

Caught in the Ban A Syrian student lands at U of T / **Drama Queen** Actor Jean Yoon / **Minor Key** A cure for the blues
Medical Errors Can we talk about this? / **Faith and Physics** A scientist's double life / **Courage to Fail** Why I gave up the law

UofT Magazine

AUTUMN 2017

BEGINNINGS



This could be the start
of something big



 **Manulife** **mbna** 



Brandy Leary performing "Ephemeral Artifacts" at *all of our days are full of breath: a record of momentum*—
a 2017 exhibition curated by Jenn Goodwin at the University of Toronto Art Museum as part of her MVS degree
in Curatorial Studies at the John H. Daniels Faculty of Architecture, Landscape and Design. Photo: Henry Chan.



FINDING THEIR FUTURE IN CULTURE

U of T affinity products give students the experience they need for an exciting professional career in the arts.

Affinity products are value-added services provided by our financial and insurance partners. The revenue they generate supports many initiatives, including the University of Toronto Art Museum's special programming to prepare students for career opportunities in the cultural sector. Participants from diverse disciplines gain a new perspective on professional fields in the arts through studio visits with living artists and field trips to galleries, museums, and artist-run centres. This arts professionalization program is one of many opportunities supported by U of T affinity partners, helping U of T students enrich their education.

www.affinity.utoronto.ca

BOUNDLESS



“A walnut cost me \$1,500.”

Avoid out-of-pocket expenses with affordable Alumni Health & Dental Plans.

Small things (like a bit of walnut shell breaking a tooth) can add up to big expenses. And if you're not covered by an employer's health and dental plan? The costs can come straight out of your pocket.

Help protect yourself with Alumni Health & Dental Plans, offered through Manulife. With plenty of coverage options plus competitive rates, it's easy to find a plan that's right for you. Choose plans for dental and vision care, prescription drugs, massage therapy, chiropractic and a lot more. Start saving on both routine and unexpected healthcare expenses.

Get a quote today. Call 1-866-842-5757 or visit us at Manulife.com/utoronto.



Underwritten by
The Manufacturers Life Insurance Company.

Manulife and the Block Design are trademarks of The Manufacturers Life Insurance Company and are used by it, and by its affiliates under licence.
© 2017 The Manufacturers Life Insurance Company (Manulife). All rights reserved. Manulife, PO Box 4213, Stn A, Toronto, ON M5W 5M3.

Autumn 2017

Volume 45, No. 1



Khaled Almilaji

28 Beginnings

Setting out on a new path takes courage. But it's a risk that often turns out to be its own reward

36 For this Syrian Grad Student, a Fresh Start

Caught in the U.S. travel ban, Khaled Almilaji finds a warm welcome at U of T

BY MARCIA KAYE

49 How Did the Universe Begin?

My lifelong journey into faith, physics and astronomy

BY BARTH NETTERFIELD
AND JONATHAN DYCK

Editor and Manager

Scott Anderson

Deputy Editor

Stacey Gibson

Art Direction and Design

The Office of Gilbert Li

Editorial and Advertising Assistant

Sally Choi

Co-Publishers

Barbara Dick, Assistant Vice-President,
Alumni Relations

Paul Fraumeni, Executive Director,
Digital Creative Services

Vice-President, U of T Communications

David Estok

Editorial and Advertising Inquiries

(416) 978-0838

uoft.magazine@utoronto.ca

All correspondence and undeliverable copies:
U of T Magazine, 21 King's College Circle,
Toronto, ON M5S 3J3

U of T Magazine, with a circulation of
330,000, is published three times a year online
and twice a year in print by U of T Communica-
tions. All material is copyright © 2017
Governing Council, University of Toronto, and
may be reprinted with permission. Alumni
receive the magazine free of charge. Donations
accepted at magazine.utoronto.ca under
"Support Us," or send a cheque payable to the
University of Toronto at the above address.

Publications Mail sales agreement

No. 40065699

Non-profit postage paid Buffalo, NY

Permit No. 3415. U.S. Postmaster send address
corrections to P.O. Box 29, Lewiston, NY 14092

Printed in Canada by TC Transcontinental
Printing Inc. ISSN 1499-0040

Stay in touch

Do we have your correct name and address?
If not, please call (416) 978-2139 or
toll-free 1-800-463-6048 or email us at
address.update@utoronto.ca.

Visit us online: magazine.utoronto.ca

Twitter: @uoftmagazine

The University of Toronto respects your privacy.
We do not rent, trade or sell our mailing lists.
If you do not wish to receive the magazine,
please contact us at (416) 978-2139 or 1-800-
463-6048 or address.update@utoronto.ca.



Departments

The registrar had to write all of our information on the back of a Rothmans cigarette carton.

—Ken Luckhurst (BSc 1970 UTM), on the shortage of printed forms at Erindale College when it opened 50 years ago (p. 42)



16 U of T president Meric Gertler looks ahead to a second term



25 What Canada got right: accepting diversity may be our defining strength



26 Undergraduate student Colin Arrowsmith is taking part in an ambitious new research project to directly measure Toronto's greenhouse gas emissions

3 **Letters** Language Is Vital to Culture

6 **President's Message** The Best Investment Canada Can Make

8 **Calendar** Astronomy on Tap T.O.

13 **Life on Campus** The High Cost of a Home

21 **Leading Edge** AI's Quantum Leap

55 **All About Alumni** The Singer of "Senthooora"

64 **Time Capsule** Flight of Fancy

Letters



Your story about the wonderful Ursula Franklin is a reminder of how one person can fight for change and help improve people's lives in many different ways.

JACK HOFFMAN

BScPhm 1956, CÔTE-SAINT-LUC, QUEBEC

Language Is Vital to Culture

I applaud the work of Prof. Ryan DeCaire and others in their efforts to keep alive our Indigenous languages ("Lost Words," Spring 2017). This work underscores important aspects of language as more than just a means of communication, but also as a scaffold of a culture and a codification of a society's cosmology. As an anthropology grad, I understand the vital role language plays in this regard.

In my career as a superintendent with the former Toronto Board of Education, I had responsibility for Ojibwa, Mohawk and Cree language programs and had the opportunity to work with members of the First Nations community in promoting and sustaining these languages for our students.

It is indeed encouraging to read about the marvellous activities of the Centre for Indigenous Studies. I wish it well.

DONALD IRWIN

BA 1960 VICTORIA, MEd 1985, BRECHIN, ONTARIO

The Power of One

Your story about the wonderful Ursula Franklin ("Warrior for Peace," Spring

2017) is a reminder of how one person can fight for change and help improve people's lives in many different ways.

Your readers may be interested in a recent documentary, *Hilleman: A Perilous Quest to Save the World's Children*, about scientist Maurice Hilleman who pioneered vaccines. He produced more than 40 of them, including 14 for children. He is, or should be, considered one of the greatest scientists of the 20th century, having saved untold millions of children's lives with his vaccines. He deserves a posthumous Nobel Prize.

JACK HOFFMAN

BScPhm 1956, CÔTE-SAINT-LUC, QUEBEC

How the War Ended

Prof. Ursula Franklin's legacy to the university, country and world is enormous. I was startled, however, to see the reference to an "armistice" that ended the Second World War. VE Day was not an armistice, but rather the unconditional surrender of Nazi Germany to the Allies.

DAVID JOSEPHY

BSc 1976 NEW COLLEGE, GUELPH, ONTARIO

Cite Your Evidence

Regarding "U of T Gains Global Edge" (Spring 2017): Apart from Prof. Ted Sargent's oracular pronouncement, what evidence did this article present for its opening sentence that Brexit and Trump are behind the growth in foreign applications to U of T? I read it twice, and didn't see any.

JAMES WHYTE

BSc 1981 NEW COLLEGE, INNISFILL, ONTARIO

Naming Women

It concerns me that women are often identified with their husband's name, even if it's their childhood or early education that is being described. For example, your tribute to the late Rose Wolfe (Spring 2017) says "Wolfe earned a BA in sociology." The article states later that she married after getting her degree. So, Rose Senderowitz earned a BA. Rose "Wolfe" did not.

GWENNE BECKER

BCom 1955 VICTORIA, TORONTO

Basic Income Has a Precedent

Your article about the Ontario government's plans to test a universal basic income ("A Stronger Safety Net," Spring 2017) ignores our own federal government's similar large experiment conducted more than 40 years ago. It should not just be mentioned, but learned from.

ROBERT THOMAS

BSc 1964 TRINITY, WINNIPEG

Write to us!

U of T Magazine welcomes letters at uoft.magazine@utoronto.ca.

Share This!

We publish some stories only at magazine.utoronto.ca

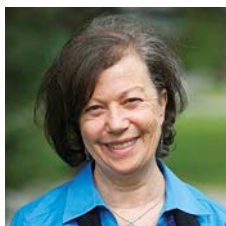
CAN YOU GUESS THE GRAD FROM THEIR YEARBOOK PHOTO?

They're famous now, but can you recognize these 14 well-known U of T alumni from pictures taken decades ago? This fella's a comedy legend.



A LIFELINE FOR PEOPLE WITH APHASIA

A stroke or brain injury often robs patients of their ability to communicate thoughts and emotions. Aura Kagan (PhD 1999) found a way to help them converse again.



FREE EYE EXAMS FOR REFUGEES

A former refugee himself, U of T medical student Tarek Bin Yameen (far right) pays it forward by organizing clinics that provide free eye exams to Syrian refugees across Toronto.



3D MOVIES IN THE SKY

U of T startup Arrowonics is using drones to develop a whole new kind of nighttime entertainment.



Readers tweeted some cover-to-cover love for our Spring 2017 issue.

This is an especially good issue of *U of T Magazine* for so many reasons.

Daniel Munro @dk_munro

Appreciate getting this publication as a proud OISE/ UofT alumna. Great articles!

Lisa Anne Floyd @lisaannefloyd

Some particularly liked the story about the late Ursula Franklin...

Important #reminder & call to #action from Dr. Ursula Franklin, especially in these #StrangeTimes

Mahfuza Rahman @MahfuzaLRahman

...and the doctor who kept a patient alive without lungs for six days.

Incredible story of human sharing, medicine and technological innovation. My classmate Dr. Shaf Keshavjee continues to inspire.

Dr. Rick MacDonald @Kidsdoc1Rick

The university got some love, too.

Gr8 move #UofT to intentionally hire more Indigenous faculty and staff, acknowledge mistakes of past. #TRC17

Pamela Gough @pamelagough

A "playful" space @UofT? Bring it on! Imagine if we took play and creativity seriously in coursework? Still see many 1-answer questions.

Leslie Stewart Rose @lstewartrose

Not everyone bought into all of the entrepreneurial advice, though.

Agree with almost everything except the "get an advanced degree" tip.

Tim Decker @TimDecker86

Join the conversation on Twitter @uoftmagazine.

Top stories from Spring 2017

BY VIEWS

So You Wanna Build a Startup?

Several of U of T's – and Canada's – top entrepreneurs share lessons they learned on the path to success.

BY FACEBOOK LIKES

The True Impact of U of T

President Meric Gertler explains the rationale for U of T's Alumni Impact Survey – the university's first attempt to measure the full extent of contributions by alumni to their communities.

BY COMMENTS

Warrior for Peace

One grad described meeting the late U of T engineering professor Ursula Franklin, and engaging her in small talk without knowing who she was. When he told his wife, she was incredulous. "The Ursula Franklin? God, what a waste! Imagine all the conversations you could have had."



UNIVERSITY OF TORONTO
LIBRARIES

HOW DO WE PROTECT THE WORLD'S MOST VALUABLE KNOWLEDGE?

Knowledge is as fragile as it is valuable. Archives can be lost, destroyed, or buried in an avalanche of data. University of Toronto Libraries (UTL) is a world-class organization, not only for how it preserves its vast holdings, but also for its nimble response to massive digital change. From collecting and digitizing rare works to organizing an exponential growth in information, UTL both safeguards the world's knowledge and puts it in the hands of those who seek it, when and where they need it.

To support the Library, please contact
Megan Campbell at 416-978-7644
or visit www.library.utoronto.ca/support

BOUNDLESS



**BRANKSOME
HALL**

Canada • South Korea

An all-girls, all-years IB World School
Discover our global study-abroad program

Be Remarkable.

**We teach her
to question everything.
Including her own thinking.**

OPEN HOUSE: Oct 24, Nov 3 and Dec 5

The Best Investment Canada Can Make

To be competitive in the economy of tomorrow, governments should invest more in investigator-led research today



April 10, 2017, could prove to be a turning point in the history of Canadian research. On that day Canada's Minister of Science, Kirsty Duncan, released the final report of the expert panel on support for fundamental science, *Investing in Canada's Future: Strengthening the Foundations of Canadian Research*. The panel was led by Dr. David Naylor, who served as president of U of T until 2013. (I'm pleased to note that the panel included another former president of this institution, Robert Birgeneau; and Kirsty Duncan is herself an alumna and former faculty member.)

The Naylor Report warns that Canada's research competitiveness has declined in recent years. Funding for investigator-led research through the research granting councils has eroded, and federal support as a whole has shifted dramatically toward government-mandated priorities and away from independent research initiated by scientists and scholars. At the same time, a lack of co-ordination among the granting agencies has limited their effectiveness.

To address these problems, the Naylor Report provides a comprehensive set of evidence-based recommendations, including measures to augment the effectiveness, accountability and efficiency of the federal research ecosystem. It also argues for a significant reinvestment in funding. On this point, the panel notes that such funding would be "among the highest-yield investments in Canada's future that any government could make," citing "global competition, the current conditions in the ecosystem, the role of research in underpinning innovation and educating innovators, and the need for research to inform evidence-based policy-making."

As I write this, it remains unclear whether the federal government will fully implement the panel's recommendations. Minister Duncan's commitment to science is sincere and admirable, and the Trudeau government acknowledged the concerns of the Canadian research community through its enhancements to research council funding in the 2016 federal budget. Still, we need to encourage Ottawa to embrace the Naylor Report in its entirety. The remarkable degree of consensus across Canada's scholarly community in support of its recommendations confirms the generational opportunity it represents to reshape public policy in an area of vital importance to our country's future.

Recent global headlines celebrating Canada's incredible depth of talent in artificial intelligence (AI) provide a timely indication of what's at stake. One of the single largest factors in the country's global leadership in AI is the path-breaking work of U of T's Geoffrey Hinton, a University Professor emeritus in computer science, whose decades-long research program on neural networks and machine learning only recently achieved several historic breakthroughs.

These discoveries are now driving transformational changes in voice and image recognition, language translation, and a seemingly limitless number of other technologies, while attracting massive investments and creating new high-quality jobs (notably, here in Toronto and other Canadian centres of AI research and innovation). They are also driving Toronto's emergence as a global hub in a field of study that's revolutionizing industries from medicine to law, financial services, transportation and information technologies. The recent establishment of the Vector Institute will further propel this promising development.

It's crucial to note that Professor Hinton and his students were supported over many years by funding from the Natural Sciences and Engineering Research Council and the Canadian Institute for Advanced Research – long before the commercial potential of machine learning was known. This incredible success story reminds us of how public funding for pioneering, curiosity-driven, investigator-initiated research has led to so many of the greatest breakthroughs in the history of science and technology, and in turn improved the lives of countless people around the world.

The Naylor Report argues persuasively that Canada needs to continue to support such research, and it charts a clear course of action to that end. U of T and scholars across the country are calling on the federal government to embrace and fully implement the report's recommendations. I encourage all of our alumni and friends to join us in this call to action, on a matter that's so crucial to Canada's long-term prosperity.

Sincerely,
Meric Gertler



UNIVERSITY OF
TORONTO

THE LANDMARK PROJECT

HELP MAKE A LASTING IMPRESSION

Through **The Landmark Project**, the University of Toronto plans to revitalize the core of the St. George campus by creating a cohesive, welcoming and beautiful network of park-like spaces befitting our status as one of the world's great universities. The addition of striking new plazas, paths, pavilions, gardens and vistas, along with the removal of surface parking, will transform our downtown campus into a greener and more dynamic place, while preserving the intrinsic beauty and character of one of Canada's most significant landscapes, and creating a more inspiring place to learn, live and work.

We invite you to help us make history by supporting the placement of a commemorative granite paver, tree, bench, or garden in the heart of St. George campus. Together, we can rejuvenate our architectural inheritance and reinstate St. George campus as one of the most indispensable public spaces in our city and country.

Learn more at landmark.utoronto.ca

Support the Landmark Project at
donate.utoronto.ca/landmark
or by calling 416-978-4928

BOUNDLESS



Calendar

MORE EVENTS!
Check out the latest campus happenings at utoronto.ca.



NOVEMBER 10

Astronomy on Tap T.O.

Quench your thirst for astronomy during this Dunlap Institute for Astronomy and Astrophysics event. A fun evening of astronomy news, talks, games and prizes – all while you enjoy your favourite pint. Features three 10-minute talks that are technobabble-free. Plenty of U of T astronomers will be in attendance to answer all your cosmic questions. Must be 19 or older to attend.

Free. 8 p.m. (Doors open at 7 p.m.) The Great Hall, 1087 Queen St. W. events@dunlap.utoronto.ca or universe.utoronto.ca/astronomy-on-tap-to.

Alumni

September 26
Luxembourg City, Luxembourg
Alumni and Friends Happy Hour. An evening of networking and refreshments with fellow grads and friends. Free. 6–8 p.m. Vinoteca, 23 ave Pasteur, Luxembourg. Register at alumni.utoronto.ca/events-and-programs/upcoming-events.

October 15
U of T Scarborough
UTSC Alumni Association Afternoon Tea. Enjoy conversation with fellow U of T Scarborough alumni. Free. 2–4 p.m. Ralph Campbell Lounge, BV380, 1265 Military Trail. alumni@utsc.utoronto.ca.

October 24
U of T Scarborough
UTSC PWR Play. Meet fellow U of T

Scarborough alumni and business partners at this annual young alumni networking event. Price TBA. 6:30–8:30 p.m. Location TBA. alumni@utsc.utoronto.ca.

October 25
Calgary
Alumni and Friends Axe Throwing. Come experience a real Canadian activity. \$30. 6–8 p.m. Axe Throwing Calgary Ltd., 5923 3rd St. SE. Register

at alumni.utoronto.ca/events-and-programs/upcoming-events.

November 10
Soldiers' Tower, St. George Campus
Service of Remembrance.

There will be a carillon prelude and postlude. Reception to follow in Hart House's Great Hall. Free. 10:15–11 a.m. 7 Hart House Circle. 416-978-3485 or soldiers.tower@utoronto.ca.

November 16
U of T Scarborough
UTSC Alumni Connections.

An evening of speed networking between U of T Scarborough alumni and students. Spaces are limited. Free. 6:30–8:30 p.m. Instructional Centre Atrium, 1095 Military Trail. alumni@utsc.utoronto.ca.

November 16
The Carlu, Toronto
University College Alumni of Influence Awards. Sixth annual awards gala in celebration of distinguished UC graduates. The Carlu, 444 Yonge St. \$150. 6 p.m. For more info: 416-978-7416 or uc.utoronto.ca/tickets.

Exhibitions

To October 7
Art Museum at the University of Toronto
Making Models. Nine Toronto architecture studios and artist groups propose ideas and prototypes for constructing urban space. Free. Tues. to Sat., 12–5 p.m. Wed. to 8 p.m. U of T Art Centre, 15 King's College Circle. 416-978-1838.

To October 7
Art Museum at the University of Toronto
In Dialogue looks at new ways of being Indigenous, and of understanding Indigenous Peoples, in today's Canada. Free. Tues. to Sat., 12–5 p.m. Wed. to 8 p.m. U of T Art Centre, 15 King's College Circle. 416-978-1838.

Come check out
Varsity Blues' hockey home
openers on Oct. 19 and 20



To October 28

Art Museum at the University of Toronto

Far and Near: the Distance(s) between Us brings together several generations of Chinese-Canadian artists, offering perspectives on the evolution of the Chinese community in Canada. Free. Tues. to Sat., 12–5 p.m. Wed. to 8 p.m. Justina M. Barnicke Gallery, 7 Hart House Circle. 416-978-8398.

October 4 to December 20
Thomas Fisher Rare Book Library
Flickering of the Flame: Print and the Reformation. Marking the 500th anniversary of Luther's Reformation. Free. Mon. to Fri., 9 a.m.–5 p.m., Thurs. to 8 p.m. (during term). 120 St. George St. 416-978-5285.

Lectures and Symposia

September 29 and 30
Jackman Humanities Building
Transparencies: Mexican Cultural Production through the 21st Century. Organized by Latin American Studies. Free. Time TBA. Rm 100, 170 St. George St. RSVP at las.utoronto.ca. More info at las.admin@utoronto.ca.

September 29–30
U of T Mississauga
Bank of Canada-U of T-IMI Conference on the Chinese Economy. Researchers and policy-makers discuss China's recent economic growth and its implications for the global economy. Free, but register at utm.utoronto.ca/imi/bank-canada-conference. UTM Innovation Complex, LL1220, 1833 Inner Circle.

October and November
Carlton Cinema, Toronto
The Canadian Perspectives Lecture Series for alumni and friends. Series of seven lectures, \$75; single lectures, \$15. Wednesdays beginning Oct. 11 from 10 a.m.–noon or Mondays beginning Oct. 16 from 1–3 p.m. 20 Carlton St.

senior.alumni@utoronto.ca or uoft.me/saacp.

October 16, 17 and 18
University College
The Seven Grandmothers: Indigenous Law, Ethics and Canada's Constitution. Prof. John Borrows of Indigenous Law, University of Victoria. 4:30 p.m. Rm 140, 15 King's College Circle. 416-978-7416.

November 15
Victoria College
Margo Glantz in Conversation. The acclaimed Mexican writer talks about her long career as writer, translator and university professor. Free. 6–7:30 p.m. Alumni Hall (VC 112), 73 Queen's Pk Cres. Please RSVP at las.utoronto.ca.

Music

October 25
Walter Hall
U of T 12tet student jazz ensemble. Free. 7:30 p.m. 80 Queen's Pk. music.utoronto.ca.

Nov 23–26
MacMillan Theatre
U of T Opera: Don Giovanni (Mozart). \$40 (seniors, \$25; students, \$10). Nov. 23, 24 and 25: 7:30 p.m. Nov. 26: 2:30 p.m. 80 Queen's Pk. Weston Family Box Office: 416-408-0208.

Special Events

October 5
Hart House
Hart House Thanksgiving Feast. Buffet dinner in the Great Hall. Price TBA. 6 p.m. 7 Hart House Circle. harthouse.ca.

October 20
Four Seasons Hotel Toronto
U of T Mississauga 50th Anniversary Gala. Celebrate UTM's anniversary and welcome new V-P and principal Ulrich Krull.

Black tie. Tickets \$340. Table of eight: \$2,700. 6–10 p.m. 60 Yorkville Ave. 905-569-4924 or utm.utoronto.ca/50thgala.

October 21
U of T Mississauga
Tech and the City. This case competition for entrepreneurs focuses on the Internet of Things. Hosted by UTM, City of Mississauga, Sheridan College and SOTI. Free. 9 a.m.–9 p.m. Innovation Complex, 3359 Mississauga Rd. techandthecity.ca.

October 27
Hart House
Hart House Halloween Party. House-wide social event with DJ, dancing, food and entertainment. Price and time TBA. 7 Hart House Circle. harthouse.ca.

Sports

October 5
Varsity Centre
Football: Varsity Blues vs. McMaster Marauders. Thanksgiving game. 7 p.m. 299 Bloor St. W.

October 19
Varsity Arena
Women's Hockey: Varsity Blues vs. York Lions. Home opener. 7 p.m. 299 Bloor St. W.

October 20
Varsity Arena
Men's Hockey: Varsity Blues vs. Queen's Gaels. Home opener. 7 p.m. 299 Bloor St. W.

October 27
Goldring Centre
Volleyball: Varsity Blues vs. Lakehead Thunderwolves. Women's home opener. 7 p.m. 100 Devonshire Pl.

November 3
Goldring Centre
Volleyball: Varsity Blues vs. Trent Excalibur. Men's home opener. 6 p.m. 100 Devonshire Pl.

November 10
Goldring Centre
Basketball: Varsity Blues vs. Brock Badgers. Home opener. Women's: 6 p.m. Men's: 8 p.m. 100 Devonshire Pl.

November 11
Goldring Centre
Basketball: Varsity Blues vs. McMaster Marauders. Women's: 6 p.m. Men's: 8 p.m. 100 Devonshire Pl.

Tickets for all sporting events: Advance are \$10 (seniors and youth, \$5). Game day are \$14 (seniors and youth, \$8). Free for U of T students with T-Card and children 8 and under. Available at each facility's box office and at varsityblues. universitytickets.com. More info: varsityblues.ca.

Theatre

September 22 to October 7
Hart House Theatre
Hedwig and the Angry Inch. This musical transforms the theatre into a wild punk rock show. Rock superstar Hedwig shares the band's story in a delightfully raunchy way. Warning: Coarse language and sexually explicit scenes. \$28 (seniors, \$17; students, \$15). 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. plus Sat. at 2 p.m. harthouse.ca/hedwig-and-the-angry-inch. Box office: 416-978-8849.

November 10–25
Hart House Theatre
The 25th Annual Putnam County Spelling Bee. This Tony Award winner looks at a small-town spelling bee – and highlights the truism that winning is not everything. \$28 (seniors, \$17; students, \$15). 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. plus Sat. at 2 p.m. harthouse.ca/the-25th-annual-putnam-county-spelling-bee. Box office: 416-978-8849.

HOW COULD THIS BE MORE BEAUTIFUL?

Exploring the world with like-minded people makes the experience all the more vivid. The University of Toronto Alumni Travel Program offers wide-ranging opportunities to connect with alumni and other travellers who share your sense of adventure. These tours criss-cross the globe. They're always fascinating, enriching and meticulously planned—down to every detail and flavour. What will turn your trip into a journey are the people you meet along the way.

Curious about this dramatic destination?

Visit the website to read about Iceland and all 35 alumni trips for 2018.

alumnitravel.utoronto.ca

1-800-463-6048 or 416-978-2367



UNIVERSITY OF
TORONTO

New Alumni Travel Destinations for 2018

Journey to Southern Africa
(South Africa,
Zimbabwe, Botswana)
Jan 16–31
From \$6,745 US + air

**Wonders of Peru
& Amazon Cruise***
Feb 8–19
From \$5,995 US incl. air
from Miami

**Expedition to
the Antarctic Circle**
(Chile, Antarctica)
Feb 9–21
From \$11,195 US + air

**Wonders of
the Galapagos Islands**
(Ecuador)
Feb 12–20
From \$5,195 US + air

**Cruise Coastal
New Zealand**
(New Zealand, Australia)
Feb 20–Mar 7
From \$3,820 US + air

Tanzania Safari
Mar 5–16
\$8,640 US + air

Slowly Down the Ganges
(India)
Mar 6–19
From \$4,995 US + air

Australia
Mar 9–22
\$5,495 US + air

Dutch Waterways*
(Holland, Belgium)
Apr 4–12
From \$2,245 US + air

**Barcelona: Art,
Culture & People**
(Spain)
Apr 12–20
\$2,645 US + air

Dynasties of China & Tibet
Apr 14–28
From \$5,295 US + air

**Alumni Campus
Abroad: Basque Country**
(Spain, France)
Apr 21–29
\$2,845 US + air

Southern Grandeur
(U.S.A.)
Apr 22–30
From \$1,799 US + air

Southwest England
(United Kingdom)
May 9–20
\$3,995 US + air

Cruise the Heart of Europe*
(Holland, Germany,
Austria, Slovakia, Hungary)
May 9–24
From \$6,245 US incl. air

**Scottish Islands &
Norwegian Fjords**
(Scotland, Norway)
May 10–18
From \$5,195 US + air

Paris: Art, Culture & People
(France)
May 20–28
\$2,745 US + air

**D-Day: The Canadian
Experience**
(France)
May 27–Jun 2
\$5,699 US + air

**Romance of
the Douro River***
(Portugal, Spain)
Jun 9–20
From \$3,145 US + air

**Alumni Campus
Abroad: Swiss Alps
& the Italian Lakes**
(Italy, Switzerland)
Jun 20–29
\$3,145 US + air

**Baltic &
Scandinavian Treasures**
(Denmark, Germany,
Lithuania, Latvia, Finland,
Russia, Estonia, Sweden)
Jun 21–Jul 2
From \$4,899 CAD incl. air

**Circumnavigation
of Iceland**
Jul 25–Aug 2
From \$6,845 US + air

**Alumni Campus
Abroad: Reims***
(France)
Sep 11–19
\$2,995 US + air

Norwegian Coastal Voyage
(Norway)
Sep 13–28
From \$8,120 CAD incl. air

Grand Danube Passage*
(Czech Republic, Germany,
Austria, Slovakia, Hungary,
Serbia, Romania, Bulgaria)
Sep 26–Oct 10
From \$4,545 US + air

Cruise the Elbe River
(Germany, Czech Republic)
Oct 2–13
From \$7,095 CAD incl. air

Ancient Vignettes
(Spain, France,
Italy, Malta, Greece)
Oct 3–14
From \$3,849 CAD incl. air

Journey of Discovery: Greece
Oct 11–19
\$1,999 US + air

Along the Mekong River
(Vietnam, Cambodia)
Oct 16–31
From \$6,145 US incl. air
from Vancouver

**Alumni Campus
Abroad: Amalfi Coast***
(Italy)
Oct 23–31
\$3,145 US + air

Patagonia's Chilean Fjords
(Chile)
Oct 30–Nov 10
From \$7,290 US + air

Great Canadian Getaways

Fogo Island & St. John's
Apr 20–26
\$4,395 CAD + air

Haida Gwaii
Jun 25–Jul 3
\$6,470 CAD + air

Northwest Territories
Jun 26–Jul 4
\$4,395 CAD + air

**Bay of Fundy
& Grand Manan**
Sep 9–15
\$2,995 CAD + air

*no single supplement
for solo travellers

Everything you need to know is at alumnitravel.utoronto.ca

Prices are per person and based on double occupancy. Dates and prices are subject to change. Individual tour brochures are available approximately 8–10 months prior to departure.

Alumni Campus Abroad trips are usually based in one location.

BOUNDLESS



Take advantage of your alumni privileges.

Get preferred rates and coverage that fits your needs.

You could **save big*** when you combine your graduate preferred rates and bundle your home and car insurance.

Supporting you ...
and the University of Toronto.

As University of Toronto alumni, you have access to the TD Insurance Meloche Monnex program. This means you can get preferred insurance rates on a wide range of home and car coverage that can be customized for your needs.

For over 65 years, TD Insurance has been helping Canadians find quality home and car insurance solutions.

Feel confident your home and car coverage fits your needs.
Get a quote now.



HOME | CAR | TRAVEL

Get a quote and see how much you could save!

Call 1-888-589-5656

Or, go to tdinsurance.com/utorontoalumni



The TD Insurance Meloche Monnex program is underwritten by SECURITY NATIONAL INSURANCE COMPANY. It is distributed by Meloche Monnex Insurance and Financial Services, Inc. in Quebec, by Meloche Monnex Financial Services Inc. in Ontario, and by TD Insurance Direct Agency Inc. in the rest of Canada. Our address: 50 Place Cremazie, 12th Floor, Montreal, Quebec H2P 1B6. Due to provincial legislation, our car and recreational insurance program is not offered in British Columbia, Manitoba or Saskatchewan. *Nationally, 90% of all of our clients who belong to a professional or alumni group that has an agreement with us and who insure a home (excluding rentals and condos) and a car on October 31, 2016, saved \$625 when compared to the premiums they would have paid without the preferred insurance rate for groups and the multi-product discount. Savings are not guaranteed and may vary based on the client's profile. Savings vary in each province and may be higher or lower than \$625. Wide Horizons Solution® Travel Insurance is underwritten by Royal & Sun Alliance Insurance Company of Canada and distributed in some provinces by RSA Travel Insurance Inc., operating as RSA Travel Insurance Agency in British Columbia. All trade marks are the property of their respective owners. © The TD logo and other TD trade-marks are the property of The Toronto-Dominion Bank.

Life on Campus

“I marvel at our students’ ability to combine multiple forms of excellence”

U of T president
Meric Gertler

p. 16



Prof. Shauna Brail and Prof. Mauricio Quiros-Pacheco are helping to lead U of T's contribution to StudentDwellTO

The High Cost of a Home

Faculty and students at Toronto's four universities will work together to seek answers to the city's housing crisis

IT TAKES UNIVERSITY OF TORONTO STUDENT Syed Imam around an hour and a half on public transit to get to the university's downtown Toronto campus from his home in Mississauga. That's almost three hours of daily commuting, five days a week, for Imam, who's studying civil engineering in the Faculty of Applied Science and Engineering.

"I'm spending a little over \$250 a month on commuting. If there was something affordable close to campus I would definitely choose to stay there," says Imam, who spends almost 12 hours a day downtown to "optimize commuting times."

Imam's commuting woes aren't unique – they're a symptom of a larger issue facing post-secondary students in the Greater Toronto Area: the lack of affordable housing.

Recognizing the urgency of the issue, the presidents of Toronto's four universities – the University of Toronto, OCAD, York and Ryerson, are teaming up for a new initiative called StudentDwellTO – bringing together almost 100 faculty and students from among their ranks to take an in-depth look at student housing in the GTA. ►

IN CASE YOU MISSED IT

Selfie Central

U of T students greet Trudeau before his talk on trade – and Trump



Justin Trudeau arriving at Rotman in June

PRIME MINISTER JUSTIN TRUDEAU braved a sea of student selfies at University of Toronto's Rotman School of Management on June 22. The sold-out talk, "Trade in the Balance: Canada-U.S. Relations," was conducted by *New York Times* journalists Peter Baker and Catherine Porter. Trudeau discussed the importance of the North American Free Trade Agreement – noting that with nine million jobs and a trillion dollars in trade at stake, the importance of NAFTA can't be understated. Jokingly described by Baker as "the Trump whisperer," Trudeau also talked about building a constructive relationship with U.S. president Donald Trump. (He even chatted about how affected he was by the play *Come From Away*, which he saw with Ivanka Trump: "I cried repeatedly... It's not a good look for me.")

Regarding Canada's foreign policy direction, Trudeau said the country will continue to chart its own path, and "even close friends like the United States... don't want Canada either to be or be seen as simply an extension of American policy." – **STAFF**

➤ "It's another example of how the impact of our collective efforts can be far greater than the sum of individual contributions," says Prof. Shauna Brail, U of T's presidential adviser on urban engagement and director of the urban studies program.

The housing initiative follows a previous collaboration among the four universities – a massive survey of student travel behaviour called StudentMoveTO. The results uncovered an unsettling narrative: students said a lack of housing affordability led to longer daily commute times, lower levels of campus engagement and, in some cases, hidden homelessness.

Considering the number of post-secondary students in the GTA – more than 180,000 spread across seven campuses – these findings are a big deal, says Brail, who will be U of T's representative on StudentDwellTO's steering committee.

The project will look at affordability from a multidisciplinary perspective – involving researchers from architecture, education, engineering, psychology and geography, who will collaborate with GTA community partners. "The opportunities for knowledge exchange are pretty incredible," says Kearon Roy-Taylor, a graduate student at the John H. Daniels Faculty

of Architecture, Landscape, and Design and one of U of T's two student leads on the project.

The 18-month initiative will include a heavy research component, and data collection from a wide-scale survey and focus groups. The results of the research will be made public. The subject matter will also be incorporated into courses, which will look at case studies from around the world on how to make housing more affordable.

The collaborative nature of StudentDwellTO across a variety of disciplines will encourage creative thinking, says Mauricio Quiros-Pacheco, a teaching stream professor at the Daniels Faculty and one of the project's academic leads. And because there's no particular outcome expected, the teams will be able to experiment with a variety of ideas. "We can be a bit more daring, going deeper into studies, trying to understand the potential of the city and the four institutions to address the crisis," he says.

Marcelo Vieta, a professor at U of T's Ontario Institute for Studies in Education, is looking forward to applying this kind of out-of-the-box thinking to StudentDwellTO research. "With me it's around how to live differently and how to live better. How do we address some of our social ills by influencing policy and practices?" – **ROMI LEVINE**



The Syed siblings served as U of T ambassadors to the Pan Am Games with their song "Champions" and they often perform at U of T events



From left: Bilal, Sarah, Hana and Hasna Syed

many U of T students – in patriotic gear, singing and dancing at Toronto locales such as Nathan Phillips Square. It's posted on the band's YouTube channel, DEYS. (The band name is "Syed" spelled backwards.)

The song is available on major music-streaming services, with proceeds going to the Syeds' Global Youth Impact – a not-for-profit that fosters youth leaders in volunteerism. In the past year, the group has undertaken campaigns to recruit student volunteers to support victims of the Fort McMurray fire and to push for living wages and safe working conditions for Bangladeshi garment workers. "It's a platform for young people to be empowered as leaders and change-makers within their communities and abroad," says Sarah.

Just as the siblings have always sung together – inspired by their mother, who always sang and played music around the house – they've also been volunteering alongside their parents and grandparents for as long as they can remember. Indeed, they combine their love of music with social justice ventures: their song "Raise Our Voices," for one, was featured in a United Nations campaign against child labour.

"Our drive and passion for social justice comes from having strong role models in our family," says Hana. The Syeds worked at soup kitchens around Toronto, for example, and performed at the March of Dimes Canada's holiday event in Ontario every year. "Our parents taught us to be cognizant of issues both in Canada and abroad, and it really shaped our world view and desire to 'make a difference' – as cheesy as that sounds," she adds.

With eldest sister Hasna abroad – she is doing a master's degree at the London School of Economics and Political Science – and the others set on grad school, the Syeds may soon be scattered in four different locations. But they have no intention of stopping their music or humanitarian work. "We're passionate about being a part of real change in the world," says Hasna. "And we'll do whatever it takes to make things work." – MEGAN EASTON

Music of the Heart

The Syed siblings use their voices to build a stronger Canada

FOUR YEARS AGO, THE SYED SIBLINGS posted their first YouTube video: the quartet sang a Bruno Mars hit, a capella, in their poorly lit basement music studio. They'd been performing together since childhood and thought it would be a fun way to share their music with family and friends. They've come a long way: The Syeds' most recent post – a video of their song celebrating Canada's sesquicentennial – marked the first time they had used a recording studio *and* it was their first professional music video.

Supported, in part, by U of T's Canada 150 Student Fund, the song "Lead You Home" is an upbeat tribute to Canada's diversity and the energy of its youth. The video features the four siblings: Hasna (BA UTSC 2016), UTSC students Hana (a neuroscience and psychology major) and Sarah (who studies human biology and health studies), as well as brother Bilal. They appear with more than 100 young people – including

NAMECHECK

Margaret Addison Hall



Margaret Addison (BA 1889 VIC) was the sixth woman to graduate from Victoria College – and, fittingly, she devoted much of her career to supporting young women at U of T. At Vic, she served as founding dean of Annesley Hall – Canada's first university residence built for women – and dean of women. In her honour, Victoria University named a second women's residence, built in 1959, Margaret Addison Hall. (The residence is now co-ed.)

During her time at Vic, Addison encouraged women's intellectual growth and independence while allaying a Methodist community's fears

about sending their daughters to the city to study. She established a safe, homey residence, and instituted a form of self-government – the Annesley Student Government Association – that enabled her young charges to help frame and enforce the rules. Both Annesley Hall and its student association would serve as models for other women's residences across Canada. Says Jean O'Grady, author of *Margaret Addison: A Biography*: "She was able to steer a middle way, reassuring people that women's education was not a wild experiment."

– SALLY CHOI

U of T: Still Defying Gravity

President Meric Gertler looks ahead to his second term



WHEN HE TOOK OFFICE IN 2013, U of T president **Meric Gertler** articulated what has come to be known as the “Three Priorities”: to leverage the university’s locations in the Toronto region, to strengthen U of T’s international engagement and to rethink undergraduate education. Earlier this year, he was appointed to a second term as president, through June 2023. **Jennifer Lanthier**, director of U of T News, spoke with him about progress on these priorities, U of T’s unique strengths and the challenges the university faces.

What’s your top goal for the next five years? To have the University of Toronto consistently viewed as one of the world’s best universities. This should be reflected not only in how we’re ranked, but also in the demand for our programs and our ability to attract great students, faculty and staff from across Canada and around the world. And in being recognized as offering a truly distinctive undergraduate education.

What will a truly distinctive undergraduate education look like? We’ll offer more creative and innovative research experiences for students, and more opportunities to work in the community. We know our students are very eager to work on real problems with real partners. More of our students will engage in learning outside of Canada. We’re not doing too badly on that relative to other Canadian universities, but we have a lot of ground to make up relative to our global peers. We also need to think about how students can benefit from U of T’s remarkable diversity. Twenty-five per cent of our undergraduates come from outside of Canada; how can all of our students benefit from this cultural richness?

U of T is like a mini-United Nations. Not many universities can say that. I was in Shanghai visiting high schools, and a student asked me straight up why she should come to U of T instead of going to a great university in China. I said that by coming to U of T she could study with the world. Half of the people in Toronto were born outside of Canada. We can’t tell the difference between a domestic student and an international student at U of T – and that’s wonderful. It’s one of the things that makes our international students feel so welcome here.

We do seem to be recruiting some incredible students. Our MasterCard Foundation scholars are among the most impressive young women and men I have ever met. They are articulate, poised, ambitious, excited to be here – and excited about what they will do when they return to their home countries in Africa. It’s hard not to be inspired

A Three-Priorities Timeline

Selected highlights from across U of T

**2013
November**
In his installation address at Convocation Hall, Meric Gertler articulates three priorities for U of T.

**2014
December**
Prof. Susan McCahan accepts a new role as vice-provost to develop innovative approaches to undergrad education.

**2015
March**
Prof. Janice Stein is appointed senior presidential adviser on international initiatives.

June
Prof. Shauna Brail, of urban studies, becomes U of T’s first presidential adviser on urban engagement.

July
U of T receives a \$114-million grant from the federal government – the largest grant in its history – for regenerative medicine. The funding will strengthen U of T’s reputation as a global centre for designing and manufacturing cells, tissues and organs.

U of T welcomes Pan Am athletes from 38 countries to new aquatic,

by people like that. Our Varsity athletes are also remarkably talented. Not only do they perform at an elite level in sports, but they are incredible students. In general, I marvel at our students' ability to combine multiple forms of excellence.

Enhancing the university's relationship with the city for mutual benefit has been one of your top priorities. What's next on that front? There's tremendous momentum around a new "school of cities" that would bring together our urban expertise in teaching, research and outreach across the university in a way that's more visible to the broader community and allows for greater collaboration between disciplines – and with our city partners. I'm very excited about that.

That would definitely raise our profile on urban issues. We have more than 200 faculty members who work in fields related to cities. But they're distributed across all three campuses and many different departments and divisions, and much of that strength isn't visible to the outside world.

As an urban geographer, what do you want for the future of U of T and the city? I'd like our three campuses to be much less dependent on automobiles. Scarborough is in the middle of an important debate about access to that campus by public transit and I hope we'll see progress there. The Toronto region needs to get serious about investing in public transportation – to improve our quality of life and to meet our responsibilities under the Paris Agreement. We need to figure out how to make higher densities more livable and more lovable. We talk a good line, but we don't always follow through.

What's something you love to do in Toronto? Forage for interesting things to eat. There are so many different cuisines from around the world here. It's one of those aspects of our urban landscape that we take for granted as Torontonians, but it is unique.

What's the most valuable thing you've learned in the job so far? I had suspected that our alumni are incredibly passionate about this place, and very loyal, but I had no idea how deeply those feelings run. One of the most pleasant surprises has been to meet alumni who communicate that passion and who say, among other things, "How can we help?"

What keeps you up at night? The state of public funding for higher education and research. The provincial government has expanded access by funding new spaces for students and by boosting financial support for students. But the operating grant we get per student has been declining in real-dollar terms for decades. It gets harder and harder for us to offer students a high-quality experience, especially compared to our peer institutions around the world. We still lag far behind in terms of per-student funding, and we can't do that forever and still compete successfully. Similarly, federal funding for research has not kept pace with many of our competitors. The federal government has made some promising moves in its first two years in office, but it must embrace the recommendations of the recent review panel chaired by President Emeritus David Naylor if we are to move the needle significantly.

I also worry about the state of the world. We are not isolated from violent struggle, refugee flows or the ravages of climate change. Of course, we have many scholars and students who are working on these issues and trying to deepen their understanding of them and move toward solutions. This gives me cause for hope.

Their work does keep the big picture in mind. I am so impressed by the quality and impact of what our scholars are doing. I'm also heartened by our deepening partnerships with other great universities around the world. So many of our current challenges are global in scope, and the process of developing solutions must also leverage international collaboration. There's much to look forward to here.

field and gymnasium facilities at the U of T Scarborough and St. George campuses.

September

U of T and Toronto's three other universities launch a survey to find out how students travel to and from their campuses – to improve university and transit planning.

December

U of T selects a team of architects and landscape architects to restore and beautify the central spaces of the St. George campus.

2016

June

Prof. Ted Sargent becomes U of T's first vice-president, international. His team includes Prof. Joe Wong, associate vice-president and

vice-provost, international student experience, and Prof. Christopher Yip, associate vice-president, international partnerships.

2017

March

U of T sees a surge in applications from international students – a result of more focused recruitment and changing global politics.

The Vector Institute, with U of T as a founding partner, is launched to strengthen Canada's global leadership in artificial intelligence.

May

U of T announces the first recipients of the Pearson International Scholarships. Covering tuition and expenses for four years, the program is intended to draw more of the world's best students to U of T.



Before turning serious about running, Gabriela Stafford kicked up her heels in another sport: she was deep into Irish dancing, according to the *Toronto Star*



Gabriela Stafford (centre) competes at the World Championships in London

What I Talk About When I Talk About Running

As Varsity Blues track star Gabriela Stafford gained success, her career aspirations and her confidence grew. But even after she earned a spot at the 2016 Olympics, “I still felt like an imposter,” says Stafford, who’s in her final year of a psychology degree. “I had doubts about my ability to race the best in Canada. Now I truly feel like I belong.”

Going into the IAAF World Championships in Athletics in London this summer, where she came in 12th in the 1,500 metre semi-final, Stafford was calmer and was focused on executing her race.

“Qualifying for worlds wasn’t any different than what I had to do to qualify for the Olympics,” she says. “I had successfully gone through the qualification process once, so I knew I could do it again.”

Her family was on hand to cheer her on, including her father – U of T professor Jamie Stafford, a former world-class cross-country runner – and sister Lucia, a 2016 junior Pan Am champion in the 1,500 metres.

Stafford credits U of T Varsity coaches Terry Radchenko and Ross Ristuccia and the track and field program with making her the athlete she is today. – **MEGAN EASTON**

SOUND BITES

What’s your favourite thing about Canada?

Our sense of humour! U of T grad and @nbcnl creator Lorne Michaels is a comedy legend. #WaynesWorld

@christine_henry

Our diversity. We are a country founded on multicultural communities. It is the core of who we are. It makes me proud.

@meL_faria

Poutine, of course!

@BookerHal

Atwood, Munro, King, Ondaatje, Toews. Anyone in this country writing world-class lit. And Type Books (a world-class bookshop).

@soramjb

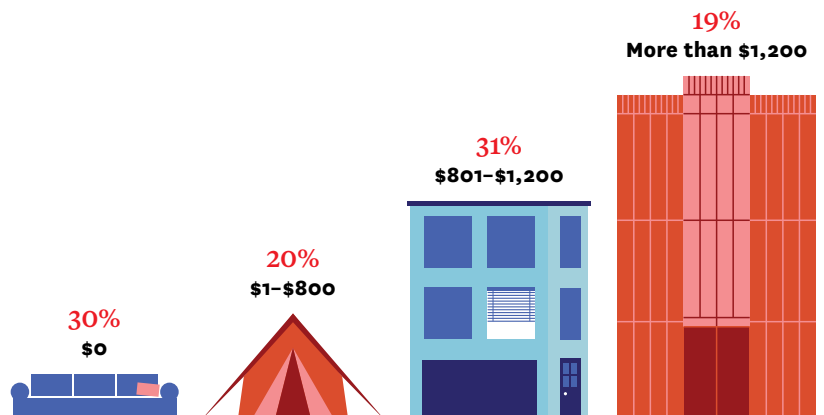
Join the conversation at twitter.com/uoftmagazine.

Poll | How much do you spend monthly on housing?

For many university students, their summer included a search for affordable digs. In this poll, 70 per cent said they pay for housing. Thirty per cent save on rent entirely by living with parents, while many others reduce expenses by residing with roomies.

Cost isn’t the sole concern. Stephen Ayeni, a third-year economics major, pays around \$750 a month to live in a UTM residence with friends. “Because I’m an international student, my parents think it’s safer and more secure to stay on campus in residence. I do, too. It’s also extremely convenient, because I can just walk to the library in five minutes.” – **SALLY CHOI**

This highly unscientific poll of 100 U of T students was conducted at Gerstein Library in June.





Shirley Blumberg of KPMB Architects likens U of T's front campus to Central Park, calling it a "very open space in our city." KPMB is working on the Landmark Project



The Landmark Project will make the heart of the St. George campus more pedestrian-friendly and accessible. It will integrate four historic areas: King's College Circle, Hart House Circle, Sir Daniel Wilson Quadrangle and the Back Campus. Parking on King's College Circle will be moved underground, and existing roadways will be replaced with elegant granite pavers. A "necklace" of pathways, dotted with gardens and seating, will wind its way to several new public spaces and plazas along the circle. "The redevelopment of the St. George campus is going to have a significant impact: enlivening student life and increasing the sense of pride alumni have in their university,"

says UTAA president Scott MacKendrick. "And the Landmark Project's effect is not temporary; the changes to be made will still be enjoyed by students and alumni 100 years from now."

UTAA has a history of supporting iconic spaces at the university – from being the lead donor for the construction of Convocation Hall in 1907 and assisting in its recent renovation, to providing funds to build Soldiers' Tower after the First World War.

The university aims to raise \$20 million with the support of the U of T community. Many alumni and friends have already enthusiastically supported gift-giving opportunities – including engraved granite pavers, benches and trees.

To learn more, visit landmark.utoronto.ca.

Transforming the Heart of St. George Campus

U of T Alumni Association's lead gift to the Landmark Project will help re-envision green space

THE UNIVERSITY OF TORONTO ALUMNI ASSOCIATION (UTAA), in partnership with the university, has pledged \$2 million to help transform St. George Campus's iconic green space for future generations, and create a welcoming cohesive landscape.

IN MEMORIAM

A Legacy of Mentorship

Tech lawyer with entrepreneurial spirit honoured by colleagues and loved ones



Geoff Taber

Geoff Taber (LLB 1985) was the lawyer that new-technology entrepreneurs wanted on their side. The partner at Osler, Hoskin and Harcourt LLP did much more than dispense legal advice – he mentored and encouraged the founders of tech startups. Taber died last Christmas Eve at age 56, in a fire at his Stoney Lake cottage that also killed his wife and their two teenage sons.

In keeping with his legacy, the Faculty of Law and Rotman School of Management have established the Geoff Taber Memorial Scholarship. Starting in the fall of 2018, the scholarship will be awarded to four students annually in the JD/MBA program who demonstrate academic excellence, leadership skills and financial need. More than half of the \$1 million needed has been raised so far. Rotman is also creating the Geoff Taber Chair in Entrepreneurship and Innovation to foster research in a subject Taber was passionate about.

Taber co-founded Rotman's Creative Destruction Lab at the University of Toronto, a program for science-based tech startups. He also advised

participants in The Next 36, a business accelerator for young innovators. His passion for championing Canada's tech innovators grew out of his work at Osler, where he founded the firm's Emerging Companies Group.

Benjamin Alarie, Osler Chair in Business Law at U of T, sought Taber's help with establishing his own company, Blue J Legal – which sells AI software for solving tax disputes. He says Taber provided excellent legal counsel, shared useful business insights and advised him to set a higher fundraising goal. "He got excited by new business ideas, and he encouraged me to think big and try new approaches," he says.

A New York native, Taber regularly attended the hockey and soccer games of his sons, Scott, who was 15, and Andrew, who was 13. Jacquie Gardner captured his heart while she was articling at Osler, and they married in 2000. A group of his friends have created the Taber Family Foundation to raise money for a seating area at his favourite retreat, Riverdale's Withrow Park. – SHARON ASCHAIK



Rotman School of Management
UNIVERSITY OF TORONTO

Master data-driven decision-making in just 9 months

Learn to harness the power of data with the Rotman Master of Management Analytics.

Suitable for recent graduates with a passion for analytics, our program prepares you to meet the market need for individuals with technical ability, business awareness and effective communication skills.

With access to industry professionals during the program, you will learn from world renowned faculty as you work on real-world business challenges.

Learn more

rotman.utoronto.ca/mma
MMA@Rotman.utoronto.ca

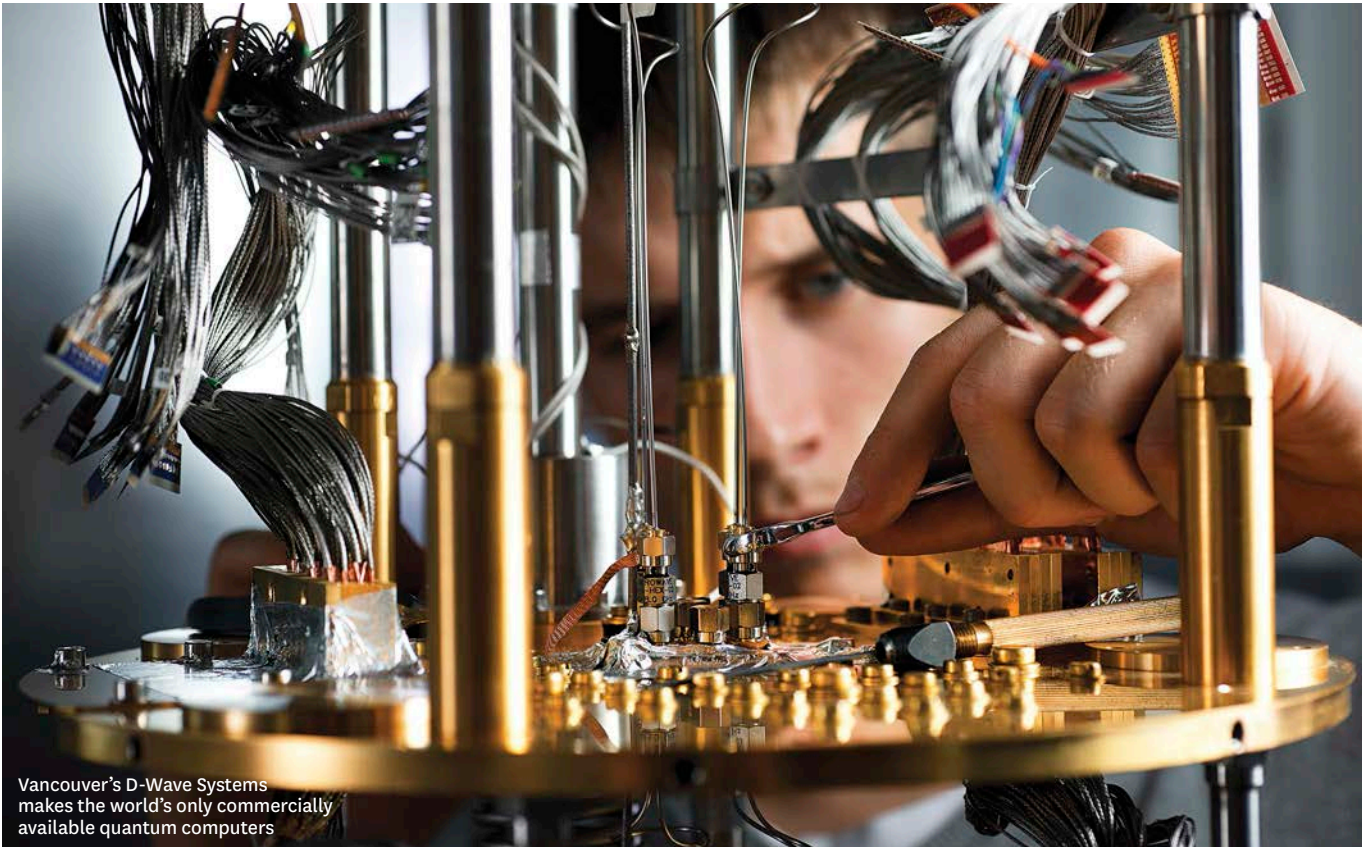
Rotman
master of
management
analytics

Leading Edge

“The point of memory is not being able to remember who won the Stanley Cup in 1972”

Blake Richards, a UTSC biological sciences prof, on why the brain sometimes actively helps us forget

p.22



Vancouver's D-Wave Systems makes the world's only commercially available quantum computers

AI's Quantum Leap

In combining two of computing's hottest trends, the Creative Destruction Lab sees new opportunities for startups

THE CREATIVE DESTRUCTION LAB at U of T's Rotman School of Management is making a big bet on quantum computing this fall, providing 25 startups with access to the world's only commercially available quantum computers, built by Vancouver's D-Wave Systems. “We hope this will spawn new, interesting applications from early-stage startups,” says Daniel Mulet, an associate director at the lab – which focuses on scaling up science-based technology companies.

Mulet says the lab's new quantum machine learning program will lay the groundwork for the next phase of AI

development by combining machine learning – computers capable of learning without explicit human instructions – with the nascent but potentially game-changing field of quantum computing.

While the Creative Destruction Lab won't have one of D-Wave's \$15-million computers on site, the startups will be able to access the machine's computational power through the cloud, and receive training from the same teams that D-Wave dispatches to customers such as Lockheed Martin, Google and NASA.

Quantum computing seeks to harness the mind-bending properties of quantum mechanics to achieve an exponential increase in computational power. These properties include superposition, which allows quantum particles to exist in more than one state simultaneously. Classical computer bits are binary, with a value of either one or zero – on or off – whereas a quantum state allows for more complex information to be encoded into a single bit. ➤

➤ During a 2014 conference in England, D-Wave co-founder Eric Ladizinsky explained it this way: Imagine, he said, trying to find an X scribbled inside one of the 50 million books in the Library of Congress. A traditional computer functions like a person sequentially opening each book and flipping through it. “But what if, somehow, I could put you in this magical state of quantum superposition, so you were in 50 million parallel realities and in each one you could try a different book?”

Confused? You’re not alone. “The problem with quantum [physics] is there are certain things that simply aren’t intuitive,” says Amr Helmy, a U of T photonics professor.

Putting aside the question of how it all works, Mulet says what caught the lab’s attention is the theoretical potential for quantum computers to supercharge its large cohort of AI-powered startups – within certain parameters. D-Wave’s machines can only be used to solve optimization problems that are specially conceived for it. One example: Volkswagen recently used D-Wave’s computer to figure out the fastest way to send 10,000 Beijing cabs to the nearest airport without creating a traffic jam. Other challenges that can be tackled include optimizing cancer radiation therapy and developing drugs.

Helmy says we’re still several years away from creating a quantum computer that can handle any kind of problem – and, even then, he says the machines won’t necessarily be more powerful than classical computers because of challenges in scaling up the technology. But he adds that the lab’s effort to bring entrepreneurs into the quantum world at this early stage is unusually far-sighted for a Canadian business school. “Some of the things Silicon Valley banked on 40 years ago were evident to the scientific community, but not the rest of the world. But they bet on it – and it paid off.” – **CHRIS SORENSEN**

Some Forgetfulness? It’s a Good Thing

Researchers discover that our brain erases certain memories for a reason



IT’S A COMMON COMPLAINT that as we age we become more absent-minded. But a certain amount of forgetting plays a vital role in how our memory functions, according to new research from U of T and the Hospital for Sick Children.

“The goal of memory is to optimize decision-making,” says Blake Richards, a professor of biological sciences at U of T Scarborough. “So it’s important that the brain forgets irrelevant details and instead focuses on the stuff that’s going to help make decisions in the real world.”

Neurobiological research into memory has tended to focus on the cellular mechanisms involved in how the brain stores information, known as persistence. Much less attention has been paid to the mechanisms involved in forgetting, known as transience. Scientists have thought that an inability to remember comes down to a failure of the process to store or recall information.

This new research, by Richards and Paul Frankland, a U of T professor and a scientist at SickKids, shows that, in fact, some cell activities *promote* memory loss and are distinct from those involved in storing information.

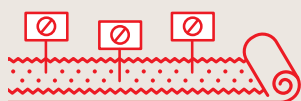
Why would our brain want us to forget? One reason, says Richards, is that, in a rapidly changing world, old information becomes outdated. “If your brain is constantly bringing up multiple memories with conflicting information, this makes it harder to make an informed decision.”

Another reason is that to make generalizations based on large amounts of information, it helps to forget some of the details. This allows us to focus on the knowledge that’s essential to making the right decision.

“We tend to idealize the person who can ace a trivia game, but the point of memory is not being able to remember who won the Stanley Cup in 1972,” he says. “The point of memory is to make you an intelligent person who can make good decisions, given the circumstances.” – **DON CAMPBELL**

LINGO

Astroturfing



In the mid-1990s, an organization called the National Smokers’ Alliance sprung up in the U.S. to fight new laws to restrict smoking. Although the group seemed to have been started by disgruntled smokers, it had, in fact, been created by Philip Morris Tobacco.

By masking its role in what seemed to be a grassroots movement, the company was “astroturfing.” Used by corporations to influence public policy, the practice is now being employed to get people to buy products, says Jenna Jacobson, a PhD candidate at the Faculty of

Information. Companies identify social media “influencers” and pay them to promote their brands to followers. Not all influencers disclose the relationship, though – hence: astroturfing. “One objection is that audiences are being duped,” she says. – **STAFF**



One problem is that it is hard to see who is a refugee and who is not, says Scott. Most refugees in Jordan and Lebanon do not live in camps, as people expect, and they suffer from “middle-income” diseases normally associated with wealthier countries. These non-communicable diseases are invisible until you talk to someone – yet the suffering is all too real and dangerous.

One recent study by the U.S. Centers for Disease Control and Prevention estimates that half of refugee households in Jordan have at least one person who suffers from a non-communicable disease. Today, for most Syrian refugees living in neighbouring states, even cancers that could be cured elsewhere are a death sentence.

Despite the urgency of the need, humanitarian organizations

THE BIG IDEA

Among Syrian Refugees, a Need for Insulin and Heart Meds

As the media share images of wounded migrants, some of the biggest medical threats go almost unmentioned

SINCE THE START OF THE CONFLICT in Syria, more than five million displaced people have fled to neighbouring countries. The media have broadcast countless images of wounded refugees, suffering in tented settlements, but Emily Scott – a PhD candidate in political science – knows that one of the primary threats facing Syrian refugees is almost invisible.

“The lives of refugees who have made it out of Syria are threatened more by manageable, treatable diseases such as diabetes, asthma, heart disease or cancers than by war wounds,” says Scott, who recently spent eight months in Jordan and Lebanon studying how groups such as Doctors Without Borders, the International Committee of the Red Cross and Save the Children operate. She observed that humanitarian organizations working in the region expected to find gunshot wounds and burns resulting from violence, but they found as great a need for puffers, blood-thinners and diabetes medication.

have been slow to provide medicines and early diagnostic services. The reasons for this are many, explains Scott. The identity of these organizations tends to be tied to work in war zones and disaster areas. Responding to violence gains greater institutional and international support: it’s easier to make a brochure and sell an image of an ash-covered child with a broken limb than a middle-aged refugee suffering from hypertension. As an employee of Doctors Without Borders told her: “We don’t want to become pills without borders.”

Scott says that organizations need to begin by first rethinking what a humanitarian crisis and suffering look like: to really advocate for Syrian refugees, you need to have a broader picture of what it means to be wounded by war. The organizations must find better ways to assess unanticipated needs experienced on the ground and then adapt or innovate to meet them. Some have already begun to change, though the effort remains fragmented. She adds that the emotional response of the fieldworkers has been a source of hope and the key to fuelling change.

“Most of these organizations move forward when these fieldworkers push for change,” says Scott. “That’s what happened with HIV/AIDS, and that’s what’s happening with non-communicable diseases.” - **MANINI SHEKER**

Emily Scott’s research is supported by the Social Sciences and Humanities Research Council and Fulbright Canada.

STARTUP

How a Verbal Test Can Reveal Your Brain Health

WinterLight Labs analyzes speech for evidence of even mild dementia. All patients need to do is describe a picture



an accuracy ranging from 82 to 100 per cent, depending on the study. (Traditional diagnostic methods are about 80 per cent accurate, the company says.) WinterLight's research also suggests that its test is more enjoyable, more objective, faster and cheaper than the traditional methods. And it can be administered monthly or even weekly to show a trend. "It gives a more sensitive picture of someone's cognitive health," says Frank Rudzicz, co-founder and president of WinterLight and a U of T professor of computer science. He adds: "We're not trying to replace doctors or pathologists. We're trying to save clinicians time."

An early diagnosis can benefit patients, too. While Alzheimer's has no cure, treatment can sometimes delay the disease's progress. A bonus: people liked taking the test. "Looking at their photos awakens something in people," says Rudzicz, who is also a scientist at Toronto Rehabilitation Institute. "They enjoy it."

Here's how the technology works. Scientists have known for decades that language – pitch, tone, frequency, false starts, hesitation, grammatical complexity, word-finding difficulties, even a barely detectable jitter or shimmer – is a highly sensitive indicator of cognition. Using artificial intelligence, WinterLight's app extracts a few features from the audio recording of your voice, then sends it to an analysis platform in the cloud that identifies additional subtle characteristics. It also converts the audio to text to analyze vocabulary and grammatical structure. By tracking many years of televised interviews on YouTube, Rudzicz suggests the company's technology could have detected the late actor Gene Wilder's Alzheimer's decades before his diagnosis. – **MARCIA KAYE**

Frank Rudzicz's research is supported by the Natural Sciences and Engineering Research Council of Canada and the Canadian Institutes for Health Research.

IF YOU'VE EVER WORRIED that you or a loved one has cognitive impairment or even Alzheimer's disease, you've likely gone this route: an apprehensive trip to the family doctor; a battery of physical and mental tests; a referral to a specialist several months and many kilometres away; an anxious wait; finally, a stranger in a lab coat coming with more pencil-and-paper tests on spelling, word memorization and math.

Compare that to this: in the comfort of your home, you look at your own photos on a tablet. You spend a minute describing one. An app records your snippet of speech and uses artificial intelligence to assess 2,000 measures from your voice. A minute later it delivers a report back to you saying whether or not you have a cognitive condition and to what extent.

WinterLight Labs' proprietary speech and language analysis program can detect Alzheimer's and other types of dementia with

Findings

Buying a Gift? Consider Buying One for Yourself, Too



The next time you're about to buy a gift, consider getting the same thing for yourself – new research suggests your recipient will like the gift more.

UTSC management prof Sam Maglio and a colleague at the University of Wisconsin-Madison found that gifts such as socks, mugs and headphones were considered more likable, thoughtful and considerate if a message was attached saying, "I hope you like the gift. I got myself the same gift too."

"If you can foster a sense of social connectedness, the recipient won't just see a gift, they will see a reminder of sharing something in their relationship with the giver," says Maglio. The effect is called "companionizing."

"The positive effect you get with sharing is small but robust," says Maglio. "It's a reliable and consistent boost." – **DON CAMPBELL**

Clinging to Old Ideas? Wash Them Off!



Cleaning your hands doesn't just get rid of germs. A U of T study suggests it also helps wipe away old goals and reorient you to new ones.

The new research, by Ping Dong, a PhD graduate of the Rotman School of Management, reveals the psychology behind cleansing. Wiping away dirt, she says, serves as a physical proxy for mentally separating ideas that linger from a previous experience. Think of the phrase "beginning with a clean slate."

In her study, Dong instructed participants to focus on a particular goal while doing an activity. She then had participants evaluate their goal or use a hand wipe. Those who were asked to use the wipe became less likely to think of the goal, less likely to make behavioural choices consistent with it and less likely to find it important. They were also more easily redirected toward a new goal. – **KEN MCGUFFIN**

Q&A

What Canada Got Right

An acceptance of diversity may be the country's defining strength

Looking back 150 years to Canada's earliest days as a country, **Peter Russell**, a professor emeritus of political science, credits the Fathers of Confederation with laying the groundwork for a country that has become one of the world's most diverse. Russell, the author of *Canada's Odyssey: A Country Based on Incomplete Conquests*, spoke recently with *U of T Magazine* editor **Scott Anderson**.

Canada has thrived for 150 years. What do you think the Fathers of Confederation did best? Number one, they saved us from becoming American.

You say that like there's something wrong with being American... Not at all. But without Confederation, we would not have taken a different path from the U.S., or built this deeply diverse country that could yet turn out to be greater than the U.S. as a bastion of liberty in the world.

French-Canadian culture certainly would have been threatened had Canada joined the United States... With the union of Lower and Upper Canada in 1840, the French Catholics were in danger of disappearing in a tide of English Protestant immigration. With Confederation, the French got a province in which they'd be the majority and could protect their distinct culture. This was good for all Canadians. It set the stage for a society that would celebrate diversity.

So Canada's openness to many different peoples dates to 1867? It actually began earlier. To this day, French Canada sees the Quebec Act of 1774 as its Magna Carta, which guaranteed freedom of worship. This did not exist anywhere in the world in 1774, and certainly not in the United Kingdom.

This openness didn't extend to Indigenous Peoples, though. No. The plan was for assimilation: to put the kids in residential schools and make them Christian Canadians. This was a complete betrayal. The Aboriginal nations were crucial allies of the British, who had promised to respect their independence and prevent settlers from taking their land.



If you could travel back in time, what might you advise the Fathers of Confederation to do differently? They didn't spell out in the Constitution how parliamentary democracy actually works. It had never been spelled out in England, so I understand why they didn't do it here. But most Canadians now, including those active in political life, don't have a good grasp of the fundamental principles of our parliamentary democracy or the important conventions of our Constitution. What's the Prime Minister's Office? Who's in the cabinet? We need a good, clear summary that is authoritative and non-partisan, can be put online and taught in schools, and can be read by any citizen.

Some people see an unelected Senate as a mistake. We're sorting it out. Independent senators are what John A. Macdonald wanted but never delivered himself. Today's independent senators are showing good sense. They're not insisting on getting their way. And they've improved some legislation.

Do you think we'll ever bring Quebec into the Constitution? Yes! The Quebec government recently released a document called *Quebecers: Our Way of Being Canadian*. It's very pro-Canadian. But it also says that Canada needs to recognize Quebec, in all its diversity, as a nation within Canada. And the document does this without threatening a referendum on independence. Unfortunately, so far, the rest of Canada has said, "We're not going to listen to you." But I'm optimistic.

What should Canadians recognize about their country? We have three national pillars: English-speaking Canada, French Canada and Indigenous Canada. Get interested in one of the other pillars. Get to know it. There will be crises here and there but we'll live to fight another day. It's a terrific country.

Second-year student Colin Arrowsmith bikes along Huron Street, pulling a device to measure greenhouse gas emissions on U of T's St. George campus



How Much Methane?

A U of T study aims to create the most accurate estimate yet of Toronto's greenhouse gas emissions

COLIN ARROWSMITH SPENT part of his summer cycling – not for fun or exercise, but for science. As part of a research placement with U of T physics professor Debra Wunch, the second-year student criss-crossed campus on a bike, towing a buggy with a bright yellow box inside – a spectrometer used to measure the concentration of greenhouse gases at precise locations.

The project, which got underway earlier this year, marks a new and ambitious attempt to calculate the city's emissions of methane, carbon dioxide and other gases based on atmospheric measurements rather than on estimates from industry.

Wunch says the information will help pinpoint the biggest sources of Toronto's emissions. The data could prove vital as the city strives to cut its contributions to greenhouse gases to one-fifth of 1990 levels by 2050. It will also enable the city

to zoom in on where its reduction efforts are needed most – and to notify organizations about fixing previously unnoticed leaks. As Wunch observes, this is not only good for the planet, it's good for the organization.

In addition to using the mobile equipment, Wunch and her team will install spectrometers at the tops of two buildings – one upwind and one downwind from the city. These will provide readings of greenhouse gases in a column from ground level right up to the top of the atmosphere, enabling the researchers to measure the city's overall emissions.

Wunch has conducted a similar study in Los Angeles, which found methane emissions to be higher than had been previously estimated. The carbon dioxide levels measured were about the same as estimates, she says.

The Toronto study is just beginning, but Wunch hopes that it leads to a long-term effort to monitor greenhouse gases in Toronto. "You want to actually be able to watch as the emissions reductions occur over time, and see that the city's efforts are working," she says. – **SCOTT ANDERSON**

Debra Wunch's research is supported by the Natural Sciences and Engineering Research Council of Canada, the Canada Foundation for Innovation and the Ontario Research Fund.



UNIVERSITY OF
TORONTO

THEY PROTECTED US. WE PROTECT THEIR MEMORY.

Soldiers' Tower was built in 1924, funded by donations from University of Toronto alumni. This Remembrance Day, our community will gather under a beautifully restored Soldiers' Tower, thanks to the repairs and preventative maintenance your generosity makes possible. Alumni and friends like you have helped raise more than \$1.2M to return the Tower to its original glory. Thank you!

Preserving the Soldiers' Tower and the memory of the 1,185 alumni, students, staff and faculty who gave their lives in the First and Second World Wars continues to be a sacred responsibility. With your help, we will ensure this monument to bravery and sacrifice continues to stand strong for many generations to come.

Please make your gift to the Soldiers' Tower Fund today. We hope you will join us on Friday, November 10, 2017 at 10:15 am for our annual Service of Remembrance.

Photo: University of Toronto Archives – November 11, 1924

BOUNDLESS

3 WAYS TO DONATE: <https://donate.utoronto.ca> ☎ **1-800-463-6048 or 416-978-0811** ✉ **Complete and mail this form**

Here is my gift of:

\$35 \$100 \$250 \$500 \$1,000 Other: \$ _____

My cheque is enclosed
(payable to the University of Toronto)

Please charge my donation to my credit card

VISA MasterCard American Express

Please designate my gift to: _____

Name

Name on Card

Address

Card Number

Expiry

City

Province

Postal
Code

Country

Signature

Date

Telephone

Email

Please return this form and your payment to the University of Toronto Annual Fund, 21 King's College Circle, Toronto, Ontario M5S 3J3

A tax receipt will be issued for your donation.

The information on this form is collected and used for the administration of the University's advancement activities undertaken pursuant to the University of Toronto Act, 1971. If you have any questions, please refer to www.utoronto.ca/privacy or contact the University's Freedom of Information and Protection of Privacy Coordinator at 416-946-7303, McMurrich Building, Room 104, 12 Queen's Park Crescent West, Toronto, ON M5S 1A8. Charitable registration No. BN 1081 62330 RR0001. **DUA1&NNASOLTOALLAFF**

THANK YOU



BEGINNINGS

The first day of school. A new job. Moving to a different country. We feel alive to possibility – to renewal and reinvention – but also anxious or fearful: What if it doesn't work out?

It requires courage to choose a new path. And in taking a chance, as many of the U of T alumni, students and faculty profiled in these pages have done, we grow stronger. That, in the end, is its own reward.




ON A MISSION OF COMPASSION

The recipient of a Lester B. Pearson International Scholarship, Deborah Emilia Solomon wants to devote her engineering career “to the service of others”

DEBORAH EMILIA SOLOMON can’t remember exactly how old she was when she saw a documentary about the Africa Mercy, a hospital ship that relies on a crew of volunteers to bring high-quality medical care to people in the poorest regions of Africa. But she vividly recalls the impact the video made on her as a young girl, and her determination to join their efforts when she became old enough.

“From the minute I saw that documentary, I knew it was what I wanted to do,” says Solomon, one of 37 young people who have received a Lester B. Pearson International Scholarship – a new awards program created to bring exceptional students from around the world to U of T. “I knew I wanted to help others, and I loved the way the Mercy ship brings medical care to places that can’t access it. It really spoke to me.”

The Mercy Ships organization doesn’t take volunteers younger than 18, so Solomon isn’t eligible yet. But last spring, she sent an email to the program’s administrators anyway. “I would love to be a future volunteer,” she wrote, noting that she would be studying engineering – and hopes to enter the biomedical stream in her third year at U of T. Once she has a year of specialized studies behind her, she figures she’ll be able to help operate biomedical equipment on board. “Please do keep me in mind for perhaps the year 2020–21.”

 A native of India, Deborah Emilia Solomon epitomizes the broad internationalism that U of T’s Lester B. Pearson International Scholarship aims to promote



Where this year's 37 Pearson Scholars come from



It was a typical move for Solomon, who applies relentless discipline and determination to everything she takes on. Ask her how she pulled off an average of 98.9 per cent in Grade 12, and she'll tell you about the schedule she keeps to document how many times she has reviewed material: Three check marks indicate exam-readiness.

A quote she has written in her journal reads, "The only failures are those who fail to try." The author? Lester B. Pearson (BA 1919 Victoria), whom she cites as an inspiration. She can rhyme off a list of Pearson's accomplishments – from implementing universal medical care to spearheading UN peacekeeping – and says she was "blown away" at being able to meet Pearson family members at a campus event last May. The quote in her journal "serves as a vital reminder for me to press forward, to never hesitate, to venture into the unknown and to never stop trying," she says.

A native of India, Solomon epitomizes the broad internationalism that the scholarship aims to promote. She has lived in several countries – Singapore, China, India and, most recently, Canada. (Her father's work as a ship surveyor involves international postings.) "I feel as if I can fit in anywhere," she says, and notes that one of the reasons she's especially excited about studying at U of T is the diversity of its students.

The scholarship covers tuition, books, incidentals and residence for four years, and recipients can choose any area of study at U of T. With engineering, Solomon knows she's selected a field that has traditionally been male-dominated, but she says she no longer sees gender as an issue. At her high school – Corpus

Christi Catholic Secondary School in Burlington, Ontario – boys and girls often worked together on math and science problems without any discrimination, she says with a shrug that would likely have impressed Pearson himself. And she's excited to see that 40 per cent of last year's incoming class at U of T engineering was female.

She's already working to improve her odds of success at U of T – this summer, while on a trip back to India, she planned to squeeze in a calculus course to brush up on her math skills before her undergraduate studies formally began this fall. "It's a good chance to get familiar again with some of the toughest math," she says.

If – when – she's accepted for a volunteer stint on the Africa Mercy, the experience of life at sea won't actually be new for Solomon. When she was a child, her family spent about six months living on board a ship sailing through the Solomon Islands for one of her father's job postings. "I think part of my interest comes from that experience," she says. "But what it's really about is the work that the Mercy ships are doing and the lives that they're touching."

Her family has a tradition of helping others: Her uncle and several other family members have worked to help deliver free health care to low-income people in India, and she loves the idea of carrying on the legacy. "I really hope that I can devote more of my life to the service of others," she says. She looks thoughtful as she says this, and then her mind turns to the Mercy ships again. "I have to send more emails," she says.

Carol Toller is a Toronto-based writer and editor.

TEACHING KIDS HOW TO CODE

U of T undergrads are bringing the language of computers to youth in Toronto's low-income neighbourhoods. Will it "future-proof" them?

ON A WARM SUMMER EVENING in July, Will Ginsberg, a lanky fourth-year U of T computer science student, wanders among a group of kids peering intently at their laptops. For much of the next two hours, he'll be helping his 11 young charges at a west-end Toronto library troubleshoot their way through the latest activity in a coding boot camp: creating an aquarium image to post on a website they're designing.

"Try control-X and then control-V," he amiably advises one participant. To another: "You know what I forgot to tell you yesterday? You got the question-of-the-week prize!"

The boot camp, which is the main part of a larger initiative called "Project Include," is geared at 10- to 19-year-olds and was created by a group of U of T engineering and computer science undergrads. Launched in 2016 by Inioluwa Deborah Raji and Afifa Saleem, Project Include runs the camps out of library branches in selected priority neighbourhoods around the city, using donated space and rented computers.

The inspiration came from an insight Raji had about access to technology. She wondered whether children from lower-income families who didn't have computers were less likely to pursue coding, a highly sought-after labour force skill.

The available research doesn't provide a clear answer, but Jacqueline Smith, a U of T professor of computer science (teaching stream), suggests this kind of program helps kids – particularly those from underprivileged backgrounds – envision themselves in a career they may not have considered before. "It builds confidence," she says.



➤ Will Ginsberg (left) and Afifa Saleem instruct youth in the basics of computer coding at the Evelyn Gregory branch of the Toronto Public Library

Raji and Saleem asked Google to support the project. The company provided a \$4,600 grant last year and more than doubled the amount for this summer. U of T also kicks in funds.

The boot camps are free for participants, and this past summer reached 140 children at 10 branches. The program fills up quickly, and there's a long waiting list, says Saleem. On a survey, many of this year's participants said they tried the boot camp out of curiosity. "I don't know what I want to learn," one commented. "I just am interested in learning new things."

Eleven U of T undergrads have signed on to teach these sessions, which instruct kids in how to build and test websites, apps and basic computer games. Ginsberg points out that each child gets their own laptop to use during camp

sessions, so they can work on their own coding projects individually, using various programming languages. He learned quickly that the best way to run these sessions is to let the kids loose on a series of small projects. "I try not to lecture at them, ever," he says with a chuckle.

Back at the library, several of the kids raise their hands to tell Ginsberg that the Internet connection seems to be down. He takes a seat at the front and starts walking them through the day's activity, using his laptop and a digital projector. "I'm just going to do this offline," he says.

But even as he's talking, several kids have redoubled their efforts to coax out the library's Wi-Fi signal. After a few moments, one of Ginsberg's young coders pipes up: "Chrome's working..."

Journalist John Lorinc (BSc 1987 UC) is the co-editor of *The Ward*, *Subdivided* and *Any Other Way* (all published by Coach House Books).

MINOR KEY

During one of life's darker moments, alumna Camilla Gibb took comfort in learning something new

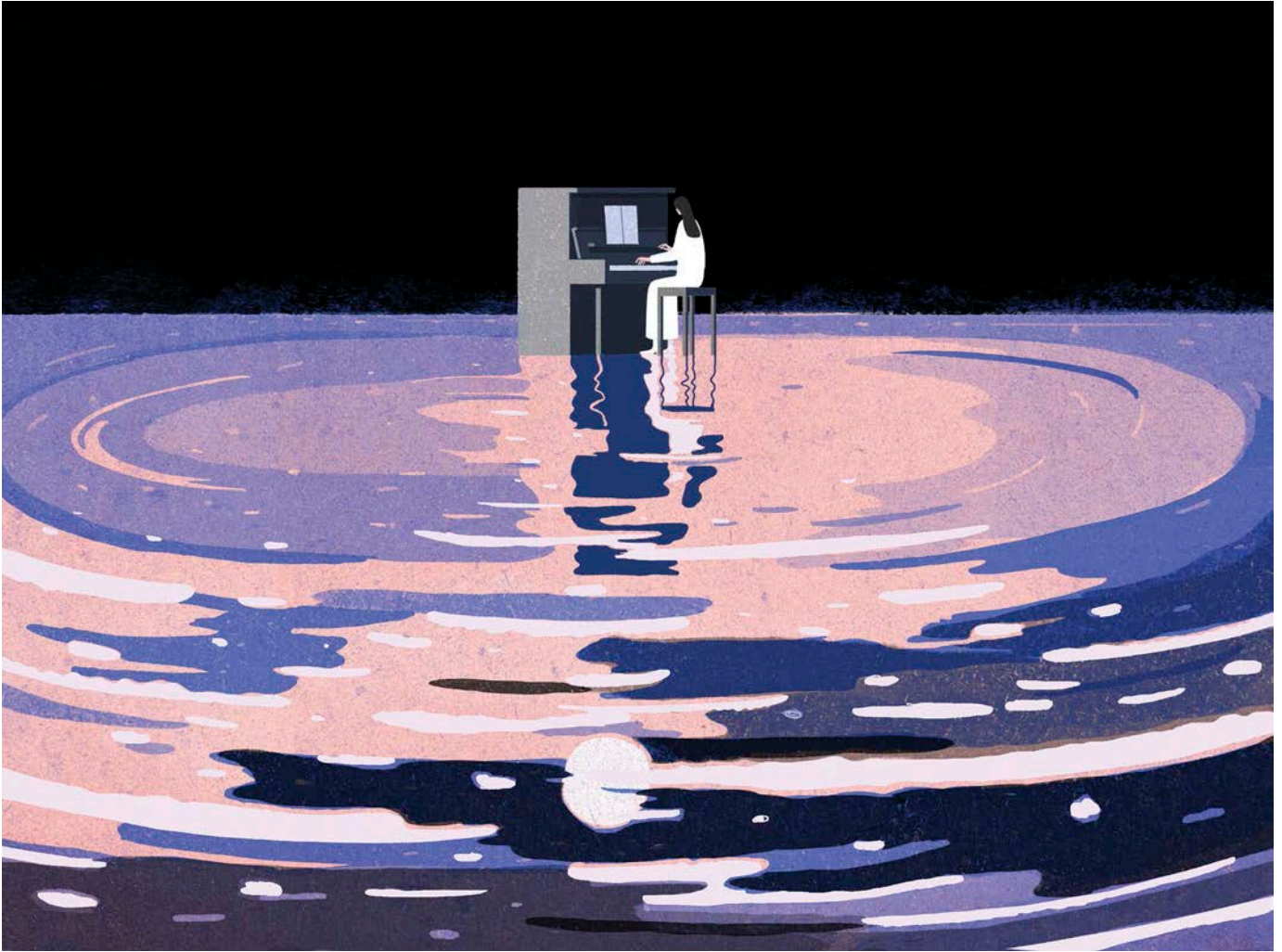
I WAS 43 YEARS OLD when I had my first piano lesson. Forty-three years old, newly divorced and the mother of a three-month-old baby. I cannot remember why I decided to take up the piano right then; there is no obvious reason. What I do know is that I'd been crying for an entire year. Crying in public as much as in private; crying in such a way that led my family doctor to say: "You do know this isn't normal, don't you?"

I didn't know what was or wasn't normal any longer; my former life had been detonated and I was stumbling, lost in its ruins. I couldn't write and I couldn't read. Therapy wasn't helping and neither were antidepressants. Perhaps in some deeply buried part of my unconscious I thought learning to play the piano might just help.

And so I arrived at the east end Toronto doorstep of a young woman with a Russian name and a giant Bouvier who occupied most of the living-room carpet. An eight-year-old boy was finishing up his lesson, his mother perched eagerly nearby in a chair.

My new teacher wondered what experience I'd had as I sat down on the piano bench, perhaps assuming, given my age, that life had taught me something relevant to where I found myself. I remembered the treble clef from early years spent playing the violin, but had no familiarity with the bass. I'd learned the alto clef when I moved on to the viola, which I played up until my first year of university. I had always felt aware of my limitations though, never having studied music theory. Music seemed to have turned into math at some point and I have never been good with numbers.

What did I want to achieve by taking piano lessons at this point? I knew



I wasn't interested in doing scales, in participating in recitals and measuring progress through conventional grades. I wouldn't be striving to be good. I didn't even aspire to technical proficiency. I think I just wanted to be able to read the notes and make my hands comply and get from the beginning to the end of a song.

We started with some sight reading from a book for adult learners that I'd brought along. I plunked my way through the pages, naming the notes, communicating them to my fingers, my left hand lagging behind my right. It took such focus and attention I could almost see new neural pathways being created in my brain. For 45 minutes once a week I was physically, emotionally and intellectually challenged in a way that commanded all my resources. For 45 minutes once a week I did not cry.

And then we got to every beginner's standard: Bach's "Minuet in G." After weeks spent practising the Minuet, I declared my hatred of the piece. It wasn't how long I'd been at it – I'd hated it from the first moment I put my fingers to the keys. One of the nice things about being an older student, perhaps, is having the temerity to say such a thing.

What we realized, as we flipped through the rest of my book for adult learners, is that I was only interested in music in minor keys. Anything in a major key just felt too bright, too alarming, too false for my mood. My teacher immediately suggested a piece I might like: "Ivan Sings" by Aram Khachaturian, with its three moody flats. I didn't even know it was possible to fall in love again, but I was smitten with it from the start.

Over the course of the next few months I worked on the first half of the piece. But then my teacher got a new job and she and her Bouvier left Toronto, headed for Montreal. While she recommended a new teacher, I already knew that the elements that went into creating the particular alchemy of these lessons couldn't be replicated elsewhere. But Ivan and I would keep each other company for years as I worked out the rest of his story on the old piano in my living room. After "Ivan Sings," "Ivan Is Ill," but shortly after that, "Ivan Goes to a Party." I have accompanied him into C and E major.

Camilla Gibb (BA 1991 UC) is the author of four novels and a memoir, *This Is Happy*. She is also the June Callwood Professor of Social Justice at Victoria College.

AN INDIGENOUS MUSICIAN TURNS TO THE LAW

First-year student Conlin Delbaere-Sawchuk is interested in how cultural appropriation affects Aboriginal artists

A VERSATILE ARTIST who loves fusing contemporary musical styles with Métis folk traditions, Conlin Delbaere-Sawchuk has performed as part of the Métis Fiddler Quartet (with his three siblings) across Canada and around the world, including at the 2010 Vancouver Olympics. Now at U of T's Faculty of Law, he says he can envision himself doing legal and justice work that supports Indigenous people. He's keen to get involved with Aboriginal Legal Services, the U of T-affiliated centre that provides free legal services to low-income Indigenous people living in Toronto.

The growing debate over cultural appropriation interests him too, and he expects that some of the questions being raised about what stories can be told by whom could eventually make their way into the court system. "Certain authors and artists who have no Indigenous connections whatsoever" – he avoids referencing them by name – "usually see justice served to them by the community in terms of the feedback they get," he says. "But I think there will be some legal ramifications to all the debate that's going on right now. Whether there's an actual career to be made from exploring these issues isn't something I'm familiar with yet. That's part of the process of learning that I'll be doing at U of T."

However he uses his legal degree, Delbaere-Sawchuk, 29, says he wants to "pay it forward" and honour the people who've helped him throughout his career – as well as the generations that



came before him. At a recent performance at a high school in midtown Toronto, he gave a shout-out to Louis Riel, the famous leader of the Métis people and a distant relation of Delbaere-Sawchuk's. "Louis Riel shaped much of what we know of Canada," he told the kids assembled in the gym. "Inclusivity,

↖ Musician Conlin Delbaere-Sawchuk, wearing the colourful woven sash that's a hallmark of Métis culture, thinks disputes over cultural appropriation could one day end up in court

the right to religion, the right to French language. This history, as far away as it might seem to you, is a big part of our lives." – CAROL TOLLER

ARCHITECTURE'S SPECTACULAR NEW HOME

AFTER YEARS OF PLANNING and painstaking construction, the new home for the John H. Daniels Faculty of Architecture, Landscape, and Design at One Spadina is not *quite* finished. But it is already a stunning addition to the St. George campus – one of the best buildings in Canada of the past decade, according to the *Globe and Mail*.

Designed by a team led by architectural firm NADAAA, the new 156,000-square-foot facility at the western edge of the St. George campus – with angled ceilings and airy interiors – welcomed its first students late this summer.

Richard Sommer, the faculty's dean, sees the new Daniels Building as a kind of urban "skunk works" – a think-tank where students, faculty and professionals from many disciplines and backgrounds will collaborate on the toughest problems facing 21st-century cities. "To get a better city, you need to bring creative thinking and imagination to the game," he says. "It's a messy art."

That may be, but it's happening in a beautiful place. – **STAFF**



FOR THIS SYRIAN GRAD STUDENT, A FRESH START

Denied re-entry into the U.S. to complete his studies in public health, Khaled Almilaji finds a warm welcome at U of T

DR. KHALED ALMILAJI had a gut feeling something might go wrong. On Jan. 6, 2017, the Syrian-born physician was preparing to fly back to the United States from Turkey following a visit relating to his humanitarian work. He figured he might run into some trouble at the American border. But he never thought he'd be barred from returning to his master's program in public health at Brown University in Rhode Island. Or that he'd be prevented from seeing his newly pregnant wife for five and a half months. Or that the University of Toronto would step in to reunite him with his educational pursuits – and his wife.

Today, Almilaji, 36, is a graduate student at U of T's Institute of Health Policy, Management and Evaluation. He arrived in Toronto in June.

But on that January day he became one of many targeted by the U.S. administration. He was simply told there was "a problem" with his visa. At first he wasn't terribly concerned. A snowstorm in Istanbul had cancelled many flights anyway. But days passed, with no information. Finally, on Jan. 18, Almilaji learned that his U.S. visa had been completely revoked, with no reason given. He could apply for a new one, but no one knew how long that might take. "I was worried only for my wife," he says. Also a physician, Dr. Jehan Mouhsen was



"I am one of the very, very few people who got another chance," says Khaled Almilaji

seven weeks pregnant. She was staying in New York with friends so she wouldn't be alone, and was studying for her medical board exam in order to secure a residency.

Although the couple Skyped daily, their frustration grew. "I was getting more and more mad," recalls Mouhsen, 27, "because Khaled would be told 'two weeks,' and then it was 'two more weeks,' then 'two *more* weeks.'" Her visa, which was linked to her husband's, had also been revoked, which meant that if she left the U.S. she couldn't return.

While waiting for his new visa application to be processed, Almilaji rented a small apartment with friends and continued his humanitarian work. Since Syria's health-care system was in tatters, he had been working from a city just over the border in southern Turkey. One project involved organizing an immunization program against polio, which had begun a resurgence in Syria. The challenges were staggering: amid bombing and shelling, 8,500 volunteers were going door-to-door to administer the oral vaccines. "One volunteer had just finished a whole building when a barrel bomb crashed into it, killing all the kids and the vaccinator," Almilaji recalls. Still the program continued. "When you see evil and you know you have to fight against it, you don't feel afraid. You have to help people regardless." Ultimately 1.4 million Syrian children received immunizations, which successfully halted the spread of the virus.

Almilaji was no stranger to personal hardship. In 2011, he was arrested in Damascus for providing medical care to injured protesters. He was thrown in jail and tortured. "They gave us electric shocks, beat us with cables, deprived us of

water and – this was the most horrible – they put salt in our mouths and hung us outside by our wrists in the sun, leaving us for 24 or even 48 hours with just our toes touching the ground." He spent four months in a solitary cell that was crawling with insects. He was sometimes taken out to administer medical care to fellow prisoners. Twice he got feverish infections himself. Finally after six months, 30 pounds lighter, he was released and made his way to his parents, who'd assumed he'd been killed.

Almilaji's resolve only strengthened. With the support of the World Health Organization and the U.S. Centers for Disease Control, he launched an early warning response and alert program to monitor and report on the spread of communicable diseases in Syria. He also helped co-ordinate the construction, now almost complete, of an underground hospital for women and children in the Syrian war zone. With several decoy floors above ground, it will be safer than traditional hospitals not only for patients but also for medical personnel, 826 of whom have been killed in the war.

When the wait for a new U.S. visa stretched into months, Almilaji realized he'd have to explore other options for continuing his education. His story made its way to U of T's Dalla Lana School of Public Health, both from a colleague of Almilaji's in the Faculty of Medicine and from the dean of public health at Brown. They suggested Almilaji be considered for U of T's Executive Master of Health Informatics, a 22-month program that involves the application of digital technologies to the health information of individuals and of entire populations. The program would enable Almilaji to analyze the medical data he's

bringing out of Syria for patterns, and help humanitarian organizations identify gaps and improve health service.

Program director Julia Zarb agreed to speak with Almilaji on the phone, a conversation that stretched to an hour. "I found him fascinating, and I was impressed by his positivity under such pressure," Zarb says. "He's had such intensive experience in a volatile environment."

With the help of Canadian humanitarian leaders, private support and U of T funding, Almilaji arrived in Toronto on June 17. He had an emotional reunion at Pearson airport with his wife, who had already arrived from the U.S. The couple embraced, rocking gently from side to side, and Almilaji placed a hand on Mouhsen's pregnant belly. "I have no words for that moment," she says. Three days later they went to an ultrasound appointment together. "I saw my baby for the first time," Almilaji says, with a wide smile. "That was amazing." The couple moved into U of T's student family housing, and Almilaji began the program, on full scholarship, within the week.

Almilaji's presence is already having a positive influence on fellow graduate students, notes Zarb. "Part of why I wanted him in the program is that his lived experiences and resilience will be very helpful for his classmates to learn from. And he can, in turn, learn from them as they seek to build projects in the Canadian health system."

The couple hope one day to return to Syria, where Almilaji can continue his work and Mouhsen can realize her dream of becoming a pediatrician. "I am so grateful to the university, its donors, the big group of professionals who were advocating for me," he says. "I am one of the very, very few people who got another chance. Many others did not."

Ironically, two days after receiving his Canadian visa, his new U.S. visa finally came through. "Too late," he says with a smile.

"WHEN YOU SEE EVIL AND YOU KNOW YOU HAVE TO FIGHT AGAINST IT, YOU DON'T FEEL AFRAID. YOU HAVE TO HELP PEOPLE REGARDLESS"

Marcia Kaye (marciakaye.com) of Aurora, Ontario, is an award-winning journalist.

10 THINGS YOU PROBABLY DIDN'T KNOW WERE INVENTED BY U OF T ALUMNI



#1 The G-Suit

U of T medical research professor Wilbur Rounding Franks (BA 1924 Victoria, MD 1928) invented the first anti-gravity suit, or G-suit, used in combat. Franks had been investigating why fighter pilots passed out during high-speed exercises. He came up with the idea of creating a suit with a water-filled layer that would press on the pilot's legs and abdomen to keep the blood circulating from the heart to the brain. Franks' Flying Suit was used successfully in combat in November 1942. It is still the basis for contemporary fighter-pilot and astronaut pressure suits.



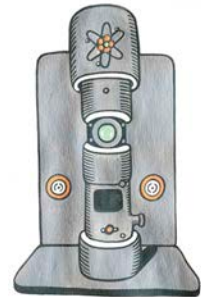
#2 Buckley's Mixture

Within a year of the deadly Spanish flu pandemic hitting Toronto in 1918, local pharmacist William Knapp Buckley had responded to customers' requests for a stronger cough suppressant by making his own – mixing menthol, ammonium carbonate, pine-needle oil and Irish moss extract. Buckley, who graduated in 1915 from the Ontario College of Pharmacists, an affiliate of the University of Toronto, described the taste of his mixture as "brisk." But if its longevity is any indication, it works.



#3 Pablum

In 1930, three pediatricians working at the Hospital for Sick Children developed Pablum – the first precooked cereal for babies, packed with vitamins and minerals. Dr. Frederick Tisdall, Dr. Theodore Drake and Dr. Alan Brown – all graduates of U of T's Faculty of Medicine – made Pablum without common allergens such as nuts, lactose and eggs. Not only did the hospital's patient mortality rates due to nutritional deficiencies fall dramatically after Pablum was introduced, but royalties from the patent helped support SickKids research.



#4 The Electron Microscope

The first electron microscope in North America was built by two U of T PhD students, James Hillier (BA 1937 UC, MSc 1938, PhD 1941) and Albert Prebus (PhD 1940), under the supervision of physics professor E.F. Burton. By focusing a beam of electrons on objects instead of using light, which had larger wavelengths, Hillier and Prebus were able to build a working microscope that was five to 10 times more powerful than traditional microscopes. Over time, they refined their design to be 100 times more powerful than even today's optical microscopes.



#5 The Alkaline Battery

In 1955, in a bid to improve sales, Canadian National Carbon Co. asked chemical engineer Lewis Urry (BAsc 1950) to extend the lifespan of its Eveready battery. Rather than simply refine the existing version, Urry experimented with a brand new material. He used powdered zinc instead of solid zinc as the anode, and manganese dioxide as the cathode, along with an alkaline electrolyte. The result, patented in 1959, was an alkaline battery that lasted much longer than regular batteries but cost less.

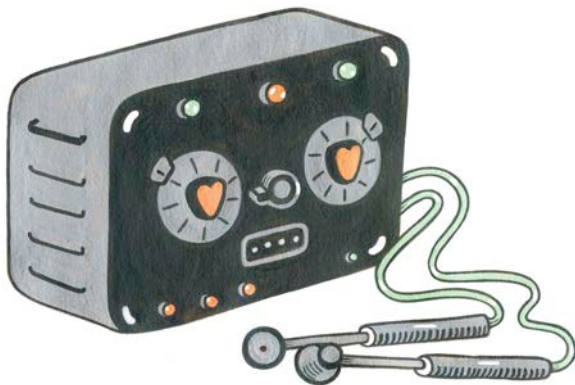
#6 The 56K Modem

Brent Townshend (BAsc 1982) was working on a system for downloading music – a kind of precursor to Napster – in the early 1990s, when the fastest modem speeds maxed out at 33.6 kilobits per second. He knew for his project to succeed, he'd need faster download speeds. His breakthrough, in 1993, was to use digital links to connect servers with the phone network, which eliminated time-consuming analog-to-digital conversions in the download direction (uploads still required these conversions). He licensed the technology for millions of devices.



#7 The Electric Wheelchair

George J. Klein (BAsc 1928), a scientist who invented the first microsurgical staple gun and the Weasel all-terrain vehicle, is best known for developing the first electric wheelchair, in 1953. His work helped improve the quality of life for Second World War veterans and kick-started the rehabilitation engineering field.



#8 The Pacemaker

In the 1940s, while studying the use of low temperatures to slow heart rates during open-heart surgery, U of T physicians Wilfred Bigelow (BA 1935 UC, MD 1938) and John Callaghan (MD 1946, BScM 1950) observed that pulses from an electrical probe could be used to restart a stopped heart. The researchers worked with engineer John Hopps to create an external device that would send electrical pulses to the heart. Over time, internal pacemakers were developed – and in 1984, doctors implanted one into Hopps himself.



#9 The Canadian Sphynx Cat

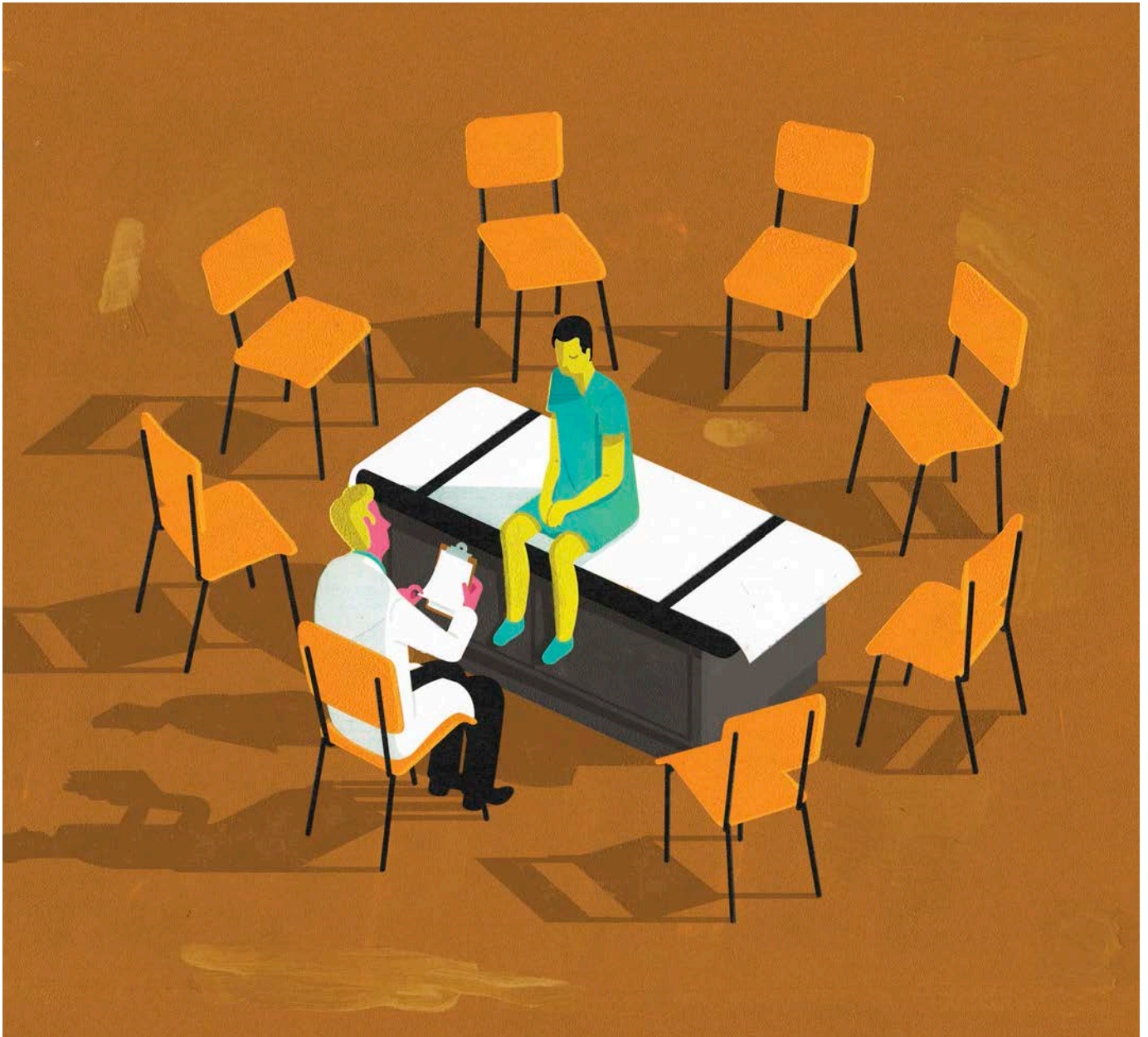
When U of T science student Riyadh Bawa (BSc 1966 UC) heard about a kitten in Toronto that had been born hairless, he purchased the kitten and its mother and mated the two (called “backcrossing”). He then mated the resulting male offspring with American shorthair females. The result was what became known as the Canadian Sphynx – a hairless pet that’s often preferred by allergy sufferers.



#10 IMAX

The giant-screen movie format that the Ontario Place cinesphere helped make famous was developed by Graeme Ferguson (BA 1952 Victoria) – himself a filmmaker – and William Shaw (BAsc 1951), along with filmmaker Roman Kroitor and businessman Robert Kerr. Ferguson made his first films as a student at U of T and would go on to create *North of Superior*, the most widely seen Canadian IMAX film.

By Sally Choi, U of T Magazine’s editorial and advertising assistant.



DOCTORS MAKE MISTAKES. CAN WE TALK ABOUT THAT?

The health-care system isn't foolproof, and it's time to open up about it, says U of T alumnus Dr. Brian Goldman

I'LL NEVER FORGET the first time I heard the three words that emergency physicians dread: Do you remember? “Do you remember that patient you sent home?” a nurse asked me matter-of-factly one late afternoon, early in my career. “Well she’s back.” Mrs. Drucker, a patient I’d treated earlier that day – had returned to the hospital and was near death. About an hour after I’d sent her home, thinking that I’d solved her problem, she had collapsed. Her family had called 911 and the paramedics had brought her back to the emergency department in

severe shock. She was barely breathing. The emergency staff were able to stabilize her, but over the next two or three days, it became clear that she wasn’t going to wake up. The family gathered. And at about the nine-day mark, they agreed to stop all life support – Mrs. Drucker, a wife, a mother and a grandmother.

They say you never forget the names of those who die.

Over the next few weeks, I beat myself up and experienced for the first time the unhealthy shame that exists in our culture of medicine – where I felt alone,

“I’M HUMAN. I MAKE MISTAKES. I’M DEEPLY SORRY WHEN THEY HAPPEN, BUT I ALWAYS STRIVE TO LEARN ONE THING THAT I CAN PASS ON TO OTHER PEOPLE”

isolated, sick inside. The unhealthy shame says not that what you did was bad, but that *you* are bad. Why did I make such a stupid mistake? Why did I go into medicine? I made myself a bargain: if I redoubled my efforts to be perfect and never make another mistake, the accusing voices would stop. I went back to work.

And then it happened again. Two years later, I saw a 25-year-old man with a sore throat. I was busy, in a bit of a hurry. I gave him a prescription for penicillin and sent him on his way. Two days later, I heard the same three words: “*Do you remember* that patient with the sore throat?” It turns out he had a potentially life-threatening condition called epiglottitis that can cause the airway to close. Fortunately he didn’t die. He was placed on intravenous antibiotics and he recovered after a few days. But I experienced the same feelings of shame and recrimination.

I’d like to be able to say that my worst mistakes happened in my first five years of practice – as I’m sure many of my colleagues would say about their own errors. But this would be false. Some have been in the *last* five years. Here’s the problem: If I can’t come clean and talk about my mistakes, if I can’t find the still-small voice that tells me what really happened, how can I share them with my colleagues? How can I teach them about what I did so that they don’t do the same thing? If I told a room full of my fellow physicians these stories, they would probably get uncomfortable, somebody would change the subject and we would move on. That’s the kind of system we have. It’s a system in which the perception is that there are two kinds of physicians – those who make mistakes and those who don’t. And we have this idea that if we drive the people who make mistakes out of medicine, we’ll be left with a safe health-care system. But there are problems with that idea.

In my 20 years of medical practice, I’ve learned that we work in a system where errors happen every day. It’s estimated that between 9,000 and 24,000 Canadians each year die in hospital of preventable medical errors – and this is probably a gross underestimate, because we really aren’t ferreting out the problem as we should.

I’m not a robot; I don’t do things the same way each time. And my patients don’t tell me their symptoms in the same way each time. Given this, mistakes are inevitable. If you weeded out all the health professionals who make errors, there wouldn’t be anybody left.

In my other career as the host of a show about health care on CBC Radio One, I’ve found that medical professionals want to tell their stories. We want to be able to say, “Don’t make the same mistake I did.” What we need is an environment in which we can do this. What we need is a redefined medical culture. This starts with one physician at a time.

The redefined physician is human, knows it and accepts it. He or she isn’t proud of making mistakes, but strives to learn one thing from what happened in order to teach somebody else. The redefined physician points out other people’s mistakes, not in a gotcha way, but in a loving, supportive way so that everybody can benefit. He or she works in a culture of medicine that acknowledges that human beings run the system, and that they will make mistakes from time to time.

I can’t compel my colleagues to admit their mistakes. All I can do is say that *I’m* human, *I* make mistakes. I’m deeply sorry when they happen, but I always strive to learn one thing that I can pass on to other people.

And I do remember.

1,600

Hospital-related harms in Canada are estimated to result in patients occupying an additional 1,600 hospital beds each day, costing roughly \$685 million a year.

1/18

One in 18 Canadian hospital patients experience harm from preventable errors. Among the most common are: falling, pressure ulcers, intravenous line infections, surgical site infections, medication errors (such as the wrong dose or wrong medication), and *C. difficile* infections.

Adapted from a TEDx Talk by Brian Goldman (MD 1980), an emergency room physician, author and broadcaster.

IT WAS 50 YEARS AGO TODAY

Ken Luckhurst first set foot at UTM at the height of the hippie era. Touring a transformed campus with a recent grad, he finds not *everything* has changed

WHEN U OF T MISSISSAUGA FIRST OPENED, deer and rabbits easily outnumbered the beautiful woodland campus's 155 students.

Ken Luckhurst was among the very first to register at Erindale College, as UTM was then known, in the late summer of 1967. When he and friend Rick Robb crossed the threshold of its one and only building, they found a school that was so new, its administration didn't have registration forms to hand out. "The registrar had to write all of our information down on the back of a Rothmans cigarette carton," he recalls with a laugh.

Today, with about 14,000 students, UTM has beefed up its operations considerably – and there is no shortage of forms. But as Ishveer Malhi (BCom 2016 UTM) tells it, the school still retains its small-town feel. With the ability to connect to almost anyone through social media, Malhi says she always felt part of an intimate community, even though the school is much bigger than it was in Luckhurst's day. "In a strange way," she says, "it was like we all knew each other."

On a sultry day in late June, Luckhurst (BSc 1970 UTM) and Malhi take a stroll along UTM's bucolic paths and engage in some comparative reminiscing: Summer of Love vs. the Instagram Era.

"Here's a peaceful spot, where you can go to de-stress," Malhi says, passing a well-lit enclave in the Innovation Complex, a hub for business education. A finance specialist who majored in economics and now works for KPMG, she muses on the paradox of UTM: a highly competitive school, but one located in the most serene of places.

Much has been made of the increasing pressure on modern students, but Luckhurst – who majored in math and

now runs his own business development company – surmises that things were just as tense in his day. "I'm still having the nightmare that I haven't prepared for the exam!" he exclaims as we pass the Hazel McCallion Academic Learning Centre, aglow with computer light.

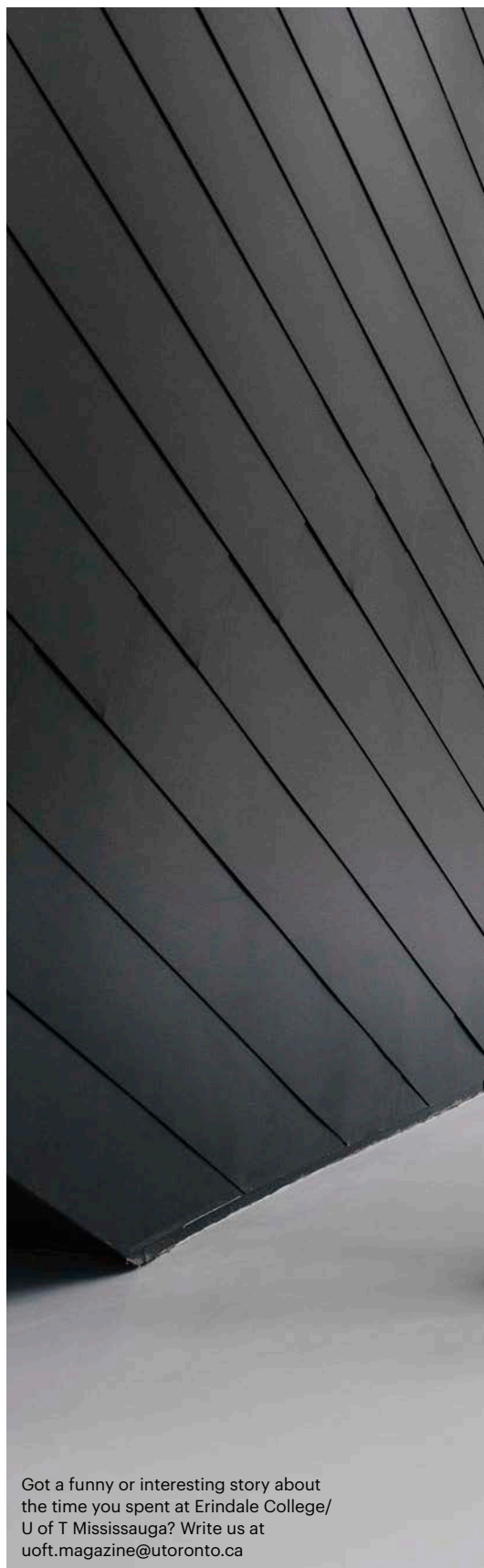
Not that his shaggy-haired, bell-bottomed cohort spent all of their time working. "We horsed around, drank, chased women," he says. "But we got one of the best educations you could have."

Another constant: the sense of friendly competition with U of T's other campuses, particularly UTSC (the other "other" campus). Both recall looking for a book at the library and being repeatedly told, "Sorry! It's at St. George."

Malhi suggests stepping inside the Communication, Culture and Technology Building, where she took first-year sociology. The auditorium is large enough to fit all of Luckhurst's class, with room for their families too. In the past decade, UTM saw the opening of eight new academic buildings and is still expanding. Luckhurst's original stomping ground, the North Building, was recently demolished and a massive six-storey complex is rising in its place.

The Erindale of 1967 offered two degrees – bachelor of arts and bachelor of science. Courses consisted of lectures and labs and not much else, and after class, says Luckhurst, athletics ruled the day. Today, students can choose from 14 degree programs – many of which involve off-campus experiences – and an extracurricular smorgasbord of more than 100 clubs and 160 recreational sports teams.

"One of my favourite times was a trip to Montreal with my gender studies class," Malhi recalls. She also worked hard on behalf of Lifeline, an organization that raises awareness about blood and stem cell donations. And she remembers student elections as, invariably, the school year's most frenzied time. But she and her fellow students could always repair to the Blind Duck Pub for a beverage, or play games online in the Student Centre. "You worked hard, you played hard," she says. "Sometimes



Got a funny or interesting story about the time you spent at Erindale College/ U of T Mississauga? Write us at uoft.magazine@utoronto.ca



◀ On a recent tour of campus, U of T Mississauga grads Ishveer Malhi (left) and Ken Luckhurst engage in some comparative reminiscing: Instagram Era vs. Summer of Love

it was stressful, but what academic experience isn't?"

In the late 1960s, of course, "online" wasn't even a word. There were only 28 professors at UTM and Luckhurst knew most of them. In fact, "we'd eat with them in the cafeteria," he recalls. Once, students were invited to Principal J. Tuzo Wilson's residence to look at moon rocks from the Apollo 11 mission; Wilson, a world-famous geophysicist, made the school a centre of scientific importance.

Back in the present-day food court of the William G. Davis Building, Luckhurst bemoans the plastic fork he's been given. "We had flatware in our cafeteria, and china with the U of T logo on it," he says, tucking into a plate of jambalaya. "However! I can unequivocally say this is the best meal I've ever had at Erindale College." Half a century ago, the cafeteria served up mac and cheese and tuna casseroles, he recalls, not the tandoori chicken and quesadillas it does today.

Suddenly, Luckhurst puts his fork down. "Hey, you know what I just thought of? I was at Erindale just after *Sgt. Pepper* came out!" he says.

Malhi looks quizzical. "What's that?"

When the elder alum tells her it's only, in his opinion, the greatest album of all time, she writes it down. "I *have* heard of the Beatles," she says apologetically.

"Well, if I've accomplished nothing else today," says Luckhurst good-naturedly, "I've introduced you to *Sgt. Pepper*."

Outside, Malhi and Luckhurst compare how campus pranks have changed (Then: streakers racing through the nearby golf course. Now: students interrupting classes to record YouTube videos). A large deer suddenly bounds across their path – as common a sight now as it was 50 years ago.

"One thing I guess we'd both say?" says Luckhurst. "We're both pretty proud of this school."

Cynthia Macdonald (BA 1986 St. Michael's) is a Toronto journalist.

A REFUGE FROM THE STREETS

Having spent time homeless herself, Prof. Suzanne Stewart envisions a new kind of shelter – one that truly understands and cares for Indigenous women

PROF. SUZANNE STEWART, a member of the Yellowknife Dene First Nation, knows firsthand what it's like to be homeless and how it affects one's health. Her six siblings were taken from her mother, a residential school survivor, in the 1960s to attend residential school themselves, or to be given up for adoption. Stewart's grandparents sent her to Edmonton to live with an aunt, but she soon found herself living in foster care and group homes. She ran away several times, and, beginning at the age of 14, lived on the streets for stretches before pursuing higher education at 25.

Now, as the director of U of T's Waakebiness-Bryce Institute for Indigenous Health, Stewart is tapping into her own experience – and all that she's learned through her work as a counsellor and psychologist, and her academic research – to spearhead the Toronto Indigenous Women's Shelter, which will open its doors next spring. "The system, social services, weren't there to look after me," says Stewart, "and that's not just my story, but the story of all Indigenous


women." Pamela Hart, a colleague from the Toronto Indigenous community, is co-founding the shelter with Stewart.

The new facility will employ traditional healers and elders to offer services based on Aboriginal understanding of health. Every day, Stewart says, women – and Indigenous women in particular – are denied access to homeless services because they don't fit into specific categories, such as having children or being in an abusive relationship. Indigenous women also face racism, on top of the intergenerational trauma they have experienced either directly or indirectly as a result of the Indian Act, residential schools and the child welfare system. "Many organizations that provide services to the homeless don't understand the impact of colonization on the mental health of Indigenous people," Stewart says.

Stewart's mother has lived on the streets of Vancouver for close to 30 years, and some of her siblings have also experienced homelessness. Her mother often faces derogatory stereotypes that remain closely attached to the Indigenous homeless, Stewart says. Shelter staff might assume that she's struggling with drugs or alcohol, or both, when she's not. Stewart's own children, she notes, are the first in four generations of her family not to experience the threat of being taken away.

"Seeing all of this, I knew that I wanted to help people," she says.

This summer, Stewart and her team were negotiating with the city for a building that could accommodate at least

 Prof. Suzanne Stewart has seen members of her own family struggle with homelessness. Being involved with a new shelter for Indigenous women that employs elders and traditional healers is "my dream," she says

25 to 30 beds for those in need. Stewart would also like enough space for a sweat lodge and a community garden, which would address the issue of food security, a common challenge surrounding homelessness and health. The garden would also help Indigenous women reconnect with the land around them.

The mission is to build the shelter around the needs and recommendations of elders, youth and homeless people within the city's Indigenous community. "All of this is really going to be grounded in people who are trained in Indigenous knowledges, within their discipline. That is a requirement," Stewart says.

There's a teaching component to the new facility as well. The shelter will offer work placements for students at U of T's Ontario Institute for Studies in Education and in the Indigenous Trauma and Resiliency program at the Factor-Inwentash Faculty of Social Work, among other U of T programs.

As far as what Stewart's role will be when the shelter opens its doors next year, she says that will depend on what role the board and the community want her to have. "It's my job as a professional and a researcher to get systems of psychology and mental health to create a space for traditional knowledges and healing, because that's how Indigenous peoples are going to get better," says Stewart. "It is my dream."

4th

Toronto's Indigenous population is the fourth largest in Canada.

31%

Between 2001 and 2006, Toronto's Indigenous population increased by 31 per cent.

10%

Indigenous people make up 0.8 per cent of Toronto's population, but represent about 10 per cent of the homeless.

Kyle Edwards is a freelance writer in Toronto and a former policy researcher at the Chiefs of Ontario.





TAKING CENTRE STAGE

U of T Mississauga student Muhaddisah Batool prepares for the spotlight as the theatre world grapples with change

THE THEATRE AND DRAMA STUDIES PROGRAM at U of T Mississauga is highly competitive: hundreds of people audition each year, but fewer than 30 make the final cut. One of those recently chosen is **Muhaddisah Batool**, who's on the verge of a triple-threat career as an actor, writer and director. This fall, the program will allow Batool (whose first name happens to mean "storyteller" in Urdu) to burnish performance skills while immersing herself in the history and theory of dramatic art. Here, she prepares to step onstage with **Cynthia Macdonald**.

“When people say ‘you have a knack for acting,’ I think it means you’re more in tune with your emotions,” says Muhaddisah Batool

Did you always want to go into the theatre? Definitely! At a young age I may not have had a concept of what theatre was, but I knew what it was like to intuit things, to be emotionally sensitive. When people say “you have a knack for acting,” I think it means you’re more in tune with your emotions than other people are.

What excites you most about starting at UTM? I’m 21 now, so I’m one of the older people in the program. I do think that gives me an edge, though, with the depth of emotion I’ve felt over the last few years. I’ve never experienced such happiness or despair or loneliness. After I graduated from high school, I wasn’t sure if I’d be able to go to university. But things have a funny way of working out.

Despite those difficulties, you’ve been able to make a great start in community theatre. Do you have a favourite role you want to play? Recently I fell in love with the character of Rose in *Les Belles Soeurs* by Michel Tremblay. I had to pick three different pieces for my UTM audition; each one featured a middle-aged woman with children stuck in a loveless marriage. I have no idea why I picked those. But they’re the roles I feel deeply about.

Twenty-one is still very young. As technology permeates the entertainment world, does your generation see a place for theatre? Theatre can’t die, but it’s going to take on different forms and incorporate a lot of new things. I was just in *The Little Mermaid*. We used green-screen technology for the coral, the bubbles and the scene where Ariel swims up to save Eric. On opening night it wasn’t working, and everybody was panicking. But at a pivotal moment it turned on, and we were all cheering as if we’d won the Super Bowl! I think we’ll find new ways to keep theatre alive, despite technology. Or – in some ways – *because* of technology.

WHEN GETTING A JOB IS MISSION IMPOSSIBLE


Laws to end workplace discrimination against people with disabilities have mostly failed to boost employment. Sociologist David Pettinicchio wants to know why

WHEN KATE WELSH, a 29-year-old artist and educator applies for a job, she faces more than the usual trepidation about whether there will be an interview and an offer of employment at the other end of an inherently competitive process. Welsh (MEd 2017) has a physical disability as well as a chronic illness that flares up from time to time, which means she always has to gauge when, in the process, she should disclose her conditions: in her cover letter or resumé, via a call prior to an interview or even just when she shows up for the meeting.

She also has to investigate whether the venue is genuinely accessible, or just cursorily so. “Arriving at a location that is not accessible is one of the worst things,” says Welsh. “There are so many steps before even getting in the door.”

The reality – borne out by surveys – is that many people with disabilities never get further than an interview. Ontarians with disabilities are almost three times more likely to be unemployed than the working age population as a whole, and tend to earn considerably less when they are hired, says David Pettinicchio, a professor of sociology at U of T Mississauga.

He cites a 2006 Statistics Canada survey that found one in four people with disabilities felt they were denied a job interview because of their conditions. In the U.S., the situation is even more dire.

 Through his research, U of T Mississauga sociology prof David Pettinicchio aims to break down the often-invisible barriers faced by people with disabilities in the labour market



“THE 1990 AMERICANS WITH DISABILITIES ACT IS CONSIDERED TO BE A HIGHLY ROBUST ANTI-DISCRIMINATION LAW, YET ONLY 40 PER CENT OF ALL PEOPLE WITH DISABILITIES IN THE U.S. WORK, AND THEIR EMPLOYMENT RATE HAS ACTUALLY FALLEN STEADILY SINCE THE LAW CAME INTO EFFECT”

The 1990 Americans with Disabilities Act is considered to be a highly robust anti-discrimination law, yet only 40 per cent of all people with disabilities in the U.S. work, and their employment rate has actually *fallen* steadily since the law came into effect.

“The question,” Pettinicchio asks, “is why?”

As it turns out, tracking the contours of hiring and workplace discrimination is difficult because employers either won't admit to it (even on anonymous surveys), may not be conscious of the fact that they're discriminating or aren't aware of the impediments that people with disabilities encounter. “We're not clear how this process of discrimination looks,” he says.

To get a better handle on these invisible dynamics, Pettinicchio, his University of Alberta collaborator Michelle Maroto and a team of graduate students are developing fictitious resumés and cover letters that will be sent this fall to 600 employers in Ontario who have posted job openings online.

Pettinicchio, who has a brother with a cognitive disability, says his team will spend the next two years analyzing the results – teasing out evidence of discrimination in the hiring process from the actual responses of employers, who won't be aware that they're being evaluated. (Companies will be debriefed later about the study.) He suspects that employer attitudes are the most difficult impediment facing people with disabilities.

“I'm not sure policy has done enough to change employers' perceptions,” says Pettinicchio.

Tim Rose would agree with that assessment. After graduating from the University of Nottingham with a master's degree in human rights law, he felt he'd have little difficulty securing a job. But Rose, who has cerebral palsy and spastic quadriplegia, was mostly unemployed for four years before finally landing a position at Magnet, a Ryerson University-based group that supports people who face barriers to employment. (He now works at a financial institution.) “I firmly believe disability discrimination played a huge part in keeping me out of the work force,” says Rose, 32.

In his job with Magnet, he recalls making presentations at conferences about disability and workplace accessibility. The employers “would be nodding enthusiastically the whole time. Then I'd walk off stage and they wouldn't actually hire anyone.”

In other cases, seemingly progressive recruiting policies don't match practice. Andrew Gurza, a disability awareness consultant, cites the instance of a former employer who had initially assured him that they'd be able to work out any accessibility problems that arose. But over the course of several years, Gurza came to see that those promises were often empty. His managers resisted his request to work at home, or would question him as to why he sometimes needed to leave abruptly – typically

because some of the equipment he relies on had malfunctioned.

“It takes a lot of guts to tell your employer that you have to go home because your incontinent device broke,” says Gurza, adding that he eventually quit when it became obvious that the company wasn't prepared to accommodate his needs.

“It's always on you,” adds Welsh, who notes that companies aren't always able to provide complete and detailed information to employees or prospective employees about their accommodation procedures. And many still require or at least expect disabled staff members to be very specific in how they account for absences. “Within this ableist culture, people assume they have the right to know all the details of my disability and illness. I don't necessarily want to share all my details with my boss.”

“It's an education problem,” says Pettinicchio. “How do you link policy to what you want people to do?” His research aims to find ways of breaking down those invisible barriers by unpacking the factors that continue to keep people with disabilities from working.

“We know that employers who've hired people with disabilities are more likely to hire other people with disabilities because the uncertainties – about equipment, accessibility amenities and awkwardness among able-bodied employees – have disappeared,” he says.

“Experience really does help cast off those negative attitudes.” – JOHN LORINC

How did the **UNIVERSE** B E G I N ?

Professor Barth Netterfield's lifelong journey into faith, physics and astronomy

By Barth Netterfield • Illustrated by Jonathan Dyck

*I come from two worlds.
One is the world of science.
The other is the world of faith.*



As a child, I felt the presence of God all around me.

In stars.
In trees.
In insects.



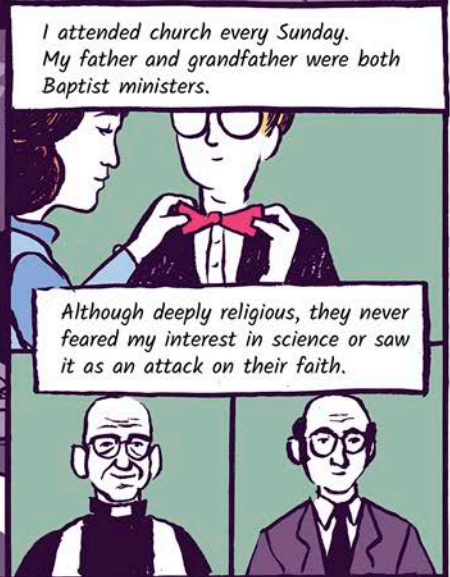
I noticed that the deeper you look at things...



...the more impressive they become.



At the same time, I was fascinated by where things came from and how they worked.



I attended church every Sunday. My father and grandfather were both Baptist ministers.

Although deeply religious, they never feared my interest in science or saw it as an attack on their faith.



Not long before he died, my 91-year-old grandfather encouraged me to study science. He didn't accept all of its findings, but he believed in the process.

In science, you will see the glory of God.



I enrolled at a Christian liberal arts college in Minnesota, where I studied physics – and religion.



I was taught that the Bible was never meant to be taken as a scientific account of how God created the world. God left that up to us to discover – through science.

At grad school, a friend and I often didn't see eye to eye on religion.

If God is real, why doesn't he make himself obvious? Why doesn't he spin my chair around three times right now?



If that happened, would you believe it was God - or highly advanced aliens playing a joke on you?



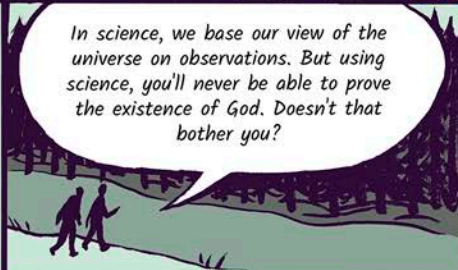
Probably advanced aliens.



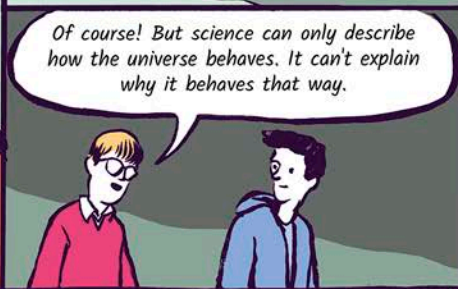
See! No matter what evidence we could find for God's existence, you would say there was some other explanation.



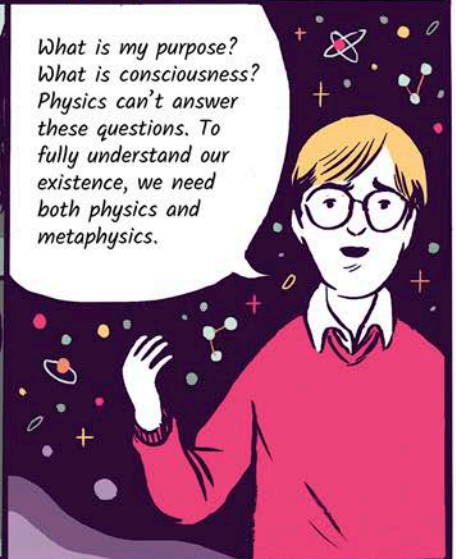
In science, we base our view of the universe on observations. But using science, you'll never be able to prove the existence of God. Doesn't that bother you?



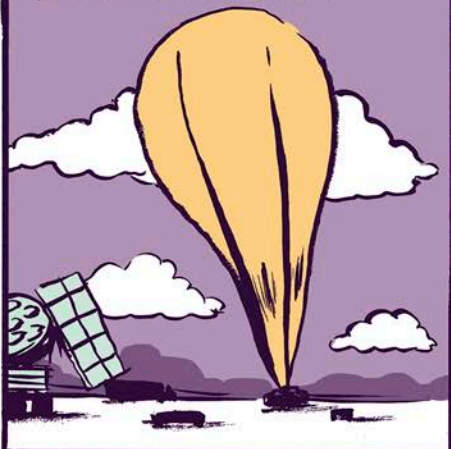
Of course! But science can only describe how the universe behaves. It can't explain why it behaves that way.



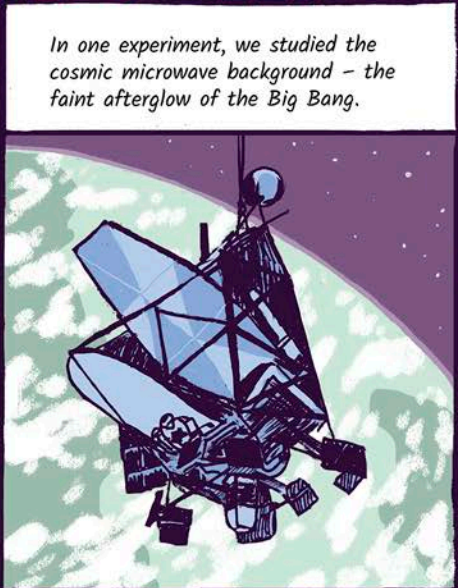
What is my purpose? What is consciousness? Physics can't answer these questions. To fully understand our existence, we need both physics and metaphysics.



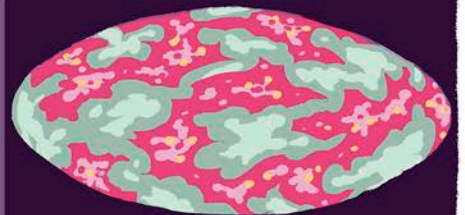
Now as an astronomer I use huge balloons to raise telescopes 35 km above the Earth - to avoid the atmosphere and get a clear view of deep space.



In one experiment, we studied the cosmic microwave background - the faint afterglow of the Big Bang.



Our observations helped put an end to questions about the age, geometry and composition of the universe.



We can now say that the universe is 13.7 billion years old, that it's geometrically flat (which is not the same as flat as a pancake, but that's another story) and that it's made up of ordinary matter, dark matter and dark energy.

But nothing we or anyone else has discovered explains why the universe exists, or what purpose it serves.



And, as I tell my students, there's still so much we don't know. We've observed that the expansion of the universe is accelerating. But we have no idea why. It's as if empty space has hidden energy. This is what we call dark energy.



We know that about 85 per cent of the mass of the universe is made of particles that we can't directly observe.



We call this dark matter, and we don't know much about it, either.

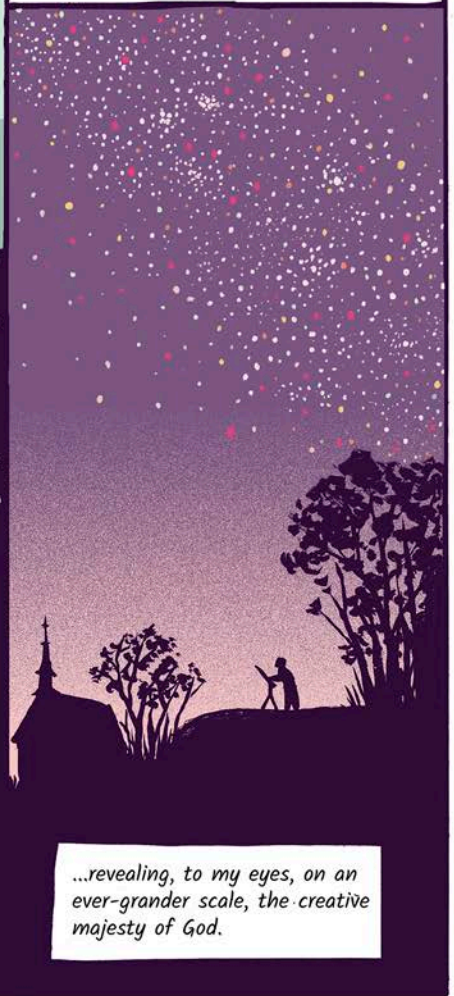
We don't know what happened in the first moments of the universe. And we don't know if our universe is one of many.



What we do know is that, compared to the age of the universe, all of human history is but a moment.



And that the universe is vast beyond comprehension. Our own galaxy, the Milky Way, has a hundred billion stars and billions of planets...



...and the Milky Way is just one of hundreds of billions of galaxies.



As we look deeper and deeper into the universe, peering back to the beginning of time...

...the more mysterious and breathtaking it becomes...

...revealing, to my eyes, on an ever-grander scale, the creative majesty of God.

The background of the advertisement is a photograph of the Rotman Institute building at dusk. The building is a modern structure with a glass facade and a prominent, illuminated, multi-story glass tower. The sky is a deep blue, and the city skyline is visible in the distance. In the foreground, there is a red brick building with a dark roof and a paved walkway leading towards the modern building.

Rotman

MASTER OF FINANCIAL
RISK MANAGEMENT

Fast Track Your Career In Finance In Just 8 Months

The Rotman Master of Financial Risk Management prepares you for in-demand careers in risk management and trading. Providing a combination of theory and real-world application, you will learn from world-renowned faculty to gain a mastery of risk, regulation and financial theory. All students complete a two-month project with a financial organization during the program where you apply this knowledge to a business content.

"My highlight was the Risk Management Project. It was an unforgettable experience. It gave me a chance to learn directly from industry professionals and to develop my own solution to a real-world research challenge."

Agnes Chang, MFRM graduate

CONNECT WITH US:

rotman.utoronto.ca/MFRM | MFRM@rotman.utoronto.ca

THANK YOU FOR HELPING TO REVITALIZE THE HEART OF CAMPUS

**UTAA'S LEAD GIFT TO
THE LANDMARK PROJECT
CONTINUES A TIME-
HONOURED TRADITION**

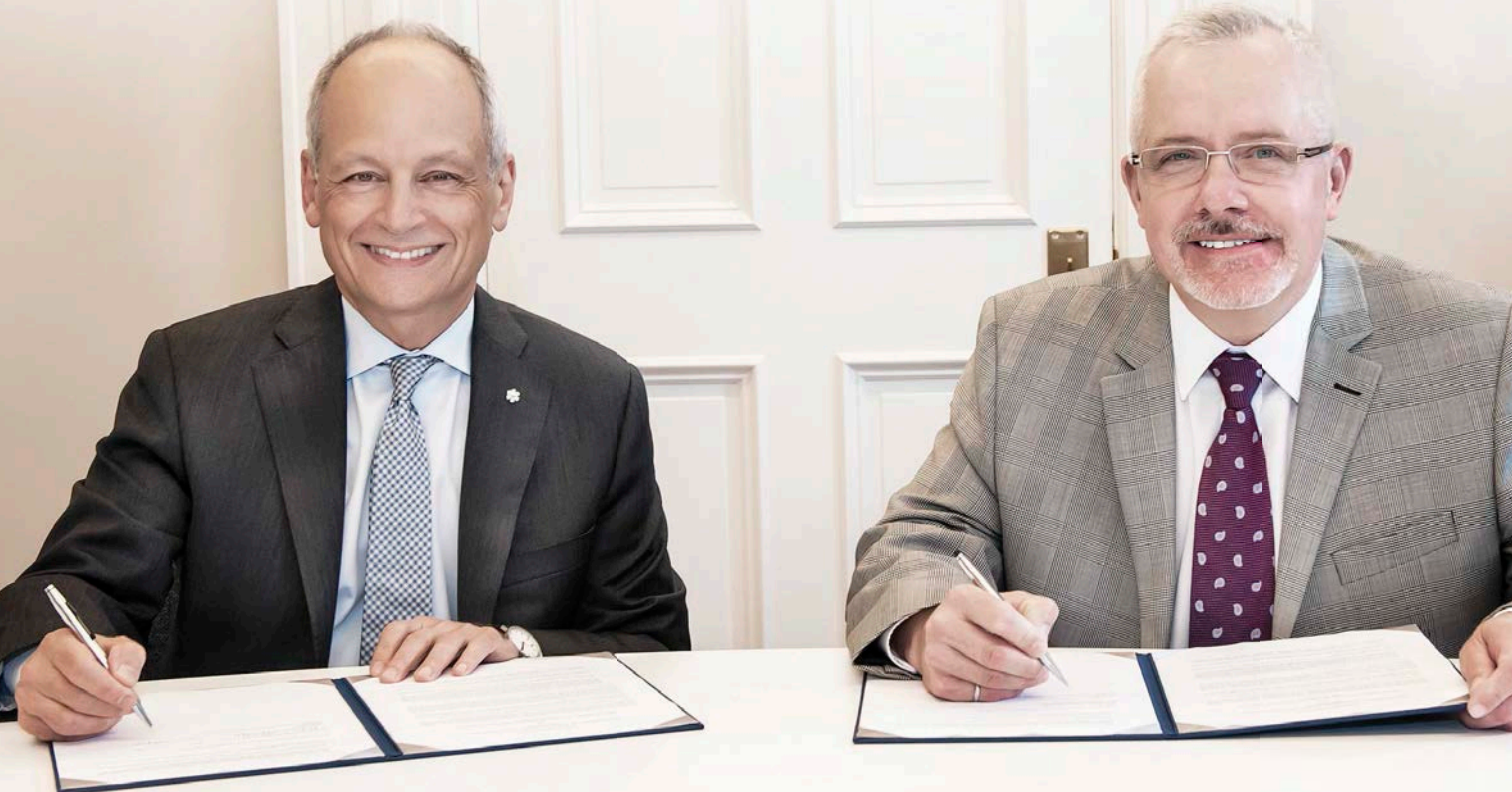
The University of Toronto Alumni Association (UTAA), in partnership with the University, has made a \$2-million lead gift to the Landmark Project—a bold new initiative to revitalize the historic core of the St. George Campus.

The pace-setting gift from the UTAA builds on its proud legacy of supporting some of the University's most ambitious and iconic projects, such as the construction of Convocation Hall, and more recently, its restoration.

The Landmark project is a once-in-a-generation opportunity to reimagine the green spaces that define the St. George campus, and create a more welcoming and cohesive landscape for generations of students, faculty, alumni and residents to enjoy. The University is grateful to the UTAA for helping us launch our campaign for this exciting initiative.

Learn more at landmark.utoronto.ca

Read about the UTAA's gift at landmark.utoronto.ca/UTAA



SAVE THE DATE FOR NEXT YEAR'S REUNION. MAY 30–JUNE 3, 2018

See you at our annual alumni weekend. Next spring, the University of Toronto will celebrate graduating classes with years ending in 3 or 8. We're planning special events for honoured years but all alumni are always welcome. With more than 130 events to choose from, there's something for every U of T graduate at our 2018 reunion.

Calling all alumni to U of T Flagship Events

Wednesday, May 30
SHAKER Classic

Thursday, May 31
LGBTQ Spring Soirée

Friday, June 1
50th Anniversary Ceremony

Chancellor's Circle
Medal Ceremonies for
55th to 80th anniversaries
Stress-Free Degree lectures

Saturday, June 2
Stress-Free Degree
lectures, campus tours
and other events

U of T Alumni Celebration

Alumni BBQ

Kids' Passport to U of T

What's happening at your College or Faculty?

Many U of T colleges,
faculties and departments
host special events for
their own alumni.

Registration for all events
opens in March 2018 at:
springreunion.utoronto.ca

Find out more:

1-888-738-8876
416-978-5881
spring.reunion@utoronto.ca

springreunion.utoronto.ca
[#uoftreunion](https://twitter.com/uoftreunion)



All About Alumni

“Seeing a child experience those little moments in dance that have always made me feel so alive is indescribable”

Jade Ryan of Dance Ability
p. 59



Luksimi
Sivaneswaralingam

The Singer of “Senthoora”

This U of T music grad achieved YouTube fame by giving Indian classical songs a Western twist. Next up: a world tour

SHORTLY AFTER SHE GRADUATED FROM U OF T, in 2015, Luksimi Sivaneswaralingam started sharing her voice on her Instagram account – through “Sunday Singstagrams.” The short clips feature covers of her favourite South Indian songs, showcasing her unique voice – which is both soaring and soft, lilting and powerful. At the time, sharing these musical moments

was mostly a fun way to highlight the culmination of her years of hard work.

Fast-forward to March 2016, when Sivaneswaralingam attended a concert headlined by D. Imman, an Indian composer and singer who works in the Tamil film industry. After the show, she went backstage to take a selfie with him. As she introduced herself, Imman interrupted her. *You look very familiar*, he said. *I think I know your voice.*

He soon realized that he’d seen her one-minute videos on Instagram. Sivaneswaralingam was taken by complete surprise. While she knew that music directors hunted social media for new voices, she never fathomed that any were watching *her*.

A few months later, Imman contacted Sivaneswaralingam: he had a song for her. She soon flew to India to record ▶



U of T Food Services has decreased waste by banning bottled water, introducing eco-trays and lug-a-mugs, and ensuring compost bins abound



Taking Waste off the Menu

U of T grad Lucy Cullen has been named one of Canada's top environmentalists for helping restaurants earn more – by throwing away less

WHEN LUCY CULLEN DISCOVERED a compost bin filled with unopened, unexpired plastic yogurt containers at the restaurant where she worked, she didn't just shake her head and walk away like everyone else. "I couldn't believe it," she says.

➤ "Senthora" for the Tamil-language film *Bogan*, a supernatural thriller about soul-swapping and murder. As of August, "Senthora" had racked up more than 15 million views on YouTube and had hit the top spot on iTunes India. "It still feels like a dream," says Sivaneswaralingam.

Last May, she began teaching at a school in Markham – and, when she started, students with a South Asian background immediately recognized who she was. They quickly spread the word to other students and teachers. "For a whole school to know who I am on the first day," her voice trails off. "It was such a happy moment for me."

When she was just three, her parents started immersing her in South Indian classical music, and Sivaneswaralingam went on to train in Bharatanatyam (a classical Indian dance form traditionally performed by women), veena (an Indian stringed instrument a bit like a lute), piano and, eventually, Western classical vocals. Her house was always filled with music, reverberating with love and joy.

"I emptied each one and sorted them properly."

Cullen (BA 2015 VIC) – recently named one of Canada's Top 25 Environmentalists Under 25 – has been frustrated by this kind of wastefulness since she started working in restaurants at 17. "It's often just accepted as an unfortunate side of the business," she says. Believing there was a better way, in 2016 she co-founded Terus, a Toronto-based business that aims to reduce waste *and* improve profitability in the hospitality sector.

Cullen says she became interested in working in sustainability during trips to Ecuador and Australia, as part of the environmental studies program at U of T. "Both trips gave me a wake-up call about the importance of protecting our planet. It's one thing to read about it, and another to hear the stories from a guide who lives in the Amazon and experiences the realities every day," she says. "I know that conserving land and biodiversity in the Amazon doesn't necessarily directly reflect on the work that I do with restaurants, but it helped me realize I wanted to do what I could to propel positive environmental change."

For Terus's first client, a 25-seat restaurant, Cullen's team diverted 248 pounds of waste from landfill and increased profits by nearly \$11,000 annually. Her strategy? Making and selling mimosas from fresh fruit (oranges and grapefruit) that used to be thrown out after the zest was taken off to garnish cocktails.

"There's still lots to be done. But every time I speak to an industry professional and hear their challenges regarding waste, it makes me motivated and determined to fix the problem." – MEGAN EASTON

Growing up, she regularly entered, and won, music competitions, travelling to London and Singapore to compete. Naturally shy and quiet, Sivaneswaralingam says her early performances helped her to put away her fear and just enjoy the moment. Today, she's an engaging, comfortable performer.

When she started her U of T bachelor of music in voice performance, Sivaneswaralingam says she was working to find common ground between Indian and Western styles. But, over the years, she has found a fusion that felt authentic. She hopes to continue to blend the styles, eventually writing and performing her own songs.

In the meantime, Sivaneswaralingam has performed "Senthora" and other songs across Toronto. Starting in the fall, she will travel internationally – and "Senthora," of course, will be in her repertoire. "It's always great when you hear them singing along with you," she says. "Sometimes I just stick out the mic and say, 'Hey it's your turn, you guys sing it.'" And, of course, her audience knows all the words. – LAUREN MCKEON

OVERHEARD



I am very happy to have a second chance to represent Canada. I have done so for years as an astronaut in outer space and now I have the chance to do so again, but this time on Earth.



Julie Payette (MAsc 1990) during a news conference announcing her appointment as Canada's 29th governor general. Parliament Hill, Ottawa, July 13.



Research by the late U of T engineering professor Ursula Franklin was crucial to halting atmospheric weapons testing in the 1960s

Ray Acheson (left) and Allison Pytlak work on a short video about an anti-nuclear march in New York



International League for Peace and Freedom. “Right now, we are facing a new arms race. Every country armed with nuclear weapons is either expanding or upgrading their arsenal.”

This year, Acheson and her colleague Allison Pytlak (BA 2004 VIC) have been taking part in United Nations treaty talks to ban nuclear weapons. Unlike previous UN treaties that have sought to limit the proliferation and testing of nuclear weapons, this effort seeks to outlaw them. The negotiations involved at least 113 countries and many civil society groups, though no nuclear-armed nations took part. Acheson and Pytlak made recommendations outlining what a strong treaty should include. They also helped organize a women’s march in New York in June to support the prohibition. Their goal: to make nuclear arsenals politically untenable. “Banning nuclear weapons in international law puts them in the same category as chemical and biological weapons,” Acheson explains.

A New Generation Seeks to “Ban the Bomb”

Two U of T grads are taking part in UN treaty talks to outlaw atomic weapons. But not everyone’s on board

IN THE 1980S, hundreds of thousands of people around the world took to the streets to protest nuclear weapons. The issue faded from public view as the superpowers reduced their arsenals, but the threat never went away – and people’s awareness is now growing again, says Ray Acheson (BA 2005 UC), who leads the disarmament program of the Women’s

As part of their work for the league, Acheson and Pytlak (BA 2004 VIC) investigate and criticize excessive military spending, war profiteering and destructive technologies such as weaponized drones and autonomous weapons.

While the U of T grads didn’t meet until 2008 when they were both working in New York, they’ve become a true dynamic duo. As the disarmament program’s only two staff members, they share the workload for most projects. U.S. president Donald Trump’s call for American nuclear supremacy while North Korea tests long-range missiles has prompted more public interest in their work. “For the first time, non-nuclear-armed states and civil society are coming together to do something, even though the nuclear-armed states oppose it,” Acheson says. “The stakes are too high to do nothing.”

– SHARON ASCHAIK

At Home in the World



Noor Naga

“When people ask, ‘Where’s home to you?’ I always have to give them a road map,” says poet and novelist Noor Naga. The 25-year-old was born in Philadelphia, raised in Dubai, educated in Toronto and now lives in Alexandria, Egypt – and the question of belonging is a theme that infuses all of her work.

Recently, Naga’s poem “The Mistress and the Ping” earned her this year’s RBC Bronwen Wallace Award for Emerging Writers, a \$10,000 prize given to writers under 35 who haven’t published a book. The poem is an excerpt from an in-progress novel-in-verse, which explores the spiritual crisis of a young Muslim woman

entangled in an extramarital affair.

Naga (BA 2014 VIC, MA Creative Writing 2016) describes its bittersweet tone as definitively Egyptian: “A sense of humour is really integral to the national character,” she says, on the phone from her grandmother’s house in Alexandria. “This is how we deal with tragedy.”

Though fluent in Arabic, Naga writes only in English, her first language. “I don’t have strong loyalties to any one place, and I think that’s helpful. It allows me to critique different social spaces or political structures without feeling a sense of betrayal.”

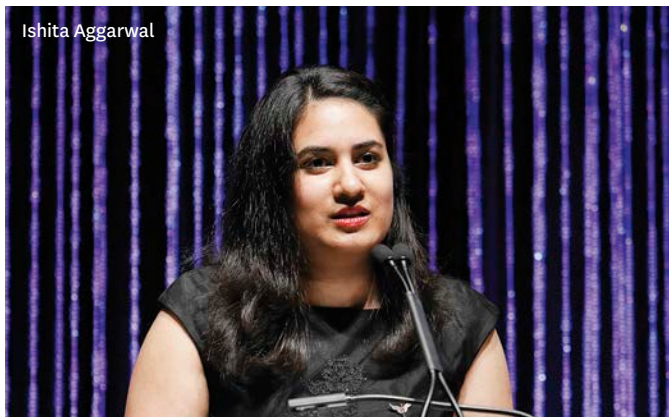
– CYNTHIA MACDONALD



MY DEFINING MOMENT AT U OF T

From Shy to Shining

A YWCA Toronto Women of Distinction Award winner reflects on a pivotal first-year program at U of T



Ishita Aggarwal

IN HIGH SCHOOL, I was shy. When I enrolled at U of T to study biology, I joined its First-Year Learning Communities program, which helped me come out of my shell.

The program’s leaders placed me and other life-science students in the same classes for core courses. I took sessions with upper-year mentors and faculty advisers on how to write exams and email a professor. I also learned how to join research projects and work-study programs in my faculty. First-Year Learning Communities organized social outings as well – the ROM, frozen yogurt, a board game café. The program helped me become more confident and outgoing, and some of my closest friends are people I met in it. I had such a good experience, I chose to mentor students in my third and fourth years.

My First-Year Learning Communities faculty adviser recommended I pursue a diverse science education. It’s one reason I felt comfortable serving as editor-in-chief of the *Journal of Undergraduate Life Sciences* and helping to plan U of T’s first Women in Science and Engineering conference. It’s also why I now enjoy a career as a neurogenetics research analyst. The program played a big role in so much of my growth.

– ISHITA AGGARWAL (BSC 2015), AS TOLD TO SHARON ASCHAIK

Happy Feet

Mallory Ryan was in the first year of her master’s in occupational therapy at U of T when a classmate showed her a video of a ballet class for girls with cerebral palsy. She was immediately captivated, and knew right away that she wanted to teach children – including those with special needs – how to dance.

“I saw it as an incredible way to combine my love for dance with my newfound knowledge of – and passion for – occupational therapy,” says Ryan (MSc OT 2011), who has been dancing since she was three. As she learned more about how difficult it is for children with special needs to get into dance classes, she felt confident that her education had given her “the tools and mindset” to tackle the problem.

In 2010, Mallory and her sister, Jade Ryan (MSc OT 2013), launched the Dance Ability Movement, which provides dance classes for children – including those with special needs and those who use mobility devices. They also offer a class for teens and adults. Six studios across the GTA host the classes, with more studios waiting to start up.

The goal of the Dance Ability Movement is to remove barriers to the joy of movement, says Jade, also a longtime dancer. “Seeing a child experience those little moments in dance that have always made me feel so alive is indescribable.” – MEGAN EASTON



Volunteer Neha Singh (left) and instructor Jade Ryan teach two dancers in their teen and adult class



Andrew Pyper

FIRST PERSON

Hungry for Failure

Defeat might taste like sawdust drizzled with WD-40, but novelist Andrew Pyper has developed a taste for it

TWENTY YEARS AGO, fresh out of law school and an articling stint at a prestigious Bay Street firm, a life was laid out for me. It was a slick-looking life, too: upper six-figured, corner-officed, cottage-and-two-German-cars. But I walked away, moving into a crappy apartment in Peterborough, Ontario, instead. Why? To work as a bartender. To promise myself that I'd never be a lawyer, no matter what. To write a novel.

When people learn this about me they often say it must have required courage. I don't know about that. It sure didn't feel like bravery. In fact, it often felt closer to stupidity, or at least romantic foolishness. But much like the brave and/or stupid things one does in the name of love, it wasn't really a decision at all. Yes, I had to tell my parents I was turning my back on a life of certainty for one in which the only predictable reward was daily servings of self-doubt. And yes, my law school colleagues greeted my plans with expressions of the kind one makes when a friend tells you he's embarking on a marriage whose doom is obvious to all except the groom himself.

But decisions are deliberate, a weighing of Pro vs. Con. What I did wasn't that. It was an act of survival.

I don't mean survival of the physical kind (I don't deserve – and I'm not looking for – the credit given to those who do

superhuman things in the name of forestalling The End). I mean the survival of my inner life. The creative self, the translator of experience, the storyteller. I've never stopped to give it a name. Whatever it was, it had been with me from childhood, a way of being, helping me see. To follow a moneyed, skyscrapered vocation would be to see it perish like the many houseplants I'd picked up over the years and watched turn to crispy sticks from lack of water and sunlight.

Perhaps it's being the child of immigrant parents, or the Presbyterian bloodline – or maybe it's simply the Canadian way – but I've always found more usefulness in failure than success. It's always personal, for one thing. And there's so much of it to choose from!

The writing life, for instance, offers a bountiful feast of failure, as well as every flavour of rejection,

the finest vintages of humiliation and sweet platters of criticism. An editor once declared my new manuscript – to my eyes, the best I'd ever written – dead on arrival. A reviewer advised me to drop the literary thing and take up long-haul trucking. At one of my bookstore signings, the only customer to buy my book was someone who'd mistaken me for a retired hockey player. Each meal taken from the banquet is unique, unforgettable.

But in order to keep that inner life alive, whatever it may be, it's important to stay hungry for ever more failure.

Here's the thing I learned from turning my back on a fancy legal career for a shot at ink-stained perpetual job insecurity: not the self-congratulation that comes with having "made it," but the importance of trying. Had I not finished that novel I wrote living on the last vapours of my student loans and a few bucks slinging drinks, had it not gone on to be published and started me on the bumpy camel ride across the desert that goes by the name of a literary career, I would never have regretted it. Because I tried. Crashing and burning is painful, but it draws a line through an item on your existential bucket list. It nourishes a part of yourself that would otherwise shrivel and starve.

Failure tastes like sawdust drizzled with WD-40 (I know because I've downed a few plates). But I've developed a stomach for the dish, and I certainly don't fear the next serving when it comes. What I fear are the costs of not having a go at the thing that risks failure in the first place.

Maybe that's courage. Or maybe that's just what it is to begin.

Andrew Pyper's (LLB 1995) latest psychological thriller, *The Only Child*, was released in May.



Actor Paul Sun-Hyung Lee, who plays Appa – the husband of Jean Yoon’s character on *Kim’s Convenience* – attended U of T’s drama program between 1991 and 1994

Jean Yoon



Did you act a lot in those days? At the time, being Asian was an issue. When I was calling about auditions, I got into the habit of announcing “I’m Asian – if that’s a problem, then let’s not bother.” Because I did walk into a bunch of auditions for student shows of classical pieces, where it was clear from the looks on their faces that there was no way they were going to cast me.

I hope that things have improved since then...

It’s getting better all the time. But in order to act, I had to put in 10 years doing advocacy. Pretty much every artist of colour back then had to. Coming of age in the ’80s, it was not possible for us to simply practise our art. We knew that casting actors of colour in classical pieces was, on its own, a fruitless enterprise. What we needed to do was start telling our own stories...leading to the creation of a new repertoire of works, new genres and styles, and a wider audience who find themselves reflected in the works on our stages.

One great new voice out there is Ins Choi, who initially wrote *Kim’s Convenience* as a Fringe play. And you’ve been playing Umma right from the start. What were those early days like?

I’d never done a play with Korean actors playing all of the Korean characters before.

It was mind-blowing because the actors would do some kind of facial tic or vocal gesture that would be so bang-on and so Korean. And everybody would lose it, because we realized that this was part of a shared experience. It wasn’t just Paul [Sun-Hyung Lee] doing his Dad, or me doing my Mom.

How has Umma changed from play to TV show? I’m grateful that the role has been radically expanded; in the play she’s more resigned than anything. But on TV she’s so active, so hopeful, she’s got her own activities with the church. She’s clearly still got aspirations as a woman.

One thing I love about the show is how everyone in the family gets equal time: not just the glamorous young adults, but their middle-aged parents, too. There are a number of women in the writers’ room, and one in particular, Anita Kapila, was instrumental in raising the notion that Umma and Appa probably still have sex. I mean, they’re not that old! Just the fact that they have bedroom scenes is great – and I love their little interactions at the end of the day.

60 SECONDS WITH

Jean Yoon

Queen of the corner store

On the hit CBC comedy *Kim’s Convenience*, starting its second season this fall, **Jean Yoon** (BA 1989 Innis) plays Umma, the warm and funny matriarch of a Korean immigrant family in Toronto. But before that, she spent many years as a playwright, stage actor and tireless advocate for equity in theatre. Here, she shares her journey with **Cynthia Macdonald**.

I’m sure we attended U of T at the same time. I remember you doing a one-act play on campus, way back in the ’80s. Yes! I won the St. Mike’s drama prize for a play called *The Barber*. I wrote and directed it. Don McKellar was in it, and some other people – including a punk cellist, who created a dark soundscape. I built the set myself, too. I’ve never been that interested in directing, though. It’s way more fun to act.

THANK YOU!

Your donations
to U of T Magazine
make a difference



**THANKS TO YOUR
GENEROUS SUPPORT,**
U of T Magazine is able
to keep alumni and
friends around the world

connected with today's University of Toronto. By helping us to defray our print and mailing costs, you support U of T's mission to discover, educate and inform.

In recent issues, we've shared with you exciting plans for the renewal of King's College Circle, efforts made by U of T scholars to preserve Indigenous languages, tips for success from some of Canada's top entrepreneurs, and gene-editing research that could lead to new treatments for hereditary diseases.

Inside each issue, you'll find coverage of the university's latest research findings, events on campus, notable alumni and the big ideas that make U of T such a fascinating place.

In the past five years, the Canadian Council for the Advancement of Education and the U.S.-based Council for Support and Advancement of Education have recognized *U of T Magazine* for excellence in writing and design with 14 awards, including Best Magazine.

We could not have achieved this without your help. Thank you for reading *U of T Magazine*, and thank you for your continued support.

If you would like to join other alumni in contributing to *U of T Magazine*, please visit magazine.utoronto.ca and click on "Support Us."



UNIVERSITY OF
TORONTO

**VALERIYA IS
EXCELLING
AT U OF T.**

**AND HELPING
OTHERS DO
THE SAME.**

Legacy giving makes this possible. Valeriya Mordvinova (BSc 2017 WDW) is a recent recipient of the Governor General's Silver Academic Medal – one of the most prestigious academic awards a U of T student can receive. When she starts her master's in economics at U of T, she'll carry on her commitment to fellow students in her new role as a teaching assistant.

Leave a bequest to the University of Toronto in your will and help scholars like Valeriya achieve their remarkable potential.

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

BOUNDLESS





Bernard Etkin, dean of the Faculty of Applied Science and Engineering, points out a feature of the Link flight simulator to a fan

FLIGHT OF FANCY

1973

A young dreamer enjoys a test drive on U of T's flight simulator

The intensity of focus in the eyes and the firmness of the grip say it all: this is no simulated flight in this boy's imagination. He's at the controls, and he's going places.

The Institute for Aerospace Studies' Link flight simulator was a popular attraction at the Faculty of Applied Science and Engineering's centennial open house in October 1973. The institute had recently acquired the trainer for the undergraduate aerospace lab to provide practical flight experience for students, says Professor Emeritus Lloyd Reid of the Institute for Aerospace Studies.

Invented by American entrepreneur Edwin Link and first sold in 1929, the basic simulators were used to train private and military pilots until the 1950s. "The cockpit cabin has room for one, with all the primary flight controls and instruments," says Reid. The U of T model was used

to train pilots for pleasure flying, with basic motion cues – such as tilting downward or rolling side to side – based on the operator's flying skills.

Bernard Etkin, a professor with the Institute for Aerospace Studies and a renowned aerodynamics expert whose research helped develop numerous aircraft, demonstrated the Link Trainer at the open house.

The institute now houses a flight simulator that provides a full range of motion cues and can incorporate virtual reality in its simulations. It allows researchers to measure pilots' performance while flying simulations of new aircraft designs.

But the Link Trainer still resides in the undergraduate lab – a piece of aviation history and a reminder of the enduring dream of taking flight. – MEGAN EASTON

Giving back can be simple, one eligible purchase at a time.

Let your University of Toronto MBNA Rewards Mastercard® credit card give back to you and to your school at the same time.



Earn MBNA Rewards points redeemable for cash back, brand-name merchandise, international travel, gift cards from participating retailers, restaurants and even charitable donations.‡

- Earn **1 MBNA Rewards point for every \$1** spent on eligible purchases‡
- Receive **1,000 bonus points**^{††} after your first eligible purchase
- Enjoy the added security of **Purchase Assurance**[™], offering coverage for the first 90-days from the date of purchase against loss, theft or damage
- Take comfort in **Extended Warranty Benefits**[™] for up to an additional year on most new purchases made with your MBNA credit card
- **Every eligible purchase** benefits student and alumni programs at University of Toronto‡

See how fast your points can add up

Type of Purchases	Monthly Expenses	Monthly Points	First-Year Points
Gas	\$500	500	6,000
Groceries	\$600	600	7,200
Utilities	\$500	500	6,000
Merchandise	\$400	400	4,800
Subtotal	\$2,000	2,000	24,000
Bonus Points ^{††}			+1,000
Potential first-year total (Redeemable for \$250 cash back and more[§])			25,000

For illustrative purposes only. Actual rewards earned will depend on individual eligible purchases

Learn more today

Visit creditsvp.com or call **1-877-428-6060**[§]
Use priority code **CRPU01**

Call us Monday – Friday 9 a.m. – 9 p.m.
Saturday 10 a.m. – 6 p.m. Eastern Time

mbna



[‡] These are highlights of the credit card rewards program (the "Program") associated with this credit card account. Points will be awarded on eligible transactions charged to your account as set out in the Program terms and conditions. Complete terms and conditions describing Program eligibility, accrual and redemption of points, and other important conditions, limitations and restrictions will be sent after your account is opened. Please read the terms and conditions carefully upon receipt.

^{††} To qualify for this offer, an applicant must be approved for the specific credit card account described in the offer. The account must be used for at least one eligible transaction that is not subsequently rescinded, the subject of a charge back request or otherwise disputed. Please allow 8-10 weeks from the transaction date for bonus points to be posted to your points account. Limit one-time bonus point offer (no cash value) per new account. This promotion is offered by MBNA and may be amended or cancelled at any time without notice.

[™] Certain limitations and exclusions may apply to this benefit and others described in the certificate of insurance sent soon after your Account is opened

[§] By telephoning to apply for this credit card, you consent to the collection, use and processing of information about yourself by MBNA, its affiliates and any of their respective agents and service providers, and to the sharing or exchange of reports and information with credit reporting agencies, affiliates and service providers in relation to processing your application and, if approved, administering and servicing your account. You also acknowledge that the account, if approved, will not be used by any third party other than a third party specifically designated by you, and then only in accordance with MBNA policies and procedures then in effect.

Information is current as of July 2017 and is subject to change.

The Toronto-Dominion Bank is the issuer of this credit card. MBNA is a division of The Toronto-Dominion Bank.

All trade-marks are the property of their respective owners.

©MBNA and other trade-marks are the property of The Toronto-Dominion Bank.



UNIVERSITY OF
TORONTO

PM40065699

VOLUME 45 NO. 1
MAGAZINE.UTORONTO.CA

What's Your City Doing for You?

Where we live affects all aspects of our lives. Sign up for a free online course designed exclusively for U of T alumni. Taught by world-leading urbanist and U of T professor **Richard Florida**, “The City and You: Find Your Best Place” explores why cities matter and how to pick the right city for you. The course runs from Sept. 25 to Oct. 27.

To learn more, visit uoft.me/mooc2017.