives Lecture Series runs on five Tuesday mornings from 10 a.m.-noon. \$15 per lecture. 20 Carlton St. senior.alumni@utoronto.ca or uoft.me/saacp.

February 1 to April 5 Hot Docs Ted Rogers Cinema, Toronto

University Lecture Series, from the School of Continuing Studies,

features leading scholars, thinkers and experts. Offered online, and in Markham, Oakville and downtown Toronto. \$162 plus HST. Wednesdays, from Feb. 1 to Apr. 5. 12:30–1:30 p.m. For downtown Toronto location: 506 Bloor St. W. 416-978-2400, learn@utoronto.ca or learn.utoronto.ca/courses-programs/arts-science/courses/ university-lecture-series.

February 4 U of T Scarborough

TEDXUTSC: Ellipses, organized by UTSC students. Price TBA. 9 a.m.-5 p.m. 1265 Military Trail. info@tedxutsc.com or tedxutsc.com.

February 9 Isabel Bader Theatre How Can Fiction Replace Reality?

A Daniels Faculty lecture with media artist and professor Walid Raad of the Cooper Union School of Art, New York. Free, but registration required. 6:30–8:30 p.m. 93 Charles Street W. 416-978-2253, pamela.walls@daniels.utoronto.ca or daniels.utoronto.ca/events.

March 14, 15 and 16 University College

F.E.L. Priestley Memorial Lectures in the History of Ideas: **The End of Knowledge**. Jill Lepore, professor of American history at Harvard and *New Yorker* writer. Free. 4:30 p.m. Rm 140, 15 King's College Circle. 416-978-7416.

Music

January 29 Walter Hall

Karen Kieser Prize Concert.

A chamber ensemble and soprano Stacie Dunlop will perform Sophie Dupuis' Perceptions de La Fontaine. The Cecilia String Quartet will perform Salvatore Sciarrino's String Quartet No. 7 and the winning student piece of the U of T String Quartet Composition Competition. Free. 7:30 p.m. 80 Queen's Pk. music.utoronto.ca.

February 5 MacMillan Theatre

Prima Zombie, the Diva That Just Wouldn't Stay Dead. Opera Student Composer Collective. A cabal of disgruntled music critics, disenchanted with the current state of opera, unearth and electrify the corpse of the celebrated 19th-century diva Nellie Melba. Prima Zombie parodies operatic obsession, diva worship and the fickle fame of performance art. Free. 2:30 p.m. 80 Queen's Pk. music.utoronto.ca.

March 23 Walter Hall

U of T Jazz Orchestra, 11 O'Clock Orchestra and John LaBarbera.
Conductor John LaBarbera, U of T's John and Claudine Bailey Distinguished Visitor in Jazz, has played and written for many renowned big bands and is one of the most respected composers and arrangers in jazz. His works have been performed by Dizzy Gillespie, Mel Tormé, Chaka Khan and more. \$20 (\$10 student). 7:30 p.m. 80 Queen's Pk. Box office: 416-408-0208 or visit music.utoronto.ca.

Special Events

January 26 Hart House

Hart House Lunar New Year Celebration. \$25 plus HST. Doors open: 7 p.m. Buffet dinner: 7:30 p.m. Fireworks: 9:30 p.m. Great Hall (fireworks in the quad). 7 Hart House Circle. harthouse.ca.

March 9 Faculty Club

Green Gala, hosted by the Sustainability Office, brings together staff, students and faculty from across St. George campus to celebrate its environmental leaders and successes. Free, but registration required. 5:30–7:30 p.m. 41 Willcocks St. For info: Jess Dawe, 416-978-6792, sustainability@utoronto.ca or uoft.me/greengala.

Sports

February 9-11 Athletic Centre

2017 OUA Swimming Championships. Watch the men's and women's swimming teams defend their provincial titles. Varsity Pool. 55 Harbord St. varsityblues.ca/tickets.

Theatre

January 20 to February 4 Hart House Theatre

Carrie: the Musical. Tormented by the "cool" kids and smothered by her religious zealot mother, Carrie's getting even. Warning: Coarse language and disturbing scenes. \$28 (\$17 seniors, \$15 students). Week 1: Fri. and Sat. at 8 p.m. Week 2: Wed. to Sat. at 8 p.m. Week 3: Wed. to Sat. at 8 p.m. and Sat. at 2 p.m. 7 Hart House Circle. 416-978-8849 or harthouse.ca/carrie-the-musical.

February 2-5 Robert Gill Theatre

FOOT 2017: Sounding the Inner Ear of Performance. Festival of original theatre and conference hosted by Drama, Theatre and Performance Studies. Free. 214 College St. foot2017.wordpress.com.

March 3-11 Hart House Theatre

7 Stories. A man stands on a seventh-storey building ledge and contemplates suicide. He is confronted by the self-absorbed (and often absurd) people who live inside the building. \$28 (\$17 seniors, \$15 students). Week 1: Fri. and Sat. at 8 p.m. Week 2: Wed. to Sat. at 8 p.m. and Sat. at 2 p.m. 416-978-8849 or harthouse.ca/7-stories.

March 8-18 Helen Gardiner Phelan Playhouse

Plays and Vignettes by Samuel Beckett by Centre for Drama, Theatre and Performance Studies. \$20 (\$10 students/arts worker). 79 St. George St. #302. 416-978-7987 or rebecca.biason@utoronto.ca.

PHOTO: COURTESY OF HART HOUSE THEATRE WINTER 2017

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Curious about this stunning destination? Visit the website to read about Greenland and all 39 alumni trips for 2017.

alumnitravel.utoronto.ca 1-800-463-6048 or 416-978-2367



"It's been a whole change in the trajectory of my life in a very beautiful way"

MasterCard Foundation scholar Sylvia Mwangi

p. 13



A New Sense of Community at the School of Graduate Studies

Renovated space marries history with innovation to better serve U of T's booming grad student population

WHEN CANADA'S FIRST prime minister, Sir John A. Macdonald, purchased the house at 63 St. George St. in Toronto, in 1876,

it was surrounded by wide open fields and backed on to University College – in a distinguished "suburb," as historian Donald Creighton later noted in his biography of Macdonald. Today, 63 St. George St. is the home of U of T's School of Graduate Studies Student Services – recently reopened in November after a renovation that married 21st-century innovation with historical preservation. The goal of the renovation was to better serve the university's growing population of graduate students.

Built in 1872 by Toronto iron founder Nathaniel Dickey, 63 St. George has been owned by Knox College since 1910. ▶

PHOTO: CHRIS THOMAIDIS WINTER 2017

U of T: A Top-Tier University

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Times Higher Education World University Rankings	22	1 st	36	2 nd	42	3 rd
QS World University Rankings	32	2 nd	45	3 rd	30	1 st
U.S. News & World Report Best Global Universities Rankings	21	1 st	31	2 nd	50	3 rd
Shanghai Jiao Tong University's Academic Ranking of World Universities	27	1 st	34	2 nd	63	3 rd
National Taiwan University Ranking	4	1 st	24	2 nd	33	3 rd

This past fall's international university rankings showcased again U of T's stellar reputation in research and teaching.

The Times Higher Education report ranked U of T 22nd (out of 980) worldwide and first in Canada for the seventh year in a row – placing it in the top 25 globally in seven of eight subjects, including arts and humanities, computer science and life sciences.

"We are extremely proud that the University of Toronto has once again been recognized in the top tier of the world's best public and private universities – that is truly a remarkable achievement," says U of T president Meric Gertler. "These results demonstrate our world-class performance in teaching and the global impact of our research."

The QS World University Rankings placed U of T 15th worldwide in academic reputation – one of the reasons the university attracts many top students and faculty. In the National Taiwan University Ranking, U of T's research excellence and impact helped make it the top-ranked public university, followed by the University of Oxford in England.

- SALLY CHOI

Before it began its life as the School of Graduate Studies (SGS), the building had already been modified to accommodate a housing co-operative on its top two floors. Its layout wasn't optimal, notes Laura Stathopoulos, director of SGS Services, and the physical building needed a bit of love. Nor was there a place for grad students to hang out or have meetings. "It was quaint and had a lot of character," she says – but it required an upgrade.

The renovation, which began in April, has allowed for representatives from all the grad student services – admissions, financial and academic, among others – to be on the ground floor instead of scattered over the three floors, which will greatly streamline service delivery to students. The ground floor is also fully accessible, and there are genderneutral washrooms throughout the building. Its interior has undergone a welcome transformation, and now features state-of-the-art oral exam rooms and, for the first time, a grad student lounge.

"The goal is user-friendly services, which is great," says Debra Kriger, a PhD candidate in exercise sciences. "That SGS wanted to create a new lounge for grad students sends a nice message." Indeed, until the renovation, grad students have had to make do with coffee shops and various lounges around campus as they had no place to call their own. Matt Patience,

a fifth-year PhD student in Spanish, is pleased about the change. "I'm happy that they've taken grad students' needs into consideration, giving more space to them and making a better dedicated space for their services."

Aside from upgrading the electrical service and improving the air quality and circulation, renovators met with historians to make sure they could restore or preserve as much of the original building as possible. All the wood, mouldings, fireplaces and the staircase, for example, have been brought back to life. One area – which had previously been partitioned – has been restored to its original state.

There is great excitement at all levels – grad students and SGS staff – about the old house's new look and feel. "For the School of Graduate Studies, the opening of 63 St. George means that we can serve our graduate students' needs throughout their program more efficiently and effectively," says Prof. Locke Rowe, vice-provost, graduate research and education, and dean of SGS. "And by creating an inviting environment dedicated just to graduate students – whether that means providing counselling services or helping with the administrative processes that are a necessary part of student life – we hope to help graduate students, student associations and faculty experience a greater sense of community here at U of T."

- NORA UNDERWOOD

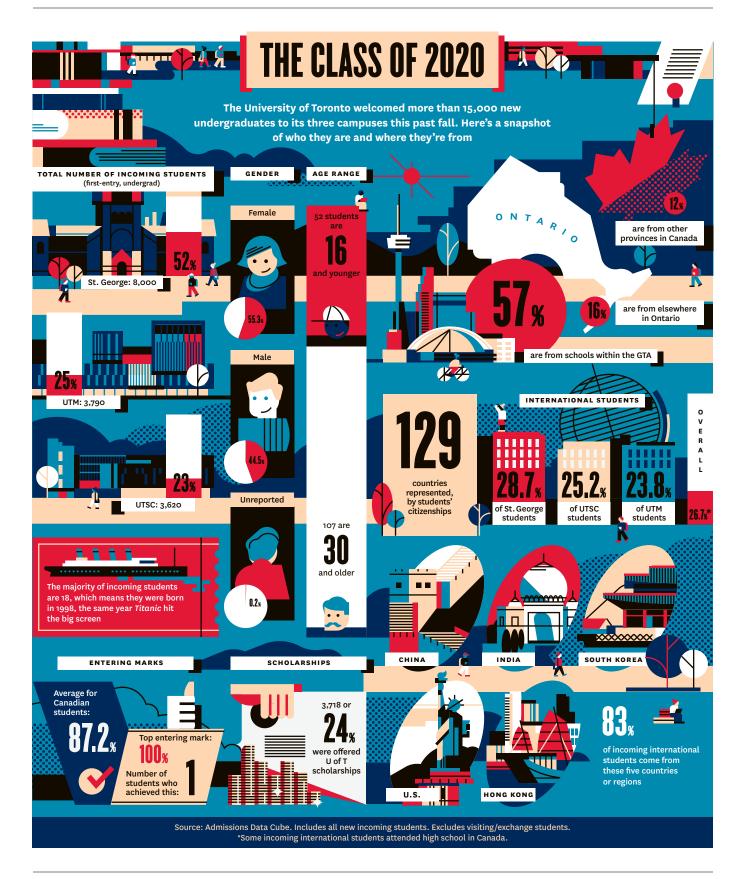


ILLUSTRATION: ALEKSANDAR SAVIĆ
WINTER 2017



According to Inside Higher Ed, McGraw-Hill Education's digital products sold more units than its print products for the first time in cour.



Open Book

When Chizoba Imoka moved to Canada from Nigeria at 16, she thought she was leaving behind life in a country afflicted by post-colonial injustices. But after settling in Grande Prairie, Alberta, and becoming friends with a Métis woman, she discovered Canada's own history as an oppressor of this land's First Peoples. Now a PhD student at OISE, Imoka thinks other newcomers should know this painful truth about their adopted homeland.

That's why in December, she participated in Hart House's Human Library Project – a storytelling

initiative that explored notions of home, belonging and community in Canada. The free event enabled participants to check out a "human book" – talk one-on-one for 25 minutes with an individual to gain a fresh perspective on what it means to be an Aboriginal, newcomer or settler in Canada. Says Imoka: "I'm hoping that by sharing my story, we can all be more reflective about our obligation to find opportunities to advocate and bring about a just and inclusive Canada."

- SHARON ASCHAIEK

SOUND BITES

What do you hope for the world in 2017?

The world needs a chat with [anti-racism activist and feminist] Jane Elliott...and quickly. #blueeyesbrowneyes @bmaynards5

I hope 2017 is all about kindness and inclusion.

@drlynnwilson

A collective hug or two or three while we deal with racism and misogyny and ridiculous immigration policy. More hugs and love please.

@DrRezmovitz

The world needs to sit down, talk and listen.

@StupidSciencer

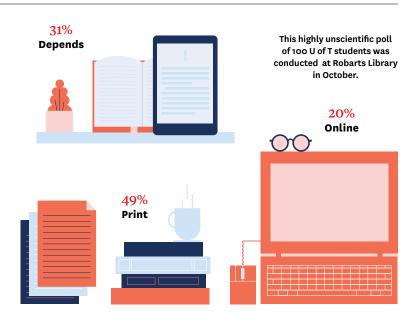
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Poll Do you generally prefer to read text in print or online?

When it comes to all forms of books – from novels and non-fiction to textbooks – most U of T students prefer the tactile pleasure of turning pages over scrolling onscreen.

Amanda Whittaker, a PhD candidate in history, says, "I prefer reading in print because you have that actual touch of the book – you feel it – and that connection is something you lose when you're looking at it online." Eighty-seven per cent digest textbooks in print, finding it easier on the eyes – as well as easier for annotating and highlighting.

Of course, not all print is equal. While there was a fairly even split when it came to magazines (43 per cent of students preferred a hard copy, while 57 per cent read them electronically), eight in 10 readers get their news online. Students enjoy the convenience, lower cost and environmentally friendly aspect of online sources – especially for shorter articles. Second-year UTM student Belal Faquiri says: "Instead of wasting paper, I can just access it online." – SALIV CHOI





Returning to Africa

U of T MasterCard Foundation scholar Sylvia Mwangi hopes to improve health care in Kenya

WHEN IT COMES TO demonstrating the transformative power of higher education, it's hard to find a better example than Sylvia Mwangi. The amount of personal growth the industrial engineering student has experienced while at U of T may be as vast as the distance, both physical and cultural, between Canada and her native home of Kenya. "It's been a whole change in the trajectory of my life in a very beautiful way," she says. "By virtue of this scholarship, I can dream much more and my scope of action has been enlarged significantly."

Improving the quality of health care in Kenya is Mwangi's dream, and preparing for it at U of T has been enabled by a MasterCard Foundation scholarship. The program helps economically disadvantaged youths from sub-Saharan Africa access higher education so they can give back to their communities. A US\$22.5-million donation from the foundation is

enabling 67 African students to complete an undergraduate degree at U of T. Mwangi will be part of the first cohort of MasterCard Foundation scholars to graduate this year. She says the benefits are not only a university education, which would have otherwise been unaffordable, but a calibre of training that isn't available back home.

Mwangi describes her academic journey as eye-opening and challenging, but overall rewarding. One thing that has stood out is the emphasis at U of T on group work. High school students in Kenya, she says, mainly complete assignments on their own, which is ironic because Kenyan society is quite communal. Life in Toronto, on the other hand, is much more individualistic – which sometimes feels isolating, she says. To integrate herself into student life at U of T, she attended "Dinner with 12 Strangers" events offered by the alumni office; joined U of T Rotaract, a community service club; and served as a student member of the University Affairs Board.

One academic experience that has made a big impact on Mwangi was her internship last summer in Belgium at Procurafrica, a firm that supplies industrial and agricultural products to manufacturers across Africa. Mwangi also travelled to Kenya during her internship to help develop a strategy for doing business in her home country. "I got to interact with leaders in Kenya, learn about the supply chain for industrial products and gain insights to help me navigate my job search," she says.

Mwangi has acted as a champion for the U of T MasterCard Foundation scholars by mentoring the program's newest students. As well, since 2015, she has volunteered at the Family Room at SickKids, a second home for families with seriously ill children being treated at the hospital. That volunteering experience, combined with case studies she completed at U of T on improving health-care systems, have motivated her to advance holistic health services in Kenya. "That is what I would like to introduce back at home, where we think about all stakeholders in the health-care system and care for them all."

- SHARON ASCHAIEK

NAMECHECK World's Easiest Book Club



While they can't prove the claim in its name, the people behind the World's Easiest Book Club at Hart House Library are confident that it's as stress-free as a literary club can be.

Launched last winter by library volunteers and former curator David Sprague, the club aims to ensure the library remains a *readers*' space, not just a *study* space. The concept is simple: the book of the month – always a quick read, like a graphic novel – sits at the library's entrance with a sign bearing the club's name.

Visitors or passersby read it in the library, then put a sticker on the sign next to a rating of one to four stars. Done.

About 30 people take part each month, and most ratings are three and four stars. The most recent book was *Soppy* by Philippa Rice.

"The idea is to make people feel the least amount of pressure, but still a part of something," says current curator Andreea Marin.
"It also gets them using the library's collection and revives reading for fun." - MEGAN EASTON

PHOTO: TOP, JOHNNY GUATTO; BOTTOM, PHILIPPA RICE WINTER 2017 13



P.O.V.

Oxford Bound

Rhodes Scholar Stephanie Gaglione is interested in vaccine development



BEFORE SHE'D EVEN FINISHED high school, **Stephanie Gaglione** was an award-winning scientific researcher. At 15, she designed a method to grow food on urban roof panels; by 17, she was investigating insulin resistance in a lab at Toronto's Hospital for Sick Children. This fall. Gaglione – a fourth-year chemical engineering major – will be entering Oxford University as a Rhodes Scholar. And even though she came to U of T with a 99.67 per cent average, she says that grades aren't nearly as important as other things: most particularly, curiosity, drive and an open mind. Here, she talks to Cynthia Macdonald.

What first attracted you to a life in science? I noticed a brochure for

a science fair on an elementary teacher's desk and decided to submit my first project and it just took off from there. I was 13. It was on bioremediation, a technique to remove contaminating oil from soil. It sparked a passion for developing something that could be useful to society.

What was your first engineering project? Environmental scientist Brad Bass was visiting my high school to conduct a lecture. He said that even though I was a little on the young side, I could come along and help on a project. I noticed that he had some panels for green roofs on which vegetation such as moss could be grown. They'd been abandoned; I emailed him and said, maybe we could grow organic food on them! I ended up designing a compost unit with tubing and valves for that purpose. That was, in some ways, a form of engineering: a chance to go through a design process and come up with a product.

Now, several years later – after an internship at the World Health Organization, no less – vaccines have become your real interest. How did that come about? After second year I realized that I genuinely believed in the undeveloped potential vaccines have – and that we are still in a primitive age when it comes to them.

How so? The ability to address diseases is important; so is expanding access. But there are also technical issues: for example, we could administer vaccines through microneedles that don't require training, instead of the conventional needle and syringe, and come up with new platforms to manufacture vaccines easily and cheaply.

The Rhodes doesn't just emphasize your studies: you also have to be a leader and an athlete. Your resumé includes skating and mountaineering. Are academic and athletic skills similar? In some ways they are, but the benefit of them is that they're not. In sports, you meet a diversity of people that you wouldn't meet through your academic circle – that can open your mind, and make you more empathetic.

People and Places



One professor tries to make sense of the world through statistics. Another is a coding whiz. The third focuses on explaining the relationship between plants and animals. And all three have received the 2016 President's Teaching Award, U of T's highest honour for excellence in teaching. Prof. Alison Gibbs of statistical sciences is leading the charge to renew the statistics curriculum at U of T. Prof. Jonathan Rose of electrical and computer engineering teaches a mobile app-development course that has led students to build more than 110 prototypes. Prof. James D. Thomson of ecology and evolutionary biology co-teaches a popular biology course on adaptation and biodiversity.

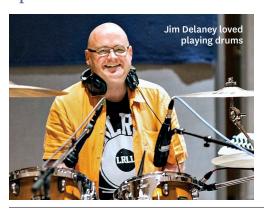
Two U of T academics have won Polanyi Prizes, which are awarded to outstanding researchers at Ontario universities in the early stages of their career. Daniel Wright, an English professor at UTM, won in the literature category. He examines the novels and poems of Victorian writers such as Elizabeth Gaskell and Charles Dickens, who used their work to probe the Industrial Revolution's social ills. Ioannis (John) Antoniadis, a researcher at U of T's Dunlap Institute, is the Polanyi winner in physics. In 2013, he was part of an international team that found the most massive neutron star discovered to date.

In November, the **University of Toronto** was named one of Canada's
Top 100 Employers by Mediacorp
Canada. U of T, which appeared on
the annual list for the 10th time, earned
top marks in such areas as financial
benefits and compensation, health
and family-friendly benefits, and community involvement.

IN MEMORIAM

Jim Delaney

A trusted adviser to students and U of T presidents, this staff member was also open about his mental health challenges



HE WAS A STUDENT leader at University College who turned that passion into an award-winning, 26-year career in student affairs at the University of Toronto. And when not at work, he was a classic rock aficionado and drummer who was thrilled when his two sons took up his love of music and made Q107 the station of choice in the family car.

Jim Delaney (BSc 1985) died at age 52 on Aug. 30 in the Toronto home he shared with his wife, Deborah Coombs, and their sons Nicholas, 21, and Michael, 10.

"People loved Jim's authenticity," says Sheree Drummond, secretary of U of T's Governing Council and a longtime colleague. "He was a trusted senior adviser to our presidents, governors, faculty and staff. He played a special role with

hundreds of students. They saw him as their guy on the inside and never hesitated to consult with him."

"Jim had a remarkable ability to bring people together," says Vivek Goel, U of T's vice president, research and innovation – who was provost when Delaney worked in student affairs. "Whenever there was an issue where two sides were at odds, Jim would find a way to help everyone resolve their differences. People trusted him."

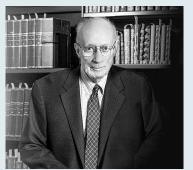
Delaney extended his expertise in student affairs to the national level, serving as president of the Canadian Association of College and University Student Services. More than 150 people, including student affairs leaders from universities across Canada, attended a Sept. 17 memorial service. Delaney also later served as an assistant secretary of Governing Council and as adviser to the chief administrative officer at U of T Scarborough.

Delaney lived with a bipolar condition but, true to his nature, was open about his experiences. "He wanted to reduce the stigma that too often comes with mental health challenges," says his wife, Deborah. Drummond agrees. "He never shied away from speaking about his struggles and, in doing so, he enabled countless others to be open about their challenges."

He used his love of rock music and drumming to help him manage his condition. Friends delighted in seeing Delaney perform in Toronto clubs through League of Rock, a program that enables amateur musicians to play in bands. "I met Jim through his love of music," says League of Rock founder Terry Moshenberg. "Each band he was in was that much better with Jim behind the drums. He was a good musician, but more importantly, he was a great bandmate and friend."

The university is honouring Delaney with the dedication of the Jim Delaney Room in the Sussex Clubhouse on the St. George campus. - PAUL FRAUMENI

Russell J. Morrison



Russell Morrison (MA 1947), who died at the age of 92 in October, was considered one of the best financial investors in Canada – and he was also one of the most generous investors in U of T students.

"No great university can function without great libraries and study spaces, and no benefactor has done more than Russell Morrison to raise the quality of those spaces for students at the University of Toronto," says U of T president Meric Gertler.

Morrison, along with his wife, Katherine (PhD 1979), made possible the Morrison Pavilion – which doubled the amount of student space at the Gerstein Science Information Centre – and University College's Morrison Hall student residence. In 2008, the Morrisons made a

donation to revitalize Robarts Library – the largest private donation ever made to the renewal of a library in Canada. They made a further gift to support Robarts Common, a five-storey addition to the library that will soon be under construction.

Born in Saskatoon, Morrison earned an MA in economics from U of T. He was a member of the Royal Canadian Navy Reserve during the Second World War. Morrison worked in brokerage research early in his career, progressing to managing hundreds of millions of dollars in mutual funds. In 2014 he was appointed to the Order of Canada. - STAFF

Read a profile of Russell Morrison at magazine.utoronto.ca/blogs.

TOP PHOTO: COURTESY OF DEBORAH COOMBS WINTER 2017 15

LI DIDN'T KNOW HE HAD A PASSION FOR LAW.

UNTIL HE STUDIED IN GENEVA.

Legacy giving made it possible. Li He (BSc 2016 UTM) was a fourth-year biochemistry major when he won the Robert Rawlings Scholarship for global experiences. Newly established by Mr. Rawlings' estate, the scholarship took Li to Geneva. There he studied international governance and made a 180-degree turn. His local perspective went global. Now studying law, he hopes to become an advocate for children's rights. Leave a bequest to U of T and you too can help students like Li discover their true passion.

Find out more at michelle.osborne@utoronto.ca 416-978-3846 or give.utoronto.ca



Leading Edge

"Martin Luther King Jr.'s dream of equality is still just a dream for many black Americans"

Akwasi Owusu-Bempah, a professor of sociology at U of T Mississauga

p. 21



The English of a Millennium Ago

Now at "H," the *Dictionary of Old English* aims to define every word from the language's earliest days

JUST WHEN YOU THINK YOU KNOW your own language, along comes a *hellwyrgen*. Rob Getz ran across the creature in a 12th-century manuscript, where it was pushing some thieves suffering torments in hell into a pit of boiling tar.

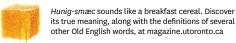
As an interim co-editor of the *Dictionary of Old English*, a project that aims to map all of the roughly 35,000 words from the earliest form of the language, Getz is no stranger to challenging words. But this one was a stretch; not so much the first part which is obvious – hell – as the second. It looked like it might be derived directly from the verb *wyrgan* or *wyrigan*

meaning "to curse, revile, condemn," but it's actually identical to the second part of a noun used to describe the mother of the monster Grendel in the Anglo-Saxon epic *Beowulf*. So, in the end, a *hellwyrgen* turns out to be something like a monstrous female creature from hell, or hell-hag.

Old English, which arose from the Germanic language of the Anglo-Saxon settlers who came to Britain from northern Europe in the fifth and sixth centuries, is the direct ancestor of our modern tongue. It has bequeathed us dozens of common words – from "hound" (hund) to "house" ($h\bar{u}s$). But the language has changed so much over the centuries that anyone reading an Old English text such as Beowulf would not recognize most of the words. Even the alphabet was different, with fewer letters, a different letter for "w," and the wonderful "eth" (\eth) and the runic "thorn" (\flat) standing in for "th."

Scholars at the Centre for Medieval Studies have been working on a comprehensive dictionary of the tongue since the 1970s and, with the release of "h" this year, have now ▶

ILLUSTRATION: CHARLES & THORN WINTER 2017 17



published definitions for more than half the words. Computers have made things somewhat quicker, and a digitized corpus, consisting of at least one copy of every known text in Old English (from poems to royal records), means that they can now search more easily for words and citations. But scholars still have to organize the words and define their meaning. Here there is no algorithm to aid them – just countless dictionaries, Latin sources and the lexicographer's best intuition.

Some words appear only once in the corpus, while others, such as the Old English for "hand," "head" and "heart" are both common and complicated. The 39-page entry for *heorte* ("heart") contains more than a dozen major meanings, including the seat of love, of courage and even of the intellectual faculties.

The section on the letter "h" was particularly difficult, and not just because it begins more words than any other except "s" and "f." It contains key verbs and pronouns, as well as the interrogatives – who, what, when, where and why – all of which began with *hw* in Old English. The interrogatives "are fairly uncomplicated in terms of their meaning," says Stephen Pelle, an interim co-editor of the *DOE* – but they "can be very complicated grammatically."

Old English portrays another world, a world where rain might be described as "heaven's showers" (heofonscur), but the language is also a window into the philosophical, moral, legal and linguistic roots of our own. If we're to understand those roots, we need to know the language the people spoke, says Getz. To that end, the lexicographers are trying to be as comprehensive as possible, picking up words earlier dictionary makers missed. "If we're doing our job right," says Pelle, "we should be able to catch just about every word that survives in an old English text."

- BRENT LEDGER

Lowering Barriers to Higher Ed

Helping high school students apply to college and university leads to higher enrolment, study finds

FOR ELEMENTARY SCHOOL STUDENTS, the transition from one grade to another can be summed up in two words: switch rooms. Moving from high school into a post-secondary institution is something else entirely, involving a maze of program catalogues, forms, fee schedules and financial aid options. The difficulty of this process may actually be stopping many qualified students from progressing with their education after high school, says Philip Oreopoulos, a professor of economics and public policy at U of T. His research has shown that when such roadblocks are removed, post-secondary application and enrolment rates surge.

Over the past few years, Oreopoulos and his research team have offered every graduating senior in a sample of Ontario schools assistance with their college or university application. The result? An increase in applications by as much as 24 per cent. The largest increases tended to occur for two-year college programs.

One of the biggest obstacles for students seems to be the application fee, which is standard across all Ontario post-secondary institutions. "Even though it's just \$100, it's a big component," says Oreopoulos. As a behavioural economist, he's particularly interested in how relatively small financial barriers – even to something that offers considerable advantages in the long run – can sometimes be perceived as much larger. "Individuals," he says, "are not always perfectly foresighted when thinking about decisions that involve immediate costs and long-term benefits."

Oreopoulos also found that students were insufficiently exposed to the breadth of post-secondary programs available to them; many assumed that a bachelor of arts was their only option. Holding information sessions during classroom time increased awareness of these options, too – currently, most sessions are held over the lunch hour or after school.

Oreopoulos is working with the Ontario government to expand his research, and he hopes the program will eventually find a permanent home within all high schools across the province.

- CYNTHIA MACDONALD

Post-Truth Politics

Donald Trump's startling victory in the American election is being seen in some quarters as a total rejection of the idea that politicians should be truthful. Some take it as a sure sign that "post-truth politics" are here to stay – even that democracy itself is in retreat.

Trump's almost complete disre-

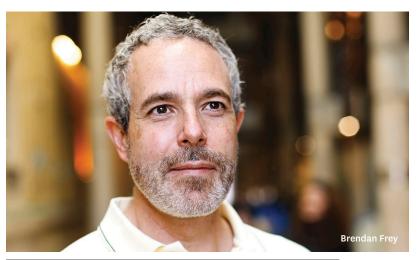
gard for the truth is indeed worrying, says Joseph Heath, a professor of philosophy and public policy. But he sees the former reality TV star as an outlier among politicians. What's more concerning, he says, is the development of political *strategists* who make lying integral to their game plan.

If there's a silver lining, Heath sees it in a mainstream media that's asking deep questions about its obligations to democracy and the growing use of real-time fact-checking to correct politicians' lies, almost as they're uttered. "This is a positive shift," says Heath. – STAFF

MAGAZINE.UTORONTO.CA PHOTO: ISTOCK



It's estimated that the global market for artificial intelligence applications will reach \$5 billion by 2020. That's a 10-fold increase in just six years



THE BIG IDEA

Can Artificial Intelligence Solve the Mystery of Genetic Disease?

Prof. Brendan Frey and his team are harnessing machine learning to figure out what makes us sick

BRENDAN FREY, a U of T professor of electrical and computer engineering, has spent more than a decade developing machines that can identify dangerous, disease-causing mutations in human DNA. While most of his career has been spent doing basic science, he and his research team have now founded Deep Genomics, a technology startup that simulates how mutations in our genetic code translate into health and illness.

Genetic mutation strongly affects the likelihood of getting cancer, diabetes and many other diseases. But the mechanisms by which genetic variation turns into ill health are still poorly understood. Frey's team feeds billions of measurements into a machine-learning system – a type of artificial intelligence – to simulate the entire process, beginning with mutations in the genetic code right through to the molecular changes that potentially lead to illness.

"After the human genome was sequenced, we had the text, but we didn't know how to make sense of it," says Frey.
"Now we have a 'deep genomics' engine – a machine-learning system where you feed in the genetics and it will tell you what's going to happen in the cells."

Some companies already offer similar-sounding genetic services, analyzing a person's individual genome and assessing their risk for certain genetic diseases. But most such

services are based on coarse statistical correlations that can say little more than, "People with gene mutation A are more likely to get disease B."

These correlations are inaccurate because they don't explain if and how a genetic mutation actually *causes* the disease. Nor do they look at gene interactions to determine whether one mutation is affected – for better or for worse – by others in the same genome. Nor do they identify categories of mutation. Andrew Delong, a research scientist and colleague of Frey's, says the Deep Genomics approach can do all of these things.

Think of a traffic-accident investigator with primitive knowledge of auto-mechanics analyzing a dozen car crashes. In every case, the brake line has been cut, but each time in a different

place. The investigator might identify each cut as a unique issue, never recognizing that all the cars crashed because the brake line has an important function and that cutting it anywhere causes the vehicle trouble. Using AI, Deep Genomics can identify the higher-level pattern. "Machine learning allows us to take all the data available and extrapolate many years ahead, predicting the effects of mutations that no one has had a chance to study," says Delong. "This is a powerful system for diagnosing disease and designing therapies."

Deep Genomics builds models based not just on genetic information, but also on biological data about what happens on a molecular level to cause certain diseases. For instance, a gene mutation can alter the behaviour of a specific protein. Or it can affect the RNA that regulates protein production and carries information within a cell. Or it can cause some other problem entirely. Deep Genomics connects the dots between gene mutations, molecular outcomes and disease, allowing researchers to zero in on how best to treat the disease.

Deep Genomics' algorithms can also deal with the complexity behind many genetic diseases. Very often diseases are caused by multiple mutations, all of which have to be present for a disease to manifest. Mutation A doesn't make you sick. Mutation B doesn't make you sick. But mutations A and B together make you sick. (Or even, mutation A will make you sick, but not if you also have mutation B.)

Sometimes hundreds of gene mutations need to be looked at to detect a complex disorder such as autism or diabetes. "We put it all together into one big system," Frey says. "Our ability to interpret the genome is growing very rapidly now. I think in 10 years we're going to understand most of what the genome does, which mutations cause which diseases and why. Even if we could just address 10 per cent of genetic disease more accurately, it would have a huge impact on people's lives."- PATCHEN BARSS

PHOTO: ROBERTA BAKER WINTER 2017 19



In 2015, Exact Media co-founder Daniel Rodic analyzed a year's worth of Zappos CEO Tony Hsieh's personal calendar to find out how he spends his time

STARTUP

Making Money Out of Thin Air

U of T startup Exact Media finds a way to turn excess space into a business



IT'S BEEN DESCRIBED as the Airbnb of marketing.

Exact Media, a Toronto startup co-founded by Daniel Rodic (BCom 2012 Trinity) and Elena Sahakyan (BCom 2009 New College), buys the excess space inside parcels being delivered to people who have made online purchases. The company then tucks samples of branded products into these nooks.

If someone buys towels online, for instance, the shipping box may contain a sample of Tide detergent. If a customer buys a swimsuit, she may find a small bottle of Olay sunscreen. The brands pay Exact to find these, well, openings. As Rodic says, "We turned that extra air into a new marketing channel."

While studying commerce, Rodic's goal was to become a management consultant. But then he was accepted into The Next 36, an intensive entrepreneurship program co-founded by Ajay Agrawal, the Peter Munk Professor of Entrepreneurship at the Rotman School of

Management. "Through The Next 36, I got funding to start my first business, and that's what pushed me toward a more entrepreneurial path," Rodic says.

Rodic explains that the company grew out of discussions he, Sahakyan and another co-founder had with an executive at Beyond the Rack, an online clothing retailer. The retailer was looking at ways of providing its customers with cosmetics samples. Together, they realized they could slip the samples into Beyond the Rack's parcels.

When Exact went to find consumer brands that might be willing to pay for this kind of product placement, they quickly signed up Procter and Gamble and Unilever and realized that selling space in shipping parcels might be a viable business.

Sahakyan, Exact's vice-president, finance, says the three-year-old firm, which has 25 employees, raised an undisclosed amount from tech investors earlier this year.

As it builds its customer base, Exact is collecting demographic data on e-commerce consumers (for example, women between 20 and 35 who buy clothes online). It then analyzes the data and makes recommendations about the sorts of product samples that these consumers might like. If Exact's brand clients agree with the analysis and the proposed co-marketing, the manufacturer ships the samples to the e-commerce retailer, which then inserts them into the appropriate parcels.

Armed with some serious financing, Rodic and Sahakyan are planning to expand beyond North America within the next 18 months, possibly targeting the United Kingdom, Western Europe or Asia. The investment capital will allow Exact, which has already distributed some 20 million samples, to develop new marketing schemes for its brand clients while expanding into new regions, says Rodic. - JOHN LORING

Findings

Who Pays the Most for Cars?



Age and gender can affect how much people pay for a new car, a U of T study has revealed. Ambarish Chandra, a professor at U of T Scarborough's department of management, and colleagues found that the price difference could be as much as \$3,000.

The researchers also found that older consumers tend to pay more than younger consumers, but that older women in particular pay more – by an average of about \$200 per car. The gender gap narrows among younger consumers to about zero among buyers aged 20 to 25.

Chandra notes that this is not necessarily a case of age or gender discrimination, but could be a result of older women being less well educated, on average, than younger women or than men their age. "[Education] has important effects for negotiating large purchases," he says. - DON CAMPBELL

Angry Drivers



Angry, aggressive drivers are 78 per cent more likely to be involved in a motor vehicle collision than those who don't get so angry while driving, according to a new study by Dr. Christine Wickens, a professor at the Dalla Lana School of Public Health.

Nearly one-third of Ontario drivers reported committing minor acts of aggression, such as swearing or yelling, while behind the wheel. The study classified those drivers who said they had uttered threats against other drivers or had damaged another car (or had tried to) as seriously "angry." This group represented about two per cent of Ontarians.

Eight per cent of Ontarians reported having a car collision in the previous year. The researchers analyzed this group in relation to their reported aggressive behaviour, while controlling for other factors that could increase the risk of collision such as age, sex, and alcohol or cannabis use.— ANITA DUBEY

MAGAZINE.UTORONTO.CA ILLUSTRATION: LUCY VIGRASS



Since the founding of Black Lives Matter in 2012, local chapters have sprung up in 37 American cities, and in one city outside of the U.S. – Toronto



Black and Blue

How do we restore trust between minority communities and police?

Like many Canadians, **Akwasi Owusu-Bempah**, a sociology professor at U of T Mississauga who studies policing, has been following the spate of police shootings of unarmed citizens, mostly south of the border. *U of T Magazine* editor **Scott Anderson** recently spoke with Owusu-Bempah about these incidents and how relations between police and racialized communities in the U.S. and Canada could be improved.

What strikes you when you hear the reports of unarmed African-Americans being shot by police and the social unrest that follows? The unrest in places such as Ferguson and Baltimore is partly in response to police violence, but it also reflects the frustrations that many African-Americans feel over the failed promise of the civil rights movement. Martin Luther King Jr.'s dream of equality is still just a dream for many black Americans. Police violence often acts as a spark for social unrest. But there are a lot of underlying issues that motivate people to get out into the streets and protest.

How does policing in Canada differ from the U.S. with respect to people of colour? I prefer to look at the differences between racial groups within each country. What we see in Canada is that, compared to whites, black and Aboriginal people are more likely to be victims of police violence. Blacks in Canada may fare better than blacks in the United States but they don't fare better than whites here.

You've said that Canadians have some "blind spots" when it comes to race and policing. What are you referring to? For one, we don't have readily available policing data disaggregated by race. While the police gather race-based data in their investigations, it's not made public, as it is in the U.K. and the U.S. As a result, we either think we don't have a problem or we look to other places, such as the U.S., to see how we're doing. Let's also not forget that Canada has done a good job of erasing its racist history. The apartheid government of South Africa borrowed from Canada's reservation system. We had slavery. We had segregated schools until almost the end of the last century.



What steps do you think we could take to improve relations between police and racialized communities? First, I think we need race-based data so we can have an intelligible discussion. The police often criticize communities for telling anecdotal stories that don't reflect reality. And likewise citizens often distrust what police say because we don't have the data.

Second, the police should acknowledge that there are policing practices that discriminate against certain groups. Carding – the practice of stopping, searching and documenting individuals – is one of these. The way we police drug crimes and give or deny bail are others. In Canada, we've seen a doubling down on denial that racism exists in policing. Racism exists across society. We know that.

It's important to acknowledge that these aren't just policing problems. These are societal problems. In communities where there are high concentrations of poverty and low levels of education attainment and employment, there are a whole host of problems that police get left to deal with.

Views on crime prevention range widely, from a law and order approach to a focus on poverty and social programs... I think there has to be a balance. We know some intelligence-led policing strategies are very effective. If there's a street corner that has a high level of drug dealing you focus your efforts there. That's a no-brainer. But simply stopping and searching people is not intelligent policing.

Tensions between racialized communities and police are high, which no doubt affects future interactions. How do you reduce that tension? It's important to note that the police are state employees and are supposed to uphold the professional standards of the institutions they work for. The onus is on them to play the positive role in an interaction, irrespective of how they're being treated. Over time, if the police treat people fairly, they're more likely to get a positive response from citizens.

PHOTO: FIBONACCI BLUE WINTER 2017 21



Launched last year, GTActivity.ca already lists more than 180 physical activities, ranging from sports to dances to martial arts, practiced in the Toronto area

Let's Get Physical



Everyone knows Torontonians are hockey-mad. But there are scores of sports and other physical activities that the people of this multicultural city enjoy. Now, a U of T professor has set out to catalogue and celebrate as many of these activities as he can.

Peter Donnelly of the Faculty of Kinesiology and Physical Education – along with a team of U of T researchers – has invited Toronto residents to tell him about the ways in which they are active, so he can share the information on a new website called GTActivity.ca and track which activities thrive and which ones die out.

"We are interested in all forms of physical cultural activities, ranging from sports played in leagues to dances to daily exercises such as yoga and tai chi," says Donnelly, who also serves as director of U of T's Centre for Sport Policy Studies.

The website – a kind of sport-and-culture encyclopedia – features a written description of each activity, a brief history of it and where it's practiced, and photographs or video of people in Toronto engaging in it.

The site already has entries on everything from Krav Maga, an Israeli self-defence practice, to pickleball, a cross between tennis and table tennis. – JELENA DAMJANOVIC

Of Hearth and Home – and Health

A simple U of T innovation could help prevent burns among millions of children in developing countries

IT'S A SHOCKING STATISTIC: Every year, worldwide, nearly 11 million people – many of them children – suffer burns serious enough to require medical attention. Two U of T medical colleagues have seen the heart-wrenching evidence first-hand.

On a trip to Kenya in 2011, Dr. Leila Kasrai, a professor in plastic and reconstructive surgery at U of T's Faculty of Medicine, and Shahla Yekta (BSc 1999, PhD 2005), a public health researcher, visited two hospitals in Nairobi, where they saw many children recuperating from serious burns. The injuries often occurred to the children's hands, leaving many of them fingerless. "It was devastating," Kasrai says.

Spurred by that eye-opening mission, Kasrai and Yekta set out to help prevent burns among children in developing countries.

Through interviews with mothers in low-income sections of the Kenyan cities of Nairobi and Nakura, they discovered that cookstoves pose the greatest danger. That's because most homes have only one room and cooking is usually done at floor level, leaving younger children at risk of touching the hot stove or heated liquid, such as water or oil.

"Mothers were aware of the danger, but the burns typically happened very quickly, when they looked away for a moment," says Kasrai.

Together with Amref Health Africa, an NGO, the two researchers developed a small, foldable barrier made from locally available materials that the mothers could use while they were cooking and, due to the extremely small living quarters, put aside when they were done. Last year, the researchers recruited families to test five models and settled on the most popular design.

The next step will be to seek funding to test the barrier's stability – to ensure that it can withstand the impact of a falling two-year-old, for example, and to scale up the project in Nairobi. "Burns are one of the most painful injuries patients can endure and there is no good cure," says Kasrai. "The best way to deal with them is to prevent them from happening in the first place." – SCOTT ANDERSON

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HOW U OF T'S BOUNDLESS CAMPAIGN IS HELPING TO

CULTIVATE GLOBAL CITIZENS MEND HEARTS BUILD BETTER CITIES CREATE OPPORTUNITY FOR ALL

U OF T'S BOUNDLESS CAMPAIGN is bringing together the globe's best thinkers in one of North America's most dynamic cities. With the world facing greater unrest and uncertainty, this is Canada's - and U of T's - moment to shine.

Read on to discover what's new for Boundless - how, thanks to the commitment and enthusiasm of our community, the campaign has surpassed its \$2-billion goal and has lifted the university, the city and beyond.

And find out what's next as we expand the campaign to reach for a new goal of \$2.4 billion and strengthen U of T's standing as one of the best public universities in the world.

CULTIVATE GLOBAL CITIZENS



WHAT'S **NEW**



The Munk School of Global Affairs – founded with a landmark gift from Peter and Melanie Munk – encourages students to apply what they learn to a global issue they're passionate about. Sometimes it saves lives

A GREAT IDEA can strike at any time. For second-year Munk School student Adam Sheikh, an ordinary evening watching television led him to create a non-profit organization that could save thousands of lives.

Sheikh, 19, learned from the Discovery Channel that some of the actors from the movie Alien had complained of overheating during filming because of the massive costumes they had to wear - and that a specialized vest could have helped them keep cool. "I started looking into this concept of cooling vests, and I figured maybe it could work elsewhere."

Inspired to tackle a global problem by his professors in the Munk One firstyear foundation program, Sheikh came up with the potentially life-saving idea of using cooling vests as a safety tool on construction sites in the Gulf region. Teresa Kramarz, a professor of global affairs and director of the Munk One program, says she and her colleagues encourage students to apply what they learn at the Munk School to an issue they're passionate about. "They're doers. They see connections, they see how global problems are connected to local realities and they're deeply motivated to do something," says Kramarz.

Having spent time in the Middle East, Sheikh knew that as Qatar prepares to host the FIFA World Cup in 2022, there is mounting concern over the treatment and safety of migrant workers hired to build stadiums and other infrastructure. A report on working conditions in Qatar, published in 2014, estimated that 7,000 migrant workers could die before the World Cup begins - partly as a result of having to perform heavy labour in summer temperatures that regularly exceed 40 degrees Celsius.

With cooling vests, Sheikh identified a critical way to intervene. He and a group of students - including peers

from the Munk School of Global Affairs – formed Aegis, a non-profit organization dedicated to providing cooling vests to migrant workers.

To pilot the project, Aegis partnered with manufacturer Inuteq and Six Construct, a construction company that works in the Gulf region. Armed with 100 cooling vests, Sheikh and his Aegis colleagues visited Qatar last summer to test the effectiveness of their proposal on one of Six Construct's construction sites.

"We would measure the workers' body temperature, heart rate and blood pressure," says Sheikh. "In one month, the number who had high blood pressure dropped by 50 per cent. By the end of our testing, the workers gave the vests an average rating of seven, with zero being 'I felt no cooling' and 10 being 'I felt no heat at all."

Sheikh and his colleagues returned to Canada and worked with Inuteq to refine the vest's design to meet specific safety and cooling needs. Their vests now have high-visibility striping, and the material is thicker than standard, which extends the cooling time. Aegis is the sole distributor of these improved vests, and is working with Six Construct in the hope of supplying 10,000 to the company's World Cup construction sites.

Last October, Sheikh's Aegis colleagues presented their work at the Vatican

Youth Symposium, a two-day assembly where young leaders from around the world shared ideas for achieving the UN's Sustainable Development Goals.

"Adam has developed a toolkit for engaging with a problem in a very specific, tangible way," says Kramarz. "This reflects the mindset we want to create in our students – of the globally engaged citizen." - ADRIENNE HARRY



PETER & MELANIE MUNK

Munk One is a foundational year program housed at the U of T's Munk School of Global Affairs. The school is a forum for exchanging breakthrough ideas and a vantage point for looking beyond national borders to help foster social resilience on a global scale. In 2010, the Munk School of Global Affairs received a transformative gift of \$35 million from Peter Munk (BASc 1952) and Melanie Munk, the largest single gift from individuals in the university's history at the time.

Global journalism alumna Nousha Kabawat examines the plight of everyday people trying to carry on with their lives during Syria's long civil war

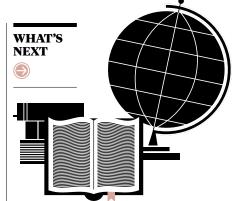
Nousha Kabawat had just completed a fellowship in global journalism at the Munk School of Global Affairs when she was recruited by the award-winning PBS television program Frontline to help produce a feature-length documentary on the Syrian civil war. Broadcast in fall 2015, Inside Assad's Syria examined the plight of everyday people trying to carry on their lives with some semblance of normalcy in a stressful, perpetually dangerous war zone.

In addition to her academic credentials, which also include a master's degree in conflict analysis and resolution, Kabawat brings deep personal



conviction to her focus on Syria. Born in Canada to Syrian immigrants, she spent much of her childhood in Damascus. Today, as head of youth programming for the Syrian Centre for Dialogue and Reconciliation in Toronto, she works with refugees inside and outside Syria, educating and empowering children in the hope that they'll one day play a role in rebuilding a proud nation ravaged by conflict. With her newly honed journalistic skills, the young activist is better equipped to tell their stories – and to turn her passionate beliefs into action.

- DOUG DOLAN



New scholarships aim to attract the world's best and brightest students to U of T

when we think about international students coming to the University of Toronto for higher education, we often consider the benefits for them – an international learning experience at one of the top-ranked public universities in the world.

But international students also contribute immensely to the experience of Canadian students at U of T – by contributing their own unique perspectives to classroom discussions and enhancing the capacity of both students and faculty to think and engage globally.

To attract the best and brightest students from around the world, U of T is planning to establish full scholarships, valued at about \$55,000 a year, for 25 international students annually for four years of study at the university. The program will be named for the late Lester B. Pearson – internationalist, prime minister of Canada from 1963–68 and a U of T graduate – and will seek support from donors.

Scholarship recipients will be recruited based on merit and financial need, and international students studying at Canadian schools will be eligible to apply.

"We expect these scholarships will clearly differentiate U of T in the minds of prospective international students and their schools and families," says registrar Richard Levin. "They will also create cohorts of students who can help spread the word about the amazing opportunities available at U of T." - STAFF

MEND HEARTS



WHAT'S NEW Research by scientist Craig Simmons at the Ted Rogers Centre for Heart Research, supported by a visionary gift from the Rogers family, could one day eliminate the need for infants with heart defects to have more than one surgery

CRAIG SIMMONS, a U of T engineering professor, recalls having given a presentation not long ago about promising new heart research in children, when a mother came up to him crying. Her tears reflected the stress of being the parent of a child born with a congenital heart defect as well as gratitude that researchers like him were working on better solutions. "That really touched me," says Simmons, who is scientific director of the translational biology and engineering program at the Ted Rogers Centre for Heart Research. It also motivated him as he continues his work on creating "living tissue" heart valves to replace defective ones in infants.

The Ted Rogers Centre – created through an unprecedented \$130-million donation from the Rogers family – brings together more than 30 experts from Sick Kids, University Health Network and the University of Toronto to address heart failure across the lifespan. "We know Ted would have been proud of this bold initiative that will improve heart health for all," says Loretta Rogers, wife of the late Ted Rogers.

We tend to think of heart disease as a problem in older adults, but children can have heart disease too. One in 100 babies in Canada is born with a congenital heart defect. In a healthy heart, the four valves open and close with every heartbeat, allowing blood to flow only one way. But a malfunctioning valve may leak, preventing a baby from getting enough oxygen-rich blood. This increases the risk for the child of infection, fatigue, fainting, delayed development, heart failure and sudden cardiac death.

The current treatment involves an initial surgery to repair or replace the defective valve in a tiny infant. Further complex operations are often required as the child outgrows the synthetic patch or valve, which are made of fabric, metals or plastics. But Simmons hopes "living tissue" heart valves that grow with the child will eliminate the need for those subsequent surgeries. "The kids would still need that single operation," Simmons says, "but then they'd never need another." Nor would they require maintenance medication such as blood thinners or anti-rejection drugs, as the new valve would be made from the baby's own cells.

Simmons heads a research team focusing on growing replacement tissue for the pulmonary heart valve. The team harvests stem cells from a baby's

umbilical cord – typically discarded after birth – and attaches them to a polyurethane scaffold. Through chemical and mechanical stimulation – sort of like forcing the cells to do bodybuilding – the growing tissue becomes stronger and stiffer. Once implanted, the scaffolding would harmlessly biodegrade. Buoyed by early lab results, the team is now optimizing the processes for future animal testing.

"I've met people who as children had congenital heart problems – this past summer, one of them was a student who worked in my lab – and I've seen what an emotional burden this can be on children and families," says Simmons. The costs to the health-care system are also significant.

Dr. Chris Calderone, surgeon-in-chief at Toronto's Hospital for Sick Children and a professor in U of T's department of surgery, is Simmons' liaison in the clinical world. Together they're focusing on a particular defect called Tetralogy of Fallot, where a baby's first surgery takes place at four to six months. "This research could change the lifetime trajectory for these children, and also create a foundation for transferring this research to other valves in the heart," says Calderone. - MARCIA KAYE



THE ROGERS FAMILY

The Ted Rogers Centre for Heart Research was created through a \$130-million donation from the Rogers family – the largest monetary gift ever to a Canadian health-care initiative. The centre has established an innovation fund to drive discovery and an education fund to attract a deep pool of talent for cardiac care and research in Canada.

WHAT'S NEXT



We're just scratching the surface of how technology will change health care

WE'VE BEEN HEARING about how big data, genetics and personalized medicine are going to radically transform health care. But as Cedric Manlhiot, who coleads the computational biomedicine program at the Ted Rogers Centre for Heart Research, points out, there's still a yawning gap between all the medical data being gathered and the ability to translate this into the best therapies for individual patients.

This may soon change, thanks to work he and colleagues are doing at the centre. In the not-distant future, says Manlhiot, a U of T professor of medicine, physicians will use *all* of a patient's relevant information, including their genome, details of their condition, their medical history and aspects of their environment, to devise the best possible treatment for them.

As he sees it, there are three big challenges to getting there: for the most part, the information being gathered isn't

collected and stored in a format that can be shared; there are no direct links between patients' health records and the high-performance computing facilities necessary to make predictions about the best treatment; and researchers still need to study how doctors will use computer-generated predictions to treat patients, including the fundamental questions of *if* and *how* these predictions will improve patients' health. The centre is working to solve all of these problems with a computational medicine platform that would be rolled out in Toronto, then perhaps more broadly.

This may seem like a daunting task, but compared to the banks and credit card companies, which already use predictive analytics through artificial intelligence to detect fraud, medicine is decades behind, says Manlhiot.

"We're trying to catch up – and fast."

Apps such as Medly are expected to significantly reduce hospital admission rates for heart patients while also helping them recover





Dr. Joseph Cafazzo, a U of T professor in engineering and health informatics, is working with clinicians at the Ted Rogers Centre for Heart Research on technology that allows doctors to monitor their heart patients' progress at home.

The platform is a smartphone app called Medly that Cafazzo and his team are using to gain continuous, real-time readings of vital data about their patients' health, such as blood pressure, weight, step count and heart rate. The app also allows patients to report symptoms such as swelling, dizziness and shortness of breath.

"Given the opportunity, patients have an immense capacity to care for themselves," says Cafazzo, who leads the Centre for Global eHealth Innovation at the University Health Network. "Patients want to stay at home; they obviously don't want to be hospitalized."

A computer monitors the incoming data and alerts physicians when a patient's readings fall outside stable parameters. "If we can detect changes in their status, we can intervene much

earlier," says Cafazzo – before the patient needs to be re-hospitalized.

Medly is still being evaluated but other remote monitoring programs have reduced rates of hospital admission for chronic heart failure by 21 per cent. At the same time as improving patient outcomes, this represents a huge potential savings for the health-care system.

Medly works in conjunction with Bluetoothenabled devices such as weight scales and blood pressure monitors. It also works with the Apple Watch and Fitbit, which can track heart rate, heart rate variability, activity, calories burned and sleep. "If a patient is doing well, then their step count is probably near normal levels. If we're seeing our heart failure patients only getting a couple of hundred steps a day, this could indicate a problem," says Cafazzo.

"We're just scratching the surface," he adds.
"Technology is going to change how we deliver
health care. We're on the cusp of something
transformational." - STEFAN SUPERINA

PHOTO: THE ROGERS FOUNDATION WINTER 2017 29

BUILD BETTER CITIES



WHAT'S NEW



The renovated Daniels Building at One Spadina
– supported by historic gifts from John and
Myrna Daniels – will bring together scholars
from across the university to envision an even
better Toronto

OVER THE PAST THREE DECADES, Toronto has emerged as a global hub that exemplifies all the opportunities and contradictions of 21st-century urbanism. With a cultural vitality and diversity that's rare among its global peers, Toronto consistently ranks among the world's most livable cities. Yet, as anyone who lives here knows, the fast-growing region is grappling with traffic gridlock, soaring

home prices and a deepening divide between haves and have-nots.

When he arrived at U of T from Harvard University in 2009, Richard Sommer, dean of the John H. Daniels Faculty of Architecture, Landscape, and Design, saw that U of T was already seeking answers to some of the city's most pressing challenges. But he wondered how the university – and

the faculty he was leading – could do more.

Sommer will answer his own question this spring with the opening of the renovated and expanded Daniels Faculty at One Spadina, made possible by donations from alumni and friends, including remarkable contributions from John H. Daniels (BArch 1950) and Myrna Daniels totalling \$24 million. "This school means a great deal to me," says John Daniels. "It's the basis for my success."

Over the next few months, the faculty will relocate into the transformed Spadina Crescent at the western edge of the St. George campus. As Sommer says of the undertaking, "U of T and the city need a school of architecture and design with a scale and character that is as, or even more, ambitious than the city itself."

Designed by a team led by architectural firm NADAAA in Boston, the newly named Daniels Building will provide a platform for far-ranging debates and research about Toronto's – and the world's – ongoing urban experiment. "It's a messy art," Sommer says of citybuilding. Measuring urban problems isn't sufficient to produce great solutions. "To get a better city, you need to bring creative thinking and imagination to the game," he says. "The problems we face now can't be addressed with one type of expertise or by staying in silos."

Connecting students and faculty with residents, community groups and advocacy organizations is central to Sommer's goal of linking U of T's urban scholarship to the city at large. "These opportunities for engagement are critical to the success of our research," he says.

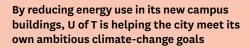
Sommer sees the Daniels Building as a kind of urban "skunk works" – a thinktank where people from many disciplines and backgrounds collaborate on the toughest problems facing 21st-century cities such as Toronto: transit, open space, housing and urban design. By including entities such as the Global Cities Institute, the Daniels Building will evolve into a hub for U of T's research on a range of urban issues, connecting students and researchers in engineering,

WWW.MAGAZINE.UTORONTO.CA PHOTO: JOHN HRYNIUK

political science and social work with those in architecture, art and urban design. "None of [us] can do a good job alone," he says.

He also stresses that the faculty is a place for expanding and amplifying discussions about issues that affect the outlying parts of the city. He notes that the Daniels Building will provide an enhanced platform for the faculty's research on such issues as delivering transit to low-density suburbs, and accelerating efforts to revitalize the 1960s apartment stock that many new immigrants call home.

As Sommer says, the faculty's new digs, and the Daniels' gift that transformed a long-neglected Toronto landmark, comes at a critical time. "It allows us to become something much larger, with much greater potential to make a huge impact." - JOHN LORINC





U of T has been finding ways to reduce its energy consumption for decades, and has now adopted some of the toughest energy-efficiency standards of any university in North America, says Ron Swail, U of T's assistant vice-president of facilities and services. The savings will allow the university to redirect funds to teaching and research - reason alone to reduce energy use.

But there's another important rationale: by investing in energy-efficiency, the university will help Toronto meet its ambitious carboncutting targets as it joins the worldwide effort to stave off the worst effects of climate change. "This is a strong signal," says Swail. "We're moving extremely fast."

U of T's green strategy extends to new buildings on all three campuses. As an example of the benefits, Swail points to the nine-storey addition to the Rotman School of Management. The building opened in 2012 and is certified gold by Leadership in Energy and Environmental Design (LEED). "We recognize that we have to be leaders by example," says Swail.

The new building has many sustainable features, including heating and cooling that can be tailored to the needs of each floor; highly efficient lighting; low-flow washroom fixtures; and a cistern that collects rain so that no potable water is used on landscaping.

Swail points out that the university's long-term commitment to sustainability - enabled by philanthropy - means that the St. George campus uses less water today than it did in 1991, despite having many more buildings and people. "Without the generous funding provided by our benefactors, it would be impossible to create the quality of buildings we have," he says. - STAFF

WHAT'S **NEXT**



A bold vision for renewing and beautifying the St. George campus moves closer to reality

FUNDRAISING has now begun on a project that will transform the heart of U of T's St. George campus and boldly renew one of the city's most important historical precincts as a car-free zone.

The recently updated plan envisions a necklace of granite paths around King's College Circle, a stately row of columnar oak trees along Tower Drive, new outdoor meeting spaces for students, and modern glass pavilions alongside the J. Robert S. Prichard Alumni House and the Medical Sciences Building. About 300 parking spaces will be relocated below the circle. Before breaking ground, U of T aims to raise \$20 million for the multi-year project, and will provide many opportunities for donors to name trees, benches, gardens and other features.

Over the past year, U of T has solicited feedback from the university community about the plan, and the architects and landscape architects have used this information as they've fleshed out

details, such as building materials, plantings and important features related to accessibility and sustainability.

The underground garage will include multiple electric-vehicle charging stations. There will be bicycle storage above and below ground and bike ramps into the garage. Interior and exterior lighting will be LED; and a new cistern will be installed to capture water for irrigation.

"Through our consultation, we have heard a profound level of support for prioritizing the pedestrian experience on campus," says Scott Mabury, U of T's vice-president of operations and co-chair of the Landmark Committee overseeing the plan. "This project will enhance the primacy of the historical buildings and landscapes at the heart of the campus and the city for all to enjoy."

Visit landmark.utoronto.ca to learn more about this project.



JOHN H. & MYRNA DANIELS

The Daniels Building was made possible with gifts totalling \$29 million from 920 alumni and friends, including \$24 million from John H. Daniels (BArch 1950) and Myrna Daniels. (\$5 million of the Daniels' contributions supports scholarships at the John H. Daniels Faculty of Architecture, Landscape, and Design.) Fundraising for the building continues.

CREATE OPPORTUNITY FOR ALL



WHAT'S NEW Scholarships can inspire students to believe they can make a difference. For Atik Bird, it helped her reach out to others – and trust her own voice

IN THE EARLY 1990S, Atik Bird was working at a domestic-violence shelter for Indigenous women and their children. She noticed some women kept returning to the shelter, trapped in the same cycle. "This really saddened me and it frustrated me because I didn't know what to say to them," says Bird (BA 2012 New College, MEd 2016). "I was just aware that there was more that *they* needed to know."

Bird, who is a member of Montreal Lake Cree Nation, realized education was the key. After attending U of T's Transitional Year Programme (a bridging program for adults who don't formally qualify for university), she earned a BA in history and English – all while raising four children. She learned about colonial history – and about the powerful role Indigenous women had held as matriarchs and negotiators. She eventually went back to the shelter, helping empower women with her newfound knowledge. "It gave them some leverage to move on a little bit – which is what we all need. We need access to our history. The *true* history.

Our *own* history from our *own* words."

Bird returned to U of T in 2013 to earn a master of education from OISE. While there, she received a prestigious Indspire Award – a U of T scholarship for outstanding Indigenous students or for students whose parents did not receive post-secondary education. Funded through an anonymous donation to U of T, the scholarship is given in partnership with the agency Indspire. "When I received that award, I was amazed. I was in awe. It gave me the confidence to focus on my studies, and to trust my voice," says Bird, who also won the President's Award for Outstanding Native Student of the Year.

While working on her master's degree, Bird took a course on residential schools in Canada and their devastating legacy. During the course, she read most of the Truth and Reconciliation report. It brought Bird to a greater understanding of her own family. Her parents had never talked about their many years in residential schools - or the painful, traumatic experiences they suffered through. It helped her re-evaluate her parents, understand their shortcomings and even heal a bit herself. She told her professor that she would have never read the report on her own. "It's painful and it's excruciating to read through, but I'm really glad that I did. It gave me more insight into my parents' life and who they were." She mentions her mother, an early-childhood educator, and her father, who helped develop the Native Alcohol and Drug Abuse Program, which now operates nationwide. "They went through some pretty bad things and it shaped who they were. Yet they were able to survive and also do great things."

When Bird attended her convocation in November, there were many family members in her academic procession her aunt Roz Young, a passionate advocate for education, to name but one. But missing was her youngest sister, Cynthia, who should have been graduating, too: Inspired by her older sister, Cynthia had been working toward her bachelor's degree. The two even took a class together: Indigenous Worldviews. She was in her second year when she was diagnosed with cancer; she died in 2014. "My sister, when I graduated, I knew she was walking alongside me."

Bird is not quite sure where her path will lead her now, but she is considering a PhD. And she is grateful that her schooling has given her more confidence, strengthened her own voice and helped her communicate more effectively with those around her. "My education enabled me to break down walls and barriers – even to be able to reach out to other people and make my life a little bigger - such as with other Indigenous students on campus. When we get together, we empower each other."

- STACEY GIBSON

WHAT'S NEXT



U of T is extending the Boundless Promise Matching Program, which doubles the impact of donations in support of financial help for students

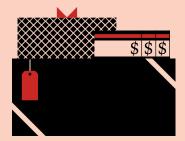
PAIGE ZHANG is fascinated by people's stories and, as a fourth-year medical student, feels fortunate to be working in a field where she can frequently connect with other human beings. "People often need health care when they're in pain, or suffering, or fearful." she says. "We have the privilege to work with them in these moments."

Zhang, who specializes in psychiatry, is a recent winner of the Dr. Murray and Dr. Roslyn Herst Award, established in 2012 under U of T's Boundless Promise Matching Program to enhance financial aid for students. Boundless Promise matches the annual payout

on donations of \$25,000 or more in support of needs-based awards at the university, thus doubling the impact of the donation. For students such as Zhang, this additional help can make a big difference. "It means that I can focus on my studies and not the financial stresses of pursuing an education,"

As part of the Boundless expansion, U of T is extending the Boundless Promise Matching Program until the end of the campaign. To be eligible for the match, new awards must support fulltime undergraduate students who are Canadian residents. - STAFF

HOW THE BOUNDLESS CAMPAIGN SUPPORTS STUDENT AID



As Canada's leading public university, U of T has a longstanding commitment to both excellence and access. Over the past several years, a combination of support from the Boundless campaign, government matching programs and university operating funds allowed U of T to increase student financial-aid disbursements to an unprecedented \$181 million in 2015.

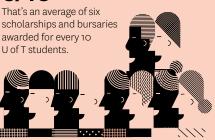
The Boundless campaign has contributed \$316 million in donations for student aid and experience.





51,588

scholarships and bursaries were awarded in the 2015-16 academic year



scholarships and fellowships have been created or enhanced through Boundless. Student scholarships are the most popular area of support for donors. One in two Boundless donors have created or supported student awards.



INSTIL HOPE



WHAT'S NEW



Researchers at the Waakebiness-Bryce Institute for Indigenous Health – created with a visionary gift from Michael and Amira Dan – have teamed up with a First Nation in northwestern Ontario to seek answers to a frightening, generation-old medical mystery

IN 2010, a council of 15 elders resolved to find out why so many members of their community of Northwest Angle 33, a First Nation near Kenora, Ontario, were dying of cancer. Could it be something in the environment? Today, seven years later, the council has lost nine of those 15 elders, all to cancer – and there are still no answers. But that may be about to change.

In partnership with the Kenora Chiefs Advisory, researchers at the Waakebiness-Bryce Institute for Indigenous Health, at U of T's Dalla Lana School of Public Health, have been analyzing data from statistics, environmental samples and people's family stories. Now, with enough evidence to justify proceeding, they hope to take their

research to the next phase: taking blood samples to measure environmental contaminants in people's bodies and genetic biomarkers for disease.

"We're very hopeful now that we'll finally get answers," says Norma Girard, a consultant and land manager for the First Nation. "People need to know: is our community safe?" Girard, who has lost a father, an aunt and friends to cancer, has been helping researchers from the Waakebiness-Bryce Institute by knocking on doors and collecting information for the study. She estimates that over the past 20 years, up to half the people who have lived at Northwest Angle 33 have contracted the disease, usually in the bladder, stomach or colon. One report found that of 20 longtime

residents, 17 were undergoing cancer treatment.

The band has about 500 members, with 120 living at the primary residence of Northwest Angle 33. The Lake of the Woods inlet in northwestern Ontario was once the place where black spruce logs, awaiting transfer to a Kenora pulpand-paper mill, were stored in booms, possibly leaching toxic methylmercury into the lake. It's also the place where workers brought electricity to the area in the 1960s through underwater cables and buried transformers, which can contain carcinogens.

The community's main sources of water are wells that run off two portable treatment plants. But in February 2016, Health Canada identified high concen-

trations of radioactive material in the water system and issued a "do not consume" order, more serious than the previous boil-water advisory. The community now receives bottled water for drinking, but many residents still cook and bathe using local water.

Health Canada provided \$200,000 for the first phase of the U of T study. It's critically important the research continue for two reasons, says Howard Hu, principal investigator and dean of the Dalla Lana School. "First, it responds to concerns from the community, and second, it relates to one of the scariest issues that communities all over the world face: is there an epidemic of cancers, and could they be related to what we're eating, drinking or breathing?"

Although it's small, Northwest Angle 33 is of critical historical significance. It was here that Treaty 3 was signed in 1873, allowing the Canadian government access through Ojibwe territory to build railways, roads and canals. "There wouldn't be a Canada without Northwest Angle 33," Girard says.

The study team includes a co-ordinator from Northwest Angle 33, as well as researchers from Cancer Care Ontario, Environment Canada, Public Health Ontario and Toronto's St. Michael's Hospital. The Waakebiness-Bryce Institute teams up U of T scholars with community partners and Indigenous Peoples to address the complex factors that underlie health disparities between Indigenous and non-Indigenous people.

- MARCIA KAYE



MICHAEL & AMIRA DAN

Michael Dan and Amira Dan's visionary gift of \$10 million to U of T in 2014 established the Waakebiness-Bryce Institute for Indigenous Health at the Dalla Lana School of Public Health.

WHAT'S NEXT



A medical research centre at U of T Mississauga aims to speed up the development of new lifesaving cancer drugs

THE UNIVERSITY OF TORONTO MISSISSAUGA is establishing an interdisciplinary centre for the development of new drugs targeting cancer and other diseases, thanks to a \$7-million donation from Mississaugabased Orlando Corporation.

The focus of the new Centre for Medicinal Chemistry will be to create compounds that are purpose-built to interrupt specific biochemical processes in the body while avoiding harm to normal cellular functions. Researchers at the centre will include UTM's Patrick Gunning and four new principal investigators who will partner in medicinal chemistry, computational chemistry, cancer biology and stem cell biology.

In the past five years, Gunning and his team have advanced four potential new drugs into the final stage of testing and analysis before clinical trials. The great promise of the centre lies in bringing together scientists from complementary areas of chemical and biological research under one roof – to reduce the time and cost of developing these compounds. The hoped-for result will be a much larger pipeline of molecules to fight many forms of cancer and other diseases. Gunning lost a grandmother to cancer; he knows that patients and their families need better treatments as soon as possible.

Gunning's lab employs more than 30 people. With the launch of the centre he plans to add several positions. Each of the other principal investigators will also have their own labs, creating a truly interdisciplinary effort with about 100 people. "Through this gift," says Gunning, "we have a unique opportunity to develop life-saving drugs." - JANE STIRLING

Scholars at U of T's Jackman Humanities Institute find optimism amidst the pain in Canada's Truth and Reconciliation Commission



As Canada embarks on a journey of restorative justice with its Indigenous Peoples, a group of scholars at U of T's Jackman Humanities Institute are consulting with peers half a world away to find out how another country sought to heal from a violent and painful episode in its history.

In 1994, South Africa set up its own Truth and Reconciliation Commission to examine the gross human rights violations that occurred during the apartheid era. Neil ten Kortenaar, a professor of English at U of T Scarborough, is among more than a dozen U of T researchers, including several Indigenous people, who participated in a workshop in October at Six Nations territory near Brantford, Ontario. Eight scholars from the University of the Western Cape in South Africa also took part.

The event, part of a planned three-year collaboration between the two universities supported by a grant from the Andrew W. Mellon Foundation, found plenty of parallels between Canada and South Africa but also key differences, says ten Kortenaar. The South Africans, largely cynical about the outcome of their own commission, were startled by the hopefulness the

Canadians expressed about theirs.

Twenty years on, the feeling among many South Africans is that their commission failed to come to grips with the broader social legacy of apartheid. "People who committed abuses admitted their guilt," says ten Kortenaar, "but all of white society had benefited from the system. This wasn't addressed, leaving the impression that it was a just a few people who had done these things."

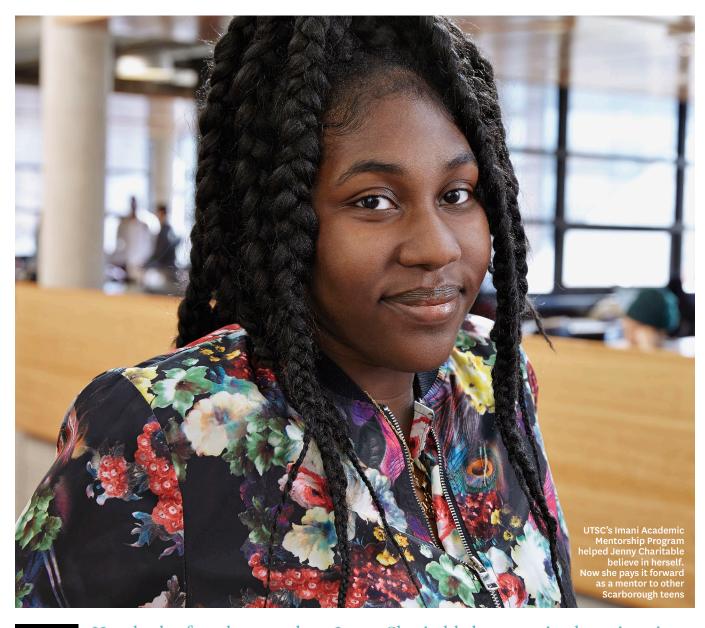
If there is a reason to be hopeful in Canada, says ten Kortenaar, it's because Canada's commission has focused more on policy and institutions than on individuals.

The group plans to meet again next year in South Africa, and will compare the impact of colonialism in each country and what's been done to make each country more just. "The emphasis is on facing up to what's been done," says ten Kortenaar.

The Jackman Humanities Institute encourages collaboration among humanities scholars. It was established in 2008 out of a visionary \$30-million contribution from Henry N. R. Jackman (BA 1953 Victoria, LLB 1956). - STAFF

PHOTO: DAVID PIKE WINTER 2017 35

ENCOURAGE NEW LEADERS



WHAT'S NEW



Hundreds of students such as Jenny Charitable have received a university education they thought was out of reach, thanks to the vision of the Black Students' Alliance, which founded U of T Scarborough's Imani mentoring program, and alumna Mary Anne Chambers, who championed it

IN 2007, the Imani Academic Mentorship program at UTSC, just two years old, was already living up to its name – by helping students have "faith" in themselves. Established by the UTSC Black Students' Alliance under the leadership of student Rashelle Litchmore (BSc 2008 UTSC), the program run by student volunteers was not only helping black

middle- and high-school students with their studies, but also celebrating black cultural heritage and the contributions of the African-Canadian community. More than 90 per cent of the program's graduates say they were inspired to pursue post-secondary education.

Imani's mentees were thriving, but the program was close to being can-

celled for lack of funding. Mary Anne Chambers (BA 1988 UTSC), Ontario's former minister of Children and Youth Services, made a five-year commitment (later generously renewed) to support Imani. Chambers loved every facet of the idea – including the fact that it would benefit local Scarborough residents. "I believe that a university has

a responsibility to understand the needs of its broader community and to be a source of friendship and leadership for the community in which it is located," says Chambers, citing a recent Toronto Foundation report that named Imani as one of the most innovative educational initiatives in Scarborough.

Litchmore had come to Canada from Jamaica to finish high school at West Hill Collegiate in Scarborough. She was surprised when she observed some black students not doing well. Imani's successful formula brings together volunteer UTSC student mentors with middle- and high-school students for three hours of academic and social support each week - efforts that include sports activities or "A Day in the Life," where mentees shadow UTSC students around campus.

For Jenny Charitable – now a first-year student at UTSC - the power of a community that believes in her potential was life-changing. In high school, Charitable had grown used to people telling her she was going nowhere in life. One informed her she would never attend university. And for a while, she believed them. "The thought that people like me would be in university, it was just never in my head," she says.

But Charitable's Imani mentor - someone who understood her life experiences and struggles – taught her to draw on her inner resources. Her grades improved steadily, and she is now pursuing a bachelor of science degree and hopes to become a psychologist.

This year, 50 mentors are working with 70 students. And since 2005, 576 Imani student volunteers have helped 1.055 Scarborough students believe in themselves and change their lives. Many of the former mentees become mentors fostering the next generation of community leaders. Charitable herself pays it forward as an Imani mentor, "All I want to do is motivate kids. I just want them to know that despite what people say or do, they can make it - no matter their race or skin colour. You can make it, as long as you believe you can."

- STAFF

The Hart Professorships - created through a historic \$20-million bequest from the estate of Erwin Edward Hart - are giving the next generation of engineering research pioneers a major boost



While advancements in computing power are famously fast-paced, Natalie Enright Jerger, a professor of electrical and computer engineering, is developing so-called "approximate computing" and "hardware acceleration" techniques that will require as much as a decade of research before they can be applied in commercial settings.

Prof. Jerger says that receiving the Percy Edward Hart Professorship, worth \$225,000 over three years, will allow her to undertake the research that may lead to much more energy-efficient processing, as well as advances in machine learning.

The professorship - one of seven awarded comes from a \$20-million bequest from the estate of alumnus Erwin Edward Hart (BASc 1940) to bolster early-career research and education at the Faculty of Applied Science and Engineering, and to provide enhanced

opportunities for graduate students. The professorships are named in honour of Erwin and his late father, Percy.

Chandra Veer Singh, a professor of materials science and engineering and another Hart Professorship recipient, says the award will allow his team to expand its long-term renewable energy research. It will also provide leadership opportunities for younger academics trying to make a name for themselves in research. Until the Hart Professorships were introduced, Veer Singh says, Canada had fewer sources of multi-year, basic science funding designed to give early-stage researchers a boost than countries such as the U.S. and India. He commends the Hart family for filling this gap. "It's an excellent opportunity for young researchers like me who have started to establish themselves but are not at the top level," he says. "I really say thanks to them." - JOHN LORINC

WHAT'S NEXT



U of T Mississauga aims to create global champions in the fight against white-collar crime

WHEN LEONARD BROOKS, a professor of business ethics and accounting at U of T Mississauga's Institute for Management and Innovation, launched a graduate diploma in forensic accounting in 2003, it was one of just three such programs globally, attracting participants from as far afield as New Zealand. Now, the Ontario government has given UTM the green light to transform the diploma into a full master's degree, with the first class scheduled for September 2017.

With steadily mounting concern about money-laundering and Internet scams, Brooks says there's enormous demand for professionals who are conversant in the latest investigative accounting techniques and can use the training to step into leadership positions within the field. "White collar criminals who engage in fraud and money-laundering throughout the world are extremely resourceful and have considerable expertise in how to exploit

the gaps in the system," he observes. "There has to be somewhere in the world where investigators are being educated to the advanced level needed to prevent and catch them."

The program, delivered online, is geared at professionals in fields such as accounting, compliance, law enforcement, regulatory oversight and business valuation. "Our focus is to provide the most rigorous, comprehensive forensic accounting program in the world," says Brooks.

In 2013, the City of Mississauga made a historic commitment to invest \$10 million in the Innovation Complex. which houses the Institute for Management and Innovation. The institute aims to produce future leaders with a combination of management skills and depth in their chosen field. - JOHN LORING

For more information, visit mfacc.utoronto.ca.

SPARK INNOVATION



WHAT'S NEW Artificial intelligence could soon transform almost everything. An innovative program at the Rotman School's Creative Destruction Lab, boosted by \$1 million from Joseph L. Rotman's legacy gift, will help place U of T startups at the forefront

TECHNOLOGIES FUELLED BY artificial intelligence (AI) are already finding their way into the stores where we shop online and into futuristic cars that drive themselves. And now a U of T legal services company is poised to use machine learning to revolutionize the practice of law.

Launched in 2014 by three U of T law professors and a veteran software engineer, Blue J Legal has created sophisticated AI software that provides lawyers and judges with guidance on resolving tax disputes. While a judge may use a dozen key precedents to make a ruling, Blue J's technology sifts through hundreds of past cases, looking beyond key words for facts similar to the case in dispute. With successive refinements,

Blue J's accuracy – the number of times its conclusions align with a previous judge's rulings – has improved from 65 per cent to up to 98 per cent.

Blue J got a leg up through a pilot program for machine-learning startups at Rotman's Creative Destruction Lab. The intensive nine-month program pairs new ventures with successful technology entrepreneurs who provide crucial advice about achieving key objectives and connecting with investors. The pilot was a success, and now the Creative Destruction Lab will use \$1 million from the Rotman Catalyst Fund to enhance its machine-learning stream. The \$45-million Rotman Catalyst Fund was created last year through a visionary

\$30-million seed gift from Joseph Rotman (MCom 1960) to fund bold and innovative initiatives that align with the school's highest priorities. Further support for the machine-learning stream has come through gifts from Scotiabank and RBC.

According to Benjamin Alarie, Blue J's CEO and a U of T law professor, the company's technology can dramatically increase access to legal advice for consumers by lowering its cost. The software will also reduce the number of disputes that go to trial. "There are cases where litigants are wasting a lot of time and emotional energy fighting," he says. "Our system could lead to settlements of easy cases."

The company traces its roots to IBM's 2014 "Watson Challenge," a programming contest that involved students from U of T's computer science department. Asked to sit on the contest jury, Alarie was intrigued by the students' ideas and approached computer science about working with the Faculty of Law to develop the concepts further. This partnership became Blue J Legal.

Law and MBA student Claudia Dzierbicki helped with the legal and market research Blue J needed to make their pitch to the Creative Destruction Lab's machine-learning stream. As Blue J commercializes its service. Dzierbicki predicts an important early market will be employment contract disputes that can "potentially cost millions of dollars in claims by employees [if the employer] gets it wrong." The company sees other applications in labour, family and even criminal law. Machine learning systems "will run circles around human decision-making," says Alarie.

For Alarie, Blue J's very existence is evidence of how smart people from seemingly disparate fields came together, with the help of astute investments by visionary donors, to create an innovation that could potentially change something as tradition-bound as the practice of law. As he says, "It's the perfect storm of how to get things done at the university." - JOHN LORINC



JOSEPH ROTMAN

In 2016, the Rotman School of Management received a historic \$30-million bequest from the estate of Joseph Rotman (MCom 1960). The gift has enabled the creation of the \$45-million Rotman Catalyst Fund to support bold, innovative initiatives at the school.

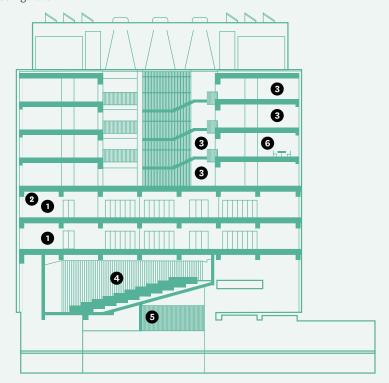
WHAT'S NEXT



The Centre for Engineering Innovation and Entrepreneurship will encourage new kinds of collaborations among students, faculty and industry in all of U of T's engineering disciplines

HERE ARE SIX WAYS the new Centre for Engineering Innovation and Entrepreneurship on St. George Street will help cultivate tomorrow's startups. The project has raised more than \$26 million from many alumni and friends, including a \$5-million gift from George Myhal (BASc 1978) \$1-million commitments from the Engineering Society and several others. The Government of Ontario has also invested \$15-million, in recognition of the facility's role as an economic driver of innovation.

- With movable tables and screens visible from every direction, 16 technologyenhanced active learning rooms and design/meeting rooms can be rearranged at a moment's notice into any required configuration.
- 2 Building prototypes and other physical models is one of the biggest challenges of getting a new business off the ground. A rapid-prototyping facility with 3-D printers will make this much easier.
- 3 Several world-leading research institutes and centres will pursue innovation in such areas as sustainable energy, robotics and global engineering.



- 4 In a state-of-the-art lecture theatre, students will be seated at tables fitted with microphones and audiovisual inputs that allow them to send digital content - anything from snippets of code to video to the room's large screen and powerful audio system.
- 5 A versatile space will allow engineering students to collaborate on group projects and other activities associated with 100 faculty clubs, such as the Human Powered Vehicle Design Team.
- 6 The Entrepreneurship Hatchery provides teams of engineering students with the space, equipment, mentoring and funding connections they need to develop their own venture.

INSPIRE CREATIVITY AND COLLABORATION



WHAT'S **NEW**

The design of the Jackman Law Building reflects the need for creative, collaborative spaces for both students and faculty

UNIVERSITIES COMPETE to hire the best teachers and researchers, and race to keep up with the latest lab and classroom technologies. But many, including the University of Toronto, are now paying

greater attention to another important aspect of the student experience: how architecture and design can assist learning and create a stronger sense of community.

Gone are the days when students spent most of their study time alone in the library stacks. Today's students more often engage in team projects and work collaboratively to solve real-world problems. That's certainly true in the Faculty of Law, where students participate in moots - simulated court proceedings - that require them to work in teams and argue a case from all sides. "The more perspectives you have on a given issue, the more informed and more considered your opinion will be," says Zachary al-Khatib, a third-year student. "Collaboration is essential to every part of the law school process."

The Jackman Law Building, which opened last fall and has received almost \$35 million in support from more than 600 alumni, gives students plenty of opportunities to meet and work together. Gian Medves, the interim chief law librarian at the Bora Laskin Law Library, notes that the library has 11 new group study rooms, all with views of the city and plenty of natural light. Because students often spend a lot of time in these rooms, they appreciate the aesthetic design elements, as well as the functional ones, says Stephanie Lewis, a second-year student. "One room has windows onto Philosopher's Walk," she observes. "Even if you're there late, you can see the sun set." Lewis also likes that several of the rooms have a whiteboard, which makes collaborating easier - especially for visual learners like her.

Creating spaces for collaboration and creativity generally means thinking at two different scales, says Jay Pooley, a lecturer at the Daniels Faculty of Architecture, Landscape, and Design. He calls them "retreat" and "meet." The "retreat" scale is private and quiet, such as a study nook or carrel where students can read, research and form an argument before advancing to the "meet" scale to refine their position within a group, or debate it with others.

His view of what's ideal for university students differs from the prevailing notion in many companies that workers are more likely to be creative and

collaborate in offices "with one big open space where no one has their own desk." This fails in some cases, says Pooley, because both universities and companies need to serve a number of different personalities and learning types - and various purposes. "Sometimes you need to have the ability to work quietly and focus, before bringing it into a larger, louder environment."

Collaboration occurs in formal work areas, but also in informal spaces such as cafés and lounges, where students hang out, forge connections and build a sense of community. "These spaces are really important to the proper functioning of the school from a mental health perspective," says al-Khatib. Figuring out where to put more of them in the new building, besides the large atrium, remains a priority for both students and the faculty administration, adds Lewis.

Creating truly collaborative spaces means ensuring that they are open to everyone. Alexis Archbold, the faculty's assistant dean, Juris Doctor program, notes that the Jackman Law Building is completely wheelchair accessible, and all new classrooms are equipped with

assisted listening devices. It has 12 allgender washrooms and heated walkways near entrances to melt snow. "For me. the accessible features are the building's real highlights," says Lewis. "I'm excited to see the faculty integrate them in all aspects of the student experience as we settle into our new space."

- SCOTT ANDERSON



HALJACKMAN

Hal Jackman (BA 1953 Victoria, LLB 1956), a former U of T chancellor and lieutenantgovernor of Ontario, made an extraordinary gift of \$11 million to support the Jackman Law Building. The innovative facility has generated a total of \$34.5 million in support from more than 600 alumni and friends.

Robarts Common will create new spaces for students to study, collaborate and access the world's digital knowledge



A highly anticipated expansion to U of T's Robarts Library will provide much-needed study and collaboration space for the building's 18,000 daily visitors.

A five-storey free-standing addition planned for the library's west side will be connected to the main library by a four-storey bridge. To be called the Robarts Common, the building will

increase study spaces by 25 per cent, bringing the total number to just over 6,000.

"This is a major part of our revitalization process," says Larry Alford, U of T's chief librarian. "It's about creating space for students to do new and different kinds of things."

Robarts Common will include traditional reading tables and carrel desks, as well as long study tables, soft-seating areas and amphitheatre-style seating arrangements for more social learning activities. The new facility will also include 32 meeting rooms – several with display screens and loudspeakers, to allow students to collaborate on group projects. There will also be Wi-Fi access and wireless printing stations throughout the building.

Designed by Diamond Schmitt Architects, Robarts Common has received more than \$19 million in support from alumni and friends, including, a lead donation from the late Russell Morrison (MA 1947) and Katherine Morrison (PhD 1979). - SHARON ASCHAIEK

NEXT



WHAT'S U of T Scarborough has close ties with ___ the community. A new building will help foster even stronger links

WHEN U OF T SCARBOROUGH'S newest building, tentatively known as Highland Hall, opens next year, it will provide something that has long been missing from the campus – an architecturally distinctive "front door" that will celebrate the link between the campus and the surrounding neighbourhoods.

Principal Bruce Kidd envisions a place where students and faculty members will engage with residents of Scarborough on issues related to suburbs. migration and globalization. UTSC researchers in recent years have established partnerships with a range of community groups. "Highland Hall will relocate the social sciences to the street front," he says, noting the new structure will become "a centre of excellence for the study and practice of community development."

Now under construction, the five-storey, \$52-million project will also provide a home for the registrar's office and the Hub, the campus's entrepreneurship centre. It will offer study space, common areas and amenities with capacity for as many as 600 students.

The architectural concept, with an open space connecting cascading levels, explicitly aims to bring people together, Kidd notes. "The design, especially the atrium, is intended to stimulate cross-disciplinary inquiry and collaboration while presenting an inviting face to the community."

The project is supported by gifts from alumni and friends totalling \$1.35 million, including a \$1-million donation from Mark Krembil (BA 1988 UTSC), through the Krembil Family Foundation.

- JOHN LORINC

WINTER 2017 41 PHOTO: COURTESY OF DIAMOND SCHMITT ARCHITECTS

PROMOTE UNDERSTANDING



WHAT'S **NEW**

Shafique Virani, a professor at the donor-supported Centre for South Asian Civilizations, spoke powerfully against Islamophobia at a recent TEDx Talk. The key to countering it, he says, is education

TO DEMONSTRATE HOW the repetition of biased or selective information can sway popular opinion, Shafique Virani, a U of T professor of Islamic Studies, conducted an experiment with a TEDx Talk audience at UTSC last year. He described a substance called DHM that's "colourless, odourless and tasteless," which, in its solid form, "can severely damage human tissue" and "has been found in excised tumours of terminal cancer patients." Accidental inhalation of DHM, he added, is the

third-leading cause of unintentional death worldwide.

"Based on this information," he asked the crowd, "how many of you would allow DHM to be freely available?" The answer: almost no one. Virani then revealed that the mysterious substance is actually "di-hydrogen monoxide," otherwise known as water.

During the talk, which is now available on YouTube, Virani draws a parallel between DHM and media portrayals of the Muslim community to help explain

where Islamophobia comes from. He notes that in a review of almost one million news stories in the U.S. and Europe about Muslims, a media monitor found that 98 per cent of the items were about radical militants. "When all the information we have is about an infinitesimally small portion of the world's Muslims, we completely misunderstand ordinary Muslims," says Virani. "It's like taking the Ku Klux Klan and saying they are representative of all of Christianity."

Virani, who is also the founding director of the Centre for South Asian Civilizations based at U of T Mississauga, believes countering Islamophobia must begin with how children are educated. "Children are not born with any sort of bias. You'll see them playing with people of another gender, of other colours or religions without any regard."

He would like to see more discussion of culture and religion in schools. "If you think about the words that people are familiar with that relate to Islamic culture, simplistic understandings of 'sharia' and 'jihad' spring to mind. How many people go to Starbucks but are unaware that the word 'coffee' comes from Arabic or have been to the doctor but didn't know that Ibn Sina's encyclopedia The Canon of Medicine laid the foundations for modern medical practice in Europe? When people learn about other cultures and religions, they become more broad-minded."

This philosophy of mutual understanding infuses the Centre for South Asian Civilizations, which was formed in 2012 with donor support. Its mandate involves reaching out beyond the university to the broader public. This

is something Virani is also passionate about in his own research in Islamic Studies – a subject that's not common in North American higher ed. "While Muslims make up close to a quarter of the world's population, just over 10 per cent of religion and theology departments at Canadian and American colleges and universities have faculty trained in Islamic studies," he says.

Besides holding public events and talks similar to the one Virani delivered at TEDx, the centre has pioneered the study of important but less commonly taught subjects, with classes in Sikhism, Zoroastrianism, Shiism, Islamic spiritual traditions, Hindi and Urdu. Virani now hopes to promote translations of scholarship by U of T professors into South Asian languages, and to support translations of South Asian literature into English and French.

"We want to make sure that our scholarship is relevant and reaches out to people – that we're not just in an echo chamber," he says. "There's so much more in terms of literature, in terms of science, that could be shared. We're very focused on having an impact across the world." - scott anderson

Reading Canadian fiction and poetry helps us understand our own experience and that of others. "That's the beauty of language," says Prof. Smaro Kamboureli



Fiction and poetry can tell us who we are as Canadians in profoundly intimate ways, says Smaro Kamboureli, a U of T professor of English. That's because we tend to engage with fiction, through metaphor and symbolism, on a more empathetic level than we do with politics, for example, or demographic studies. Literature brings us closer to the people outside of our own lived reality. "That's the beauty of language," she says. "We are able to identify with the plight or experience of someone else."

Kamboureli, who holds the Avie Bennett Chair in Canadian Literature, teaches at the St. George campus and says she regularly receives emails from students who feel that learning about

literature has transformed how they view the world. "You see that it really touches them," she says. "It speaks to the questions young people have about their own experiences."

In her role as chair, Kamboureli hopes to expose the broader public to a range of Canadian authors. Each year, she organizes a free public lecture called "Literature Matters" featuring two Canadian authors. Over the course of the evening, each writer speaks about a topic related to their work and why literature matters to them. This year's event, scheduled for late January, welcomes Esi Edugyan, the winner of the 2011 Giller Prize, and poet Karen Solie.

- STAFF

WHAT'S NEXT



Students at UTSC will be able to learn

much more about Tamil language and culture, thanks to a \$2-million gift

JUST A FEW kilometres away from the heart of Canada's largest Tamil community, U of T Scarborough professor Bhavani Raman is hoping to create a vibrant centre for learning and discovery about a culture that has existed for millennia but may be unfamiliar to many Torontonians.

Raman, who teaches history, is the chair of Tamil Worlds Initiative. a tri-campus program that holds talks and discussions on Tamil history, culture, religion and politics. Themes range from postwar developments in Sri Lanka to environmental history. migration and feminism. The events are open to anyone, she says, noting that the program offers a place for students and members of the public, whether Tamil-speaking or not, "to understand urgent issues pertaining to our globalizing world, in ways that they can relate to in their own life."

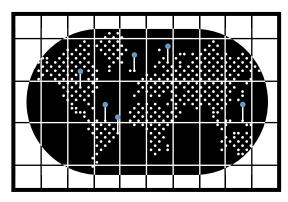
Through Tamil Worlds, Raman is also facilitating connections for students to do internships in Sri Lanka, a country to which many of Toronto's Tamils trace their origins.

In the future, she'd like to offer language classes, so students can understand the scholarship, read novels or poetry and conduct research on histories of Tamil communities in eastern Toronto. She'd also like to invite more visiting Tamil scholars to U of T.

An expansion of the program is now being planned, thanks to Ravi Gukathasan (BSc 1982, PhD 1987), a Scarborough businessman who has given \$2 million to support Tamil studies at UTSC. The gift is the largest ever from an alum to UTSC, and arrives just as Canada marks January as Tamil Heritage Month. - STAFF

THE BOUNDLESS CAMPAIGN SO FAR

Thanks to the generosity of thousands of alumni and friends, the Boundless campaign has raised \$2,058,559,590 for the university's highest aspirations and priorities. As we set our sights on reaching a new goal of \$2.4 billion, unprecedented in Canadian philanthropic history, we are inspired by our community's shared belief in the power of higher education to prepare leaders, transform lives and shape a better world.



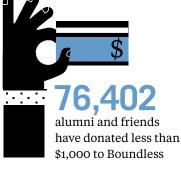
94,736
alumni and friends have contributed to the Boundless campaign

is the number of countries – almost half of the world's nations – from which alumni and friends have sent donations

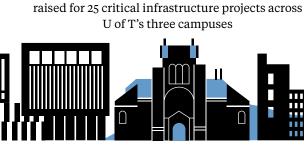


\$523 million











\$660 million

in donations for innovative programs and research



\$356 million in philanthropic research grants

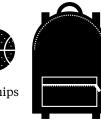


\$203 million

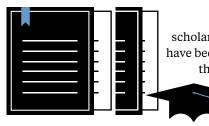
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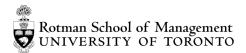
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OUR DEEPEST THANKS AND GRATITUDE.

Through their generous giving, our worldwide community of alumni and friends are playing a crucial role in lifting the University of Toronto to new heights, while setting the pace for philanthropy in Canada. Their support is fuelling important discoveries, preparing the next generation of leaders and allowing us to imagine a brighter future for our city, our country and our world. As we celebrate realizing our goal ahead of schedule and raise our sights on reaching \$2.4 billion, we are grateful for this generosity and the new opportunities we have to achieve even greater levels of excellence, innovation and impact.



BOUNDLESS THE CAMPAIGN FOR THE UNIVERSITY OF TORONTO

Since its public launch in 2011, Boundless: The Campaign for the University of Toronto has elevated the university's excellence and our capacity to address local and global challenges. Boundless has engaged an extraordinary 94,736 alumni and friends to rally around U of T and provide more than \$2 billion in support for our highest priorities and aspirations. This outpouring of generosity from our alumni and friends has supported hundreds of initiatives that are changing the lives of our students and contributing to the health and vibrancy of our community and society.

The outstanding response to the campaign is transforming every aspect of our tri-campus community. To date, we have received \$316 million for student scholarships, \$203 million for faculty support, \$660 million for groundbreaking centres and initiatives, \$523 million for critical infrastructure projects and \$356 million in philanthropic research grants. This rising tide of support has coincided with a surge in alumni participation, pride and affinity at home and around the globe.

Thanks to the commitment and enthusiasm of our community, we surpassed our \$2-billion goal in June 2016 – six months ahead of schedule. Thousands of alumni and friends from around the

world helped us reach this milestone, which is unprecedented in Canadian philanthropic history. Their generosity and shared belief in U of T's mission has elevated our standing among the world's best universities and lifted our sights to a new horizon of excellence and impact.

To capitalize on our success, the university, with the unanimous support of our deans, principals and volunteer campaign leadership, has decided to expand the Boundless campaign goal to \$2.4 billion. This expansion will help fund critically important initiatives inspired by the university's three priorities of leveraging our urban location more fully, strengthening key international partnerships and reimagining undergraduate education.

Please visit **boundless.utoronto.ca** to view an extensive listing of donors who have contributed to the campaign. On this page and the next two, we are proud to recognize those benefactors who have made landmark gifts to the Boundless campaign of \$1 million or more and those who have contributed to the King's College Circle Heritage Society. The subsequent pages recognize donors who have donated \$5,000 or more in 2015–16.

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Recording Artist The Weeknd Helps Launch Ethiopian Studies at U of T

U of T's department of Near and Middle Eastern Civilizations is launching a course in Ethiopian studies, and Toronto native Abel Tesfaye, a.k.a. recording artist The Weeknd, is helping. Tesfaye responded to a call from local Ethiopian leaders to help raise money for Ethiopian studies with a \$50,000 gift, putting the university within reach of its \$200,000 fundraising goal. The first course will be in Ge'ez – the liturgical language of the Ethiopian church.

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We are proud to recognize those benefactors who have made a provision for the university through a future bequest or beneficiary of a life insurance or registered retirement fund during the Boundless Campaign.

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Granddaughter's Diagnosis Prompts \$1-Million Gift from the Colonel Harland Sanders Charitable Organization to Stem Cell Science at U of T

When Bill Karny's eight-year-old granddaughter Charlotte was diagnosed with Rett Syndrome, a rare neurodevelopmental disorder, he was determined to find a treatment for its debilitating symptoms, which include seizures. Karny, who is vice-president of the Colonel Harland Sanders Charitable Organization, teamed up with Terrence Donnelly, the philanthropist behind U of T's Donnelly Centre for Cellular and Biomolecular Research. The result: a \$1-million gift to help James Ellis, a professor of molecular genetics and a researcher at SickKids, accelerate his search for stem cell-based therapies to improve the lives of all children suffering from Rett Syndrome.

PHOTO: COURTESY OF THE KARNY FAMILY

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Scholarship Honours Memory of Creative Writing Grad

Each spring, Carla Gilders looks forward to the department of English's annual Creative Writing Gala, which features talented students, including scholarship recipients, from the MA program in creative writing. Gilders and members of her family (pictured) support the Adam Penn Gilders Scholarship in Creative Writing, established in memory of her late son, an English graduate and writer. "When Adam passed away, we wanted to find a way to honour his memory, contribute something meaningful, and give his family and friends a way of turning their grief into something positive. We understand all too well how hard it is for writers to make a living.'

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International students attending a Canadian high school will be able to strengthen their links to this country thanks to a \$1-million gift for U of T entrance scholarships at Columbia International College. Clement Chan, who arrived in Canada from Hong Kong in 1972 as an international student, is now executive director and founder of the college, a middle school and high school for international students in Hamilton, Ontario. His gift establishes the University of Toronto Future Leaders Admission Scholarship – five awards worth \$8,000 annually for first-year students who have just graduated from Columbia.

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A Memorial Gift Becomes a Lasting Legacy in Peace and Conflict Studies

Amir Hussain met and married fellow residence don Shannon Hamm while he was a psychology student at U of T. But tragedy struck in 1992 when Shannon suddenly passed away. Hussain, now a theology professor in the U.S., created the Shannon L. Hamm Award in Peace and Conflict Studies and, with assistance from U of T staff, set up an estate gift to augment the scholarship. Hussain notes that he had thought such gifts were made only by wealthy individuals, but gift-planning staff at U of T showed him that this wasn't the case. "I'm happy that I can recognize Shannon and the person she was by leaving a legacy to this place that was so important to us," he says.

Keith Moles

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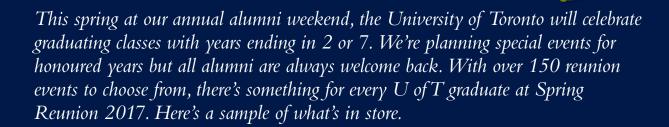
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We are grateful for the continued support of all our generous donors. We endeavour to make our lists as accurate as possible. For more information, or if you have questions about U of T's donor listing, please contact Suzanne M. Chalambalacis at 416-946-5915 or suzanne.chalambalacis @utoronto.ca.

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All About Alumni

"I asked the hairstylist how she thought the movie would fare. She rolled her eyes and said it's going straight to DVD"

Actor Rajiv Surendra on filming *Mean Girls* p. 63



Beauty in the Everyday

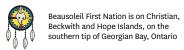
During one terrible year, author Kyo Maclear finds solace by birding in the city

BIRDERS OFTEN SPEAK of a "spark bird" – the one that hooks you on birding, and never lets go. For author Kyo Maclear (BA 1992 UC, MA 1996 OISE), there were two: the exotic magnolia warbler – the yellow-streaked songster who migrates north from South America – and the more modest house sparrow, ubiquitous on Toronto's streetscape and in its skies. "There's a competitive aspect to birding: people covet the rare," says Maclear. "But actually, finding house sparrows everywhere makes it so pleasurable, because they're always around. I've always liked the common."

It is finding the beauty in the everyday and urbane that Maclear captures so well in her new book, *Birds Art Life*, equal parts memoir, sketchbook and meditations arising from birding in the city. The book centres on one year in Maclear's life: a devastating one in which she watches her father – an award-winning war reporter – lose his independence and dignity after suffering two strokes. An only child with two young boys, Maclear struggles to care for two generations of loved ones. She needs an outlet to help her breathe and recalibrate. A new friend with a passion for birding takes her on outings, introducing her to chimney swifts in High Park, trumpet swans at a local marina, red-necked grebes at Humber Bay. "Just walking around the city with him made me discover that every shrub and tree had a whole sub-world of birds that I'd never known about," she says.

The passion for winged creatures does, indeed, run deep among writers: Sylvia Plath had her beekeeping, Nabokov his butterflies, Jonathan Franzen writes feverishly about his ▶

PHOTO: DAVID WALL WINTER 2017 57



Who Gets Called an Artist?

Wanda Nanibush, the AGO's first curator of Indigenous art, pays heed to the overlooked



dian and Indigenous art, Nanibush is informed by thoughtful integration as she plans to expand the collection's range and involve artists who have historically been overlooked. "I pay attention to diversity," says Nanibush, who is Anishinaabe, from Beausoleil First Nation. "It's not always the quality of the work that determines if an artist is overlooked. Power has a lot to do with the making of great artists. Racism, colonialism, sexism and homophobia have led to the exclusion of some."

Women. For this, she gathered writings by Indigenous women, and translated them for a wider audience. "I was worried that the inquiry into murdered and missing Indigenous women wouldn't have enough of an Indigenous woman's voice," she says.

- NAOMI SKWARNA

AT THE ART GALLERY OF ONTARIO, it is not

For the AGO's first curator of Indigenous art, Wanda Nanibush (Master of Visual Studies, 2012), that interpretative text is a vital way to help viewers access each work and link it to other things. In her inaugural exhibition, Toronto: Tributes + Tributaries, 1971-1989, Nanibush commissioned wall texts in Anishinaabemowin as well as French and English. "It's a way to mark Toronto as Indigenous territory," she says. The exhibition brings together work by 65 artists and collectives in Toronto from the '70s and '80s, focusing on an experimental time in the city's art scene.

As the assistant curator of Cana-

It gives them life and pushes back of Indigenous people."

Nanibush also recently released the book *Violence No More: The Rise of Indigenous*

uncommon to encounter someone reading an artwork's wall text in hunched concentration, shooting glances at the work itself.



Have you heard of these artists?

Wanda Nanibush describes a few to check out at the AGO's Toronto: Tributes + Tributaries on until May

"One of the videos in the exhibition is Lisa Steele's Birthday Suit with scars and defects, where she points out every scar on her naked body for the camera."

"We have a big Jayce Salloum installation from the '80s called *The Ascent* of Man, which chronicles the relationship between masculinity and the development of history and society."

"Jamelie Hassan has a work dealing with the anthropological gaze, especially directed at Indigenous women and children. She brings back the feeling of those who were being catalogued by [20th-century anthropologist] Lévi-Strauss, blowing up his photos. against anthropology's objectification

birds. While Maclear identifies as an amateur birder, the passion she feels for them begins to fuel her work. "For me, having a bit of a routine where you make space and hold a space for beauty or for creativity is so important. And birding gave me the oxygen and psychic spaciousness needed to get through a creative rut," says Maclear, the author of such children's books as Virginia Wolf.

Maclear's love of all things literary and artistic was writ large during her days at U of T. While pursuing a BA in fine art and art history through University College (and later an MA from OISE), she wrote about art, dance and theatre and drew illustrations for the Varsity. She and a group of friends including now well-known activist Naomi Klein - created Free School at UC, an open-format classroom where speakers

talked about everything from ecology to the anti-apartheid movement, as students sat in a circle and let the conversation flow. "That give-and-take, to me, is the DNA of learning," says Maclear.

Today, Maclear is writing another children's book and working on her PhD at York University. The birding remains, and she's grateful that it helped her see beyond Toronto's concrete: "I didn't notice the rhythms of the city and the whole understory that was happening," says Maclear of her prebirding days. "I could see the permanent infrastructure of buildings, but I didn't notice how much was transient – the seasonal, annual story that happens where certain birds vanish and then others appear. There's a sense of rhythm that's very analog and human." - STACEY GIBSON

MAGAZINE.UTORONTO.CA PHOTOS: COURTESY OF THE AGO

All About Alumni



We have to find a way to recognize that when people are struggling, it's not because they don't have enough to eat. At the root of hunger is poverty... what's needed is not charity, but solidarity.



Nick Saul (BA 1990 VIC), president and CEO of Community Food Centres Canada, on why food charity can't solve hunger. His organization builds and supports community food centres in low-income neighbourhoods across Canada. He spoke at TEDx Toronto at the Telus Centre on Oct. 27.





At the age of eight, Kendrick Lamar watched Dr. Dre and Tupac Shakur shoot their video for California Love in his hometown of Compton. It inspired him to become a hip-hop artist



What Do Hip Hop and Beowulf Have in Common?

Gilbert Perkins uses urban music to teach students about literature

WHEN THE LITERACY PROGRAM Gilbert Perkins developed made a teacher cry tears of joy, he knew he was onto something. "It was during our pilot project in a 10th grade class, and this teacher warned me about two students," says Perkins (MBA 2011), the founder of Words Liive, which aims to get kids reading and writing by linking rap lyrics with classic literature. "They were close to dropping out. But by the end, one of them was writing away and answering questions more than almost anyone else."

Perkins' path to that classroom began when he was almost 10, and trying to find his place in the educational system.

Growing up in predominantly black, inner-city Washington, D.C., he was in his school's gifted program. "Our teachers pushed us to exceed any self-imposed limitations," he says. Wanting to maximize his potential, his parents moved him to a top-rated school district in nearby Fairfax, Virginia – a predominantly upper-income and white county – but the move backfired. "I wasn't expected to perform well, and I lived up to the low expectations."

Feeling alienated by his teachers and disconnected from the coursework, he almost gave up in eighth grade. Then he discovered poetry – including the abundance of it within hip-hop lyrics – and this passion helped him regain his confidence. School didn't change; he did. "I fell in love with writers and poets," he says. Some favourites were authors Chinua Achebe and T.S. Eliot, and songwriters Nas and Jay Z.

Perkins earned a business degree and worked in finance, but also felt a pull to address the negative school experience he had, and that many others faced. His thoughts on education, literacy and urban music crystallized during his MBA at U of T. "The Rotman School's integrative-thinking philosophy – finding bridges between worlds – gave me the intellectual courage to start Words Liive after graduation."

The company creates customized educational programs that teach students – and teachers – to build competency in reading and writing by comparing literary devices in hip-hop lyrics with those in required school readings. In the pilot project, Perkins explored epic poem structure in the songs of hip-hop artist Kendrick Lamar and *Beowulf*. "Students struggle with formal texts, but once they see the exact same literary patterns and themes in music they like, their comprehension increases," he says. Words Live is in five schools in D.C. and Virginia, with plans for expansion. "We've found something that can make a difference – now I want to get it to as many students as possible."

- MEGAN EASTON

Without a Trace



A woman's disappearance sends shock waves through her university town because of its parallels to the murder years before of a muchmythologized poet in an act of domestic violence.

It's the intriguing premise for *So Much Love*, by Rebecca Rosenblum (MA 2007), a novel that – with a huge cast of characters and interweaving stories – took its author many years to write. Rosenblum started it in 2000, but the structure wasn't working. "I had to wait until I was a good enough writer to write it," she explains.

To that end, Rosenblum completed U of T's creative writing master's program, working with mentor Leon Rooke on her award-winning

short story collection, *Once*. Her followup, *The Big Dream*, is a collection of linked stories that showed her how a book's parts could work as a whole.

So Much Love was born from undergraduate discussions about poet Gwendolyn MacEwen – specifically, from Rosenblum's discomfort with conflations of MacEwen's work and the circumstances of her early death, which highlighted how a victim's voice gets lost in tragedy. The novel also engages with ideas about university education. "Everyone learns something different from the same text," Rosenblum says, "and I wanted to show that."

- KERRY CLARE



Joel Ivany's first production with Against the Grain Theatre was *La Bohème* – but he set it in a dive bar in Toronto's Annex

MY DEFINING MOMENT AT U OF T

The Sweet Sound of Inspiration

An encounter with one of opera's greats helped this alum succeed



when I was a student at the Faculty of Music, Paul Curran — who had just been appointed artistic director of the Norwegian National Opera — came to speak. He told us about how he trained at opera houses worldwide, and his international experiences drew me in. Early in his career, Paul went to see opera and film director Baz Luhrmann in Australia and said, "I'd like to work with you, whatever it takes," and Baz said yes. So after the talk, I asked Paul if, after graduating, I could work with him in Norway — and he agreed. He couldn't pay me, but he could give me as much experience as I wanted.

The following year I went to Oslo, and Paul assigned me to work under assistant directors on different productions. He also arranged free tickets for me to opera, ballet and dance performances. The experience opened me up to the broader world of opera and stage directing.

I've since worked at opera houses around the world. I also started Against the Grain Theatre – we present classical music in creative ways in unconventional venues. I recently collaborated with Paul again on a Banff Centre production. What Paul shared in his U of T talk was a challenge: This is all out there for me, I just need to go after it – and I did.

Exploring Northern Communities

When Nick Kozak (BSc 2005 Trinity) and I attended the Double "M" Traditional Powwow last February in Moose Factory, everything seemed pleasant. But beneath the surface there was conflict in need of reconciliation.

In total, we drove 3,000 kilometres over northern Ontario ice roads and found powerful stories within and beyond the powwow. Travelling through numerous First Nations adjacent to James Bay – all part of the Mushkegowuk Tribal Council – we met people such as George Rose, a residential school survivor seen here wearing wolf head regalia, symbolizing reverence for all animals and birds.

At Moose Factory, we also met a small band of activists commencing a 500-kilometre snowshoe trek to Chisasibi, Quebec, to raise awareness about violence against women. The group was embarking on a Meen'wach (a Cree word meaning Healing Road). They were recognized at the powwow with an Honour Dance, in recognition of their noble undertaking. Amongst other things, the powwow is about reclaiming pride.

"A sense of adventure, a friendship, and a desire to return north to connect with First Nations people and their land led us to take on the ice roads," says Kozak, of the 16-day trip.

– JACK LOCKE

Read more about Kozak and Locke's journey at ontheiceroad.wordpress.com.



PHOTO: TOP, NIKOLA NOVAK; BOTTOM, NICK KOZAK

WINTER 2017



FIRST PERSON

Life and Death in an Addis Ababa ER

In 2010, Dr. James Maskalyk – who did his postgraduate medical training at U of T from 2000–04 and is now on faculty in U of T's department of medicine – travelled to Ethiopia to train ER doctors in a country that had *none*. Now, there are 15. Below, Maskalyk describes one day in an Addis Ababa emergency room. The piece is adapted from his forthcoming book, *Life on the Ground Floor*, which centres on his ER experiences.

THE ER AT THE BLACK LION HOSPITAL in Ethiopia has two tin rooms and a back hall. That's it, the place that gathers people too sick for anywhere else. Students pass through, a tour of duty to the front lines, grateful to leave the dying behind when their month is up. At home in Canada, emergency medicine is one of the most competitive specialties for medical students, and most who apply won't get in. Here, no one knows why you would do it, because it appears that for the sickest, little can be done.

Aklilu, the doctor tasked with making emergency medicine thrive in Ethiopia, and my oldest friend here, sees ahead. This is his life more than mine, and it is him I am here to help. He knows there can be no future for a country without a place that cares for those who are hurt worst. All emergencies happen mostly among the poor. Every year, after generations of trying, one billion climb above the poverty line. Every

year, the same number fall below it. The most common reason for their drop? A health crisis.

A young girl struck by a lorry lies quietly. In her trachea, a plastic tube, a honeycomb of blood bubbling in it. There are no ventilators in the ER, and the four in the intensive care unit are pushing breaths into others. The girl, at least for now, is breathing on her own, her tube connected to nothing.

Aklilu and I squeeze past the family, to her head. Her breaths come quickly, in bunches, then draw out into sighs. This pattern is a bad sign. The pressure in her brain is reaching its limit, pushing what keeps her breathing into a space too small to hold it. Her breath hitches. I pull down one of her lids. The pupils twitch. If seizures persist, large muscles tire, and the convulsion stops. Look to the eyes.

Biruk, a resident, stands at the foot of the bed. He spent last night here.

I direct him to the head, show him the saccades of her irises. "She kept on with her seizures all night," he tells me, "so we gave her some Valium, but didn't want her to stop breathing."

I ask Aklilu and Biruk about different intravenous medicines, ones that work on seizures, and they shake their heads. They know what I'm talking about but until now, there has been too few people asking for it for any of the pharmacies to stock it. There is one that comes in pills, Biruk says. We decide to crush some, put them into her stomach with a tube, but we all know she is dying.

The family looks at us, wide-eyed. An older man wearing plastic sandals, one red, one blue, his feet callused at the buckles, holds her hand.

"Do they understand?" I ask Biruk. He nods.

Biruk says some words in Amharic.

Tears well in the father's eyes. We move on.

Residents in white coats lean over patients, listening for trouble in hearts and lungs. No computers. Aklilu leaves to attend a meeting, and Biruk folds his coat under his arm, ready to return to his bed for some sleep.

I stop him. "You did good, man. It was the right thing to do to intubate that girl. I would have done the same thing."

He smiles softly, and walks past the growing crowd of patients at the metal door waving their hospital cards.

James Maskalyk divides his time between Ethiopia, as a visiting professor of emergency medicine at Addis Ababa University, and Toronto, where he is an ER doctor at St. Michael's Hospital. *Life on the Ground Floor* (Doubleday Canada) comes out in April.

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Rajiv Surendra's chalk art has been featured in the New York Times and Architectural Digest – and can be found everywhere from the walls of NYC apartments, to coffee shops, to the cover of his memoir

60 SECONDS WITH

Life of Rajiv

In his new memoir, this young actor reflects on the life-changing role he *didn't* get



POP CULTURE FANS remember **Rajiv Surendra** (BA 2009 St. Mike's) for his hilarious turn as Kevin G, the rapping "mathlete" in 2004's smash hit *Mean Girls*. In Surendra's new memoir, *The Elephants in My Backyard*, he writes about his six-yearlong attempt – and subsequent failure – to nab the lead role in *Life of Pi*. Here, he shares all with **Cynthia Macdonald**.

U of T was where you studied art history (and, as you wrote in your book, learned how to swim!). Mean Girls was also partially shot at the university – and as a first-year student, you got to be in it! What was that like? Juggling the demands of school with those of the movie was really hard. Call times were really early, and my drama teacher did not see acting in a movie as a legitimate reason to miss class. Still, being in Mean Girls was great.

It's gone on to be a cult smash... It's crazy how popular it's become. At one point I asked the lady doing my hair how she thought the movie would fare. I remember her rolling her eyes and saying, "Come on. It's called *Mean Girls* and it stars Lindsay Lohan – it's going straight to DVD."

Not exactly the Nostradamus of hairstylists, right? On the set, a cameraman tells you about this amazing novel. In fact, he says, "You're in it." I'd heard of $Life\ of\ Pi$, but didn't know much about it. When I read it, I saw that the similarities between that character and myself were uncanny. He was Tamil, so was I. He grew up in a zoo – and I grew up near the Toronto Zoo, hearing elephants through my bedroom window.

So you become obsessed with getting that part. Why? The only roles for skinny young brown guys were stereotypical: math nerds, people working in call centres, terrorists. It was really frustrating. So when I found out they were going to make a movie of Pi, it felt like the stars had aligned to give me my wish.

You hire a dialect coach, befriend the book's author and spend weeks living in Maine with someone who'd actually been a castaway. What else? My parents were from Sri Lanka, but I was Canadian. I needed to dive in and become a teenage Indian boy, so I travelled to Pondicherry, where the book takes place. I spent a few months at the school that author Yann Martel used as the setting for Pi's school; I recorded schoolboys' voices, even watched how they walked.

Then, after years of work, you get an email from Martel. He tells you the director's going with someone else. It was like a punch in the face. I needed to run away, so I worked as an au pair in Germany. As it turned out, it was the perfect medicine.

Did you see the movie when it came out? I did, and it was kind of heartwarming. I asked myself, "Do you wish that was you? Be honest." And I didn't! I was actually happy that things worked out the way they did, because I learned valuable lessons about life by not getting the part.

But you're still acting, and have a great career as a chalk artist, potter and calligrapher. How did that come about? There's a huge appreciation now for things that are handmade, not digitized. These activities started out as hobbies when I was a kid, and have now turned into different ways that I make a living. I feel very fortunate about that.

Most memoirs are about success, not failure. Why do you think this story will resonate? We're brought up being told that if you work hard enough, you'll get everything you want. That doesn't always happen. This book is what life is all about: how we take awful experiences, turn them around, grow from them and become stronger. I think that's something we can all relate to.

PHOTO: JAMES TSE WINTER 2017 63

Time Capsule



Winter 1910

Hockey was one of U of T's first women's sports A century ago, U of T, like most of Canada, was hockey crazy. Because ice time on outdoor rinks was at a premium in the short six- to eight-week season, Varsity Arena's three hockey rinks were booked from four to 10 p.m. The women's teams – University College, Victoria and St. Hilda's (part of Trinity) – who had begun interleague play in 1901, competed in a six-game round robin in January and February 1910, with as many as 2,000 "rooters" (fans) cheering them on. Skates cost as much as or more than a week's rent, anywhere from \$1.25 to \$5, with boots an extra \$2 to \$4. But the players could pick up a hockey stick for 25 to 75 cents.

The Varsity reported enthusiastically on the matches, commending captain Anne Sutherland's goalkeeping and

Annie Hunter's scoring. (Hunter played rover, a seventh position popular in the early days of hockey that could play either offence or defence.) But not all rules were imported wholesale from the men's game. Body checking, for example, was banned in 1910 and remained taboo for more than half a century afterward.

The pictured team won the U of T championship – undefeated – in 1910. The women's intercollegiate competition was launched a decade later, with U of T shutting out McGill 4–0 in 1922. Today, Varsity Blues women's hockey has won 17 Ontario University Athletics championships, and coaches include Olympic medallists Vicky Sunohara (BPHE 2010) and Jayna Hefford (BPHE 2004).

- JANET ROWE

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Thank You for Showing Your Pride

Since the public launch of the Boundless campaign five years ago, the University of Toronto has seen record levels of alumni engagement – in attendance, participation, volunteerism and mentorship. We have also seen rising levels of alumni pride and affinity, and tremendous support from alumni across the university. Indeed, the success of the campaign today is due entirely to the extraordinary generosity of more than 94,000 alumni and friends, who share a common belief in the University of Toronto's ability to address the world's most pressing global challenges.