


The Reluctant CEO Canada Goose's Dani Reiss / UTSC at 50 A unique identity / Heart Health A boon for cardiac care
Voyage into Ice Images from the Arctic / Time Zero The universe's first moments / Thank You to Our Donors

UofT Magazine

WINTER 2015


A woman in a blue dress is walking down a modern staircase. The staircase has grey steps and a bright pink wall. She is carrying a white pillow. The background shows a dark ceiling and a wooden railing.

From Dream to Reality

Canada's next billion-dollar tech start-up might just come from U of T

WHAT CAN PICASSO TEACH THE BUSINESS STUDENT?





Taking education beyond the classroom in boundary-pushing, unexpected ways.

For a U of T business student, the best career coach may be an alum who majored in something completely different. A mentor who is also an artist might be just the volunteer to help an already creative thinker develop his entrepreneurial talents. By purchasing U of T affinity products, you're providing these opportunities for U of T students to take their learning to surprising new places.

What exactly are affinity products? Value-added services like the insurance options offered by Manulife Financial. The revenue generated supports mentorship programs, environmental initiatives, music, theatre and the arts for students and alumni alike. More than 120,000 alumni and friends now take advantage of affinity products, helping U of T students explore their boundless potential.

www.affinity.utoronto.ca

 **Manulife Financial**
| For your future[®]





"Or you could just apply by March 31, 2015."

ALUMNI

HEALTH & DENTAL INSURANCE

You don't have to turn back time to get last year's rates.

**Dental Care • Vision Care • Prescription Drugs
Massage Therapy • And Much More**

Visit healthplans101.ca/utoronto or call toll-free
1 866 842-5757 for more information.

SAVE!

with **2014** rates
for one more year.*



 **Manulife**

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 license. Exclusions and limitations apply.

© 2014 The Manufacturers Life Insurance Company (Manulife). All rights reserved.

Manulife, PO Box 4213, Stn A, Toronto, ON M5W 5M3.

*Effective date of coverage must be on or before April 1, 2015.

Winter 2015

Volume 42, No. 2



40 Voyage Into Ice

Daniel Kukla's photographs ponder the quiet, stunning North

BY CYNTHIA MACDONALD

26 From Dream to Reality

Canada's next billion-dollar tech start-up might just come from U of T

BY JOHN LORINC

34 The Reluctant CEO

Arts grad Dani Reiss wanted to become a writer, then realized there was more than one way to tell a story

BY MARCIA KAYE

Editor and Manager

Scott Anderson

Acting Deputy Editor

Janet Rowe

Art Direction and Design

The Office of Gilbert Li

Editorial and Advertising Assistant

Jessica Lay

Co-Publishers

Tanya Kreinin, Acting Senior Executive Director, Advancement Communications and Marketing

Barbara Dick, Assistant Vice-President, Alumni Relations

Editorial Office

T (416) 978-0838, F (416) 978-3958
uoft.magazine@utoronto.ca

Advertising Inquiries

T (416) 978-0838, F (416) 978-3958
jessica.lay@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 320,000, is published quarterly by University Advancement. All material is copyright © 2014 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

I knew from kindergarten onwards that I would be an entrepreneur. There was never a question.

– Hanna Janossy, a master's student in industrial engineering and the co-founder of Syncadian, p. 29



58 Urban sleuth Robyn Yates Cameron designs historical scavenger hunts



21 A telescope being launched from Antarctica may shed light on the universe's first moments



9 The largest private donation in Canadian health-care history will bring together the strengths of Sick Kids, UHN, and U of T in personalized genomic medicine, tissue engineering and advanced cardiac care to address heart failure across the lifespan

3 Letters Outstanding Journalism

4 President's Message Partners in Success

6 Calendar A Story of Canadian Art

9 Life on Campus A Boon for Heart Health

19 Leading Edge Northern Discovery

45 Boundless Gratitude 2014 Donors

53 All About Alumni Breaking News

60 Time Capsule UTSC TV

Letters



Diversification may be a great idea for U of T and a few other large research-intensive universities, but it's bad news for smaller universities

MEREDITH S.G. HAWKINS
PhD 1994, LETHBRIDGE, ALBERTA

Outstanding Journalism

I just spent an enjoyable half-hour with the Autumn issue (I'm a fast reader) – and I'm not even a U of T grad. Much of that time was with “Changed by War.” U of T has a rich heritage, and you made the most of it. Particularly captivating was “Forgotten Warriors” and “Farmerettes Help at Home” with those so-true *Toronto Star* stories. And imagine having the shrapnel-scarred notebook of Harold Innis as a visual draw.

I'll show the piece about cyberbullying to my grandnieces and grandnephews – *if* I can get them to put down their electronic devices long enough! Keep up the outstanding journalism.

PETER CALAMAI
OTTAWA

The Wired World of Teens

“The Bully Who Is Everywhere” (Autumn 2014) by Cynthia Macdonald is a timely, thoughtful, well-researched and thorough treatment of cyberbullying, and I plan to share it with a number of family members and friends.

I like to think of myself as pretty aware of social issues and reasonably tech-savvy. I see to a certain extent how my children and grandchildren make use of all forms of technology, but I was struck by the sentence, “Kids also think parents don't understand how wired their world truly is, *and they are right.*”

Macdonald, quoting Faye Mishna, goes on to say: “Parents and adults in general often overlook the Internet's positive effects.” This too is true.

Thank you for including this excellent article and know that its contents continue to spread in ever-widening circles.

BEVERLEY AGOLINI-VEITCH
MSW 1962, MULLENDORF, LUXEMBOURG

Cyberbullying's Impact

As a U of T graduate, and as someone who has taught education law at OISE since January 1982, I found Cynthia Macdonald's article on bullying and cyberbullying right on (“The Bully Who Is Everywhere,” Autumn 2014). Beyond Bill C-13, many of the provinces have passed legislation to address this issue, primarily within the context of education laws. For those interested in this subject, the Supreme Court of Canada decision in the fall of 2012 – *AB v. Bragg Communications Inc.* – is imperative reading. Justice Abella rightly addresses the impact of cyberbullying on young people.

JUSTICE MARVIN A. ZUKER
BA 1963 UC, MED 1973, TORONTO

The Cost of Diversification

Diversification may be a great idea for U of T and a few other large research-intensive universities in Canada (“A Big Step Forward,” Summer 2014). But

it's bad news for smaller universities in each province, for the PhD students who teach in them and for the students who attend them.

I teach in a small, primarily undergraduate university that is ranked third in Canada in its category. In 2012, Research Infosource named it “Research University of the Year” in its category. But there is a larger research-intensive university in my province. If diversification were instituted here, most of the research money would go to the larger university. Funding cuts to my university would strangle our research and graduate programs. If our research suffers, so will the quality of the education we provide.

Is boosting the reputations of a few research universities worth a diminished quality of education for most Canadians?

MAUREEN S. G. HAWKINS
PhD 1994, LETHBRIDGE, ALBERTA

President Meric Gertler responds:

Professor Hawkins raises important concerns. But to clarify, I wrote of public policies supporting *differentiation* among post-secondary institutions, not *diversification*. As stated in Ontario's new policy, differentiation is intended, among other things, to “help focus the well-established strengths of institutions.” It would build on our existing diversity, by allowing each institution to play to its strengths, thereby offering students a *more clearly articulated* range of *strong options*.

It remains to be seen how the new policy will affect funding, but in general the policy and its resulting Strategic Mandate Agreements have been well received across the spectrum of Ontario's universities.

Partners in Success

To maintain its top-20 global standing, U of T needs more funding from the province



Measured by major global university rankings, research productivity and impact, and the profile of our alumni, the University of Toronto is Canada's leading university and one of the world's best. We combine excellence with accessibility more successfully than virtually any university in the world.

Yet we achieve these results with funding per student that ranks among the lowest of any Canadian or American peer university. Ontario sits last among the provinces in per-student public support for universities. Compared with our public and private peers in the U.S., the difference is even more startling. The 19 universities ranked above us in the Times Higher Education World University Rankings benefit from operating funding per student on average seven times – and as much as 14 times – what is available to U of T. The five that placed just below us have on average more than three times per student what U of T has. Considering what this revenue is used for – student financial aid, recruiting and retaining top faculty, and providing excellent facilities – per-student funding is a matter of some consequence.

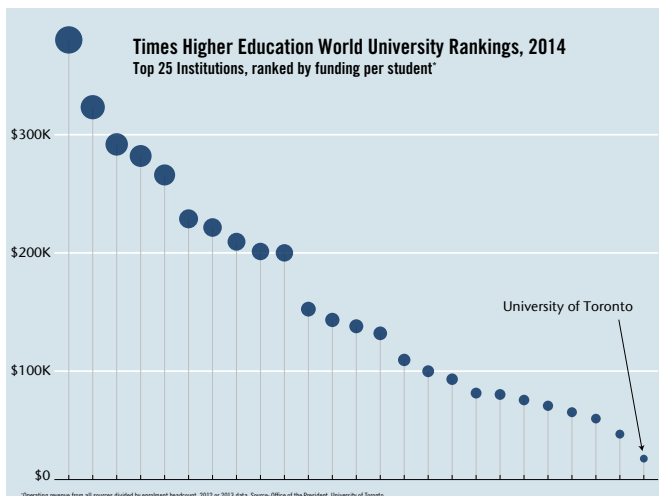
In light of these extreme financial challenges, U of T truly defies gravity. Without the incredible vision and generosity of many thousands of benefactors large and small, the university would have been in deep difficulty long ago. These alumni and friends will remain crucial to our continued

success (including our ability to ensure access to all qualified students, regardless of their financial situation). But the government will remain an indispensable partner, too. This is as it should be, since everyone in Ontario benefits from a strong post-secondary education system. By providing advanced education to our next generation, universities build our capacity for innovation, and help ensure our shared economic and social prosperity. In fact, the social returns of higher education are substantial. Universities serve as crucial portals of opportunity – in Toronto especially, where so many people have come from other countries to contribute their talents and to build a better life.

As competition in the global knowledge economy intensifies, however, Canadian jurisdictions will need to invest more – or risk losing ground. Although U of T ranked 20th in the world (and first in Canada) again this year in the Times rankings, all other Canadian universities dropped, and McMaster University was the only other institution in Ontario to place in the top 100. This isn't a matter of losing stature – it is a question of whether we can maintain and strengthen the culture of innovation on which our prosperity depends. To that end, governments around the world are investing heavily in post-secondary education. For example, since 1995, China has made massive investments, with the result that per-faculty research funding (at purchasing power parity) for China's most globally competitive universities, the C9 group, has reached U.S. Ivy-League levels.

In Ontario, the provincial government deserves credit for making investments in post-secondary education to support enrolment growth in a time of fiscal restraint and economic uncertainty. And, through its differentiation policy, it has taken a major step toward enabling each institution to play to its strengths, thereby improving the system as a whole. If funding is allocated accordingly, taxpayers will receive greater value from existing per-student funding. At some point soon, though, we must face the reality that we need not only more efficient funding, but more funding full stop.

For a long time, provincial support was U of T's largest source of operating revenue; by 2009, tuition fees overtook it. The province now provides a mere 32 per cent of the university's annual operating revenues; tuition and other



fees make up 55 per cent and other revenues, 13 per cent. Adjusted for inflation, per-student funding for Ontario universities has been declining since 1992.

Naturally, students and parents tend to focus on rising tuition fees, and their effect on accessibility. But there is a common misunderstanding that fees and accessibility are inversely related. In fact, since 2005, for every one dollar increase in tuition per domestic undergraduate at U of T, the university has increased its needs-based student aid by \$1.07 per aid-receiving student. Thanks in part to generous donations from alumni, U of T is the Canadian leader in ensuring accessibility, providing some \$165 million per year in student financial support. Nearly one half of our undergraduates receive financial aid. When you factor in grants from the Ontario Student Assistance Program, the Ontario Tuition Grant, and additional needs-based student aid from U of T, the actual tuition fees paid by these students amount to, on average, one half of the tuition “sticker price.” It’s worth emphasizing that financial aid from the programs mentioned above comes in the form of *grants*, not loans.

U of T and its sister institutions have long advocated for a higher per-student operating grant from Queen’s Park

in order to sustain the quality of university education in Ontario. I admit it seems that any such increase is a long way off, especially while the province is running a budget deficit. Nevertheless, to continue to provide an excellent, accessible education, U of T, like all post-secondary institutions in Ontario, needs significantly increased funding per student. It’s important, therefore, that the government give universities the flexibility to use the resources they *do* have more efficiently, according to each institution’s strengths and priorities. Recent moves toward greater differentiation are a good start. The commitment to additional funds for deferred maintenance in the province’s 2014 budget is also welcome. And we look to the government at least to maintain its existing level of investment in the university sector. The hard work and brilliance of our faculty, staff and students, and the vital support of our alumni and friends, give us reason to hope that U of T will continue to defy gravity. We also hope that, when Ontario is in a position to increase its contribution, our partners at Queen’s Park will do so.

Sincerely,
Meric Gertler



MARCEL FORTIN
Map and Data Librarian
Geography and Information Lecturer
Spatial Data Mapper

“I love teaching and helping people out. The Map and Data Library in Robarts was created with donor support—its facilities are superb and essential to my work with students and faculty throughout U of T.”

Your gift to U of T Libraries helps us nurture tomorrow’s leaders today.

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



UNIVERSITY OF TORONTO
LIBRARIES

BOUNDLESSKNOWLEDGE

Calendar

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



Arthur Lismer, *Isles of Spruce*, 1922.
From the Hart House Art Collection

JANUARY 15 TO MARCH 7

A Story of Canadian Art: As Told by the Hart House Art Collection

The University of Toronto Art Centre presents a major, national touring exhibition showcasing 41 works by renowned artists such as Emily Carr, Lawren Harris, David Milne and Tom Thomson, drawn from the celebrated Hart House Art Collection. Come to the free opening reception, 6 p.m. January 15, or enjoy the show at your leisure until March 7.

Free. Tues. to Sat. 12-5 p.m. (Wed. to 8 p.m.) 15 King's College Circle. For info: [416-946-8687](tel:416-946-8687) or utac.utoronto.ca.

Alumni

January 14 U of T Mississauga

Get Hired Fair. Students and recent grads can learn about summer and full-time opportunities. Free. 10 a.m. RAWC Gym, 3359 Mississauga Rd. 905-828-5477, uoft.me/hired

January 14, February 11, March 11 The Toronto Plaza Hotel

Skule Lunch & Learn Speakers Series. Engineering alumni share camaraderie while enjoying engaging lectures. \$30. 12 p.m. 1677 Wilson Ave., North York. 416-978-0380

January 18 University College **The Dog Days of Winter.**

Bring your dog and meet fellow UC alumni at the off-leash park in the University College quad. Free. 2 p.m. 15 King's College Circle. 416-978-7416

January 28 and 29 Florida

Jan 28: Miami Alumni Reception.
Jan 29: Naples Alumni Reception.
Meet your fellow alumni in the Sunshine State. Times and locations TBA. For details: 416-978-1966, deirdre.gomes@utoronto.ca.

**February 18
St. Andrew's Club
SHAKER Professional – The Architecture of Choice.** Prof Dilip Soman on designing environments to help consumers make better choices. Followed by an alumni networking reception. Free. 6 p.m. 150 King St. W, 27th floor. uoft.me/youngalumni

**February 21
Faculty of Medicine
Daffydil – Alumni Night.** An evening of laughs and memories before the Daffydil performance. Free (Daffydil tickets sold separately). For details: morgan.tilley@utoronto.ca.

**February 24 to 25
San Francisco/Paolo Alto
California Engineering Alumni
Events.** For details: 416-978-4274.

**March 25
Faculty Club
SHAKER Professional – The Etiquette of Networking.** A networking seminar tailored to young professionals with consultant Leanne Pepper. Free. 6 p.m. 41 Willcocks St. uoft.me/youngalumni

Exhibitions

**January 5 to February 14
Doris McCarthy Gallery
TEMPERAMENTAL.** Intermedial, multisensory works reflect contemporary queer cultural production. Free. Mon.–Thurs. 11 a.m.–4 p.m. (Wed. to 8 p.m.), Sat. 12–5 p.m. 1265 Military Trail. 416-287-7007

**January 14 to March 1
Blackwood Gallery
Inside.** With artists Mark Bell, Pierre Dorion, Dorian FitzGerald, Sara Hartland-Rowe, Maria Hupfield, Denyse Thomasos, Rhonda Wepler and Trevor Mahovsky. Curated by John Armstrong. Free. Mon.–Fri. 12–5 p.m. (Wed. to 9 p.m.), Sat.–Sun. 12–3 p.m. Opening reception Jan 14, 5–8 p.m. 3359 Mississauga Rd. 905-828-3789

**January 26 to May 1
Thomas Fisher Rare Book Library
As it is Written: Judaic Treasures from the Thomas Fisher Rare Book Library.** Manuscripts, prints and more. Free. Mon.–Fri. 9 a.m.–5 p.m. (Thurs. to 8 p.m.). 120 St. George St. 416-978-5285

**February 25 to April 11
Doris McCarthy Gallery
Another Perfect Day.** Janet Werner's painted portraits fictionalize time, place and memory through exaggeration and distortion. Free. Mon.–Thurs. 11 a.m.–4 p.m. (Wed. to 8 p.m.), Sat. 12–5 p.m. 1265 Military Trail. 416-287-7007

Catch Dave Liebman and the University of Toronto Jazz Orchestra in concert, February 26 at Walter Hall.



Lectures and Symposia

January 7 to March 25 Faculty Club

Senior College Weekly Program. Presentations and discussions. Free. 2 p.m. every Wed. 41 Willcocks St. 416-978-7553. Register at: faculty.utoronto.ca/arc/college.

January 29 Campbell Conference Facility International Criminal Law at the Crossroads.

With James Stewart (LLB 1975) of the International Criminal Court and Richard Dicker of Human Rights Watch. \$10. 6 p.m. 1 Devonshire Place. ihrp.law.utoronto.ca/page/speaker-series

February 13 Robert Gill Theatre

Writing in her/story. Panel discussion featuring actor Sylvia Milo and composer Nathan Davis ("The Other Mozart"). Free. 2 p.m. 214 College St., 3rd floor.

February 23 Old Victoria College Women in Early Modern Medical Science: Professional Practice and Social Boundaries.

With Sharon Strocchia, Tamar Herzig, John Christopoulos, Elizabeth Smyth and Nicholas Terpstra. Free. 3 p.m. 73 Queens Pk. Cres. E., Alumni Hall. crs.info@vicu.utoronto.ca

February 24 to March 24 Daniels Faculty

Lecture Series. Free. 6:30 p.m. 230 College St., Rm 103. 416-978-2253. **Feb. 24:** Patricia Patkau, whose practice integrates architectural, urban, social, environmental and cultural concerns. **Mar. 10:** Jimenez Lai of Bureau Spectacular on comic books, furniture, super-furnitures, architectural theory and experimentation. **Mar. 24:** Shane Williamson, a professor at the Daniels Faculty and partner in the architectural practice of Williamson Chong.

**March 4
University College
R.K. Teetzel Lectures in Architecture.** Carmen C. Bambach of the Metropolitan Museum of Art on "Leonardo, Michelangelo, and the Question of the Unfinished in their Art." Free. 4:30 p.m. 15 King's College Circle, Rm 140. 416-978-7416

Music

**January 6
Walter Hall
New Orford String Quartet Concert.** Jonathan Crow and Andrew Wan (violin), Eric Nowlin (viola), Brian Manker (cello). Tickets \$40 (seniors \$25, students \$10). 7 p.m. 80 Queen's Pk.

**January 28
Walter Hall
Film Composer Skills: Not Available
From Any Software Manufacturer.** With Richard Bellis: former child actor, touring rock-'n'-roll music director, Las Vegas conductor and now, award-winning Hollywood composer. Free. 5:30 p.m. 80 Queen's Pk.

**January 30 to February 1
Campbell House Museum
Footsteps in Campbell House.** Our annual student composer project offers a unique operatic experience in this extraordinary landmark home. \$20. Fri.–Sun. 2 p.m. and Fri.–Sat. 8 p.m. 160 Queen St. W. 416-597-0227, ext. 2

**February 12
Walter Hall
Atar Arad Concert.** Includes the presentation of the Lorand Fenyves Resident Program medal and music by Bach and Arad. Tickets \$40 (seniors \$25, students \$10). 7 p.m. 80 Queen's Park.

**February 26
Walter Hall
Dave Liebman and UTJO Concert.** Come listen to the John and Claudine Bailey Visitor in Jazz. Tickets \$20

(students \$10). 7:30 p.m. 80 Queen's Pk. 416-408-0208

**March 12 to 15
MacMillan Theatre
Opera: Postcard from Morocco.** Six disparate characters intersect in a train station. Tickets \$40 (seniors \$25, students \$10). Thurs.–Sat. 7:30 p.m., Sun. 2:30 p.m. 80 Queen's Pk. 416-408-0208

Special Events

**February 5 to 7
Various Locations
FOOT 2015 (Festival of Original Theatre).** This conference presented by the Centre for Drama, Theatre and Performance will bring together art, activism and scholarship in an attempt to queer traditional understandings of theatre and performance studies. For details: Foot2015.wordpress.com.

**March 11 to 14
Hart House Theatre
Mar. 11: Skule Nite Reception.** Mix and mingle before the big show put together by engineering students. Price TBA. 6 p.m. **Mar. 11 to 14: Skule Nite 15.** The world famous engineering musical and sketch comedy revue. Price TBA. 8 p.m. nightly. 7 Hart House Circle. For details: 416-978-4941.

**March 16 to 20
St. George Campus
Jr. DEEP at March Break.** Hands-on science and engineering program for students in Grades 3 to 8. \$280. 9 a.m.–4 p.m. daily; free supervision provided 8–9 a.m. and 4–5 p.m. To register: outreach@ecf.utoronto.ca, 416-946-0816.

Sports

**February 26 to March 1
Goldring Centre
CIS Women's Volleyball Championship.** The University of Toronto welcomes the top teams in the

country at the brand new Goldring Centre for High Performance Sport. Time TBA. 100 Devonshire Place. Tickets: varsityblues.ca/tickets.

Theatre

**January 16 to 31
Hart House Theatre
Jesus Christ Superstar.** This epic rock-'n'-roll musical contains some of the most memorable music of Andrew Lloyd Webber's career. Three week run. Week 1: Fri.–Sat, 8 p.m. Week 2: Wed.–Sat., 8 p.m. Week 3: Wed.–Sat., 8 p.m. and Sat., 2 p.m. Postshow chats: Jan. 17 and 22. Preshow chat: Jan. 31, 1 p.m. Adults \$28, seniors \$17, students \$15 (students \$10 every Wed., alumni \$17 every Thurs.). Tickets: 416-978-8849, uofttix.ca.

**February 14 to 15
Luella Massey Studio Theatre
The Other Mozart.** The true and untold story of Nannerl Mozart, the sister of Amadeus and a prodigy, keyboard virtuoso and composer in her own right. Free. 8 p.m. nightly. 4 Glen Morris St.

**February 27 to March 5
Hart House Theatre
This is For You Anna.** A haunting exploration of revenge, liberation and motherhood. Two week run. Week 1: Fri.–Sat, 8 p.m. Week 2: Wed.–Sat., 2 p.m. Preshow chat: Mar. 7, 1 p.m. Adults \$28, seniors \$17, students \$15 (students \$10 every Wed.). Alumni \$17 every Thurs. Tickets: 416-978-8849, uofttix.ca.

**March 12 to 14, 19 to 21
TAPs Theatre, UTSC
Laramie Project.** A production of the popular play about the murder of Matthew Shepard, created by the world-renowned Tectonic Theatre Project based in New York. Poignant and uplifting. \$10. 8 p.m. 1265 Military Trail. 416-287-7076. Tickets: www.aeplive.ca.

Meet you there.

Join adventurers like you for the trip of a lifetime. The University of Toronto Alumni Travel Program offers boundless opportunities to connect with alumni and other travellers who share your interests. These journeys criss-cross the globe. They're always fascinating, enriching and meticulously planned—down to every refined detail and delectable flavour. What will make your experience even more memorable are the people you meet along the way.

Curious about this stunning destination?
Visit uoft.me/Haida. Explore all 35 alumni
trips for 2015 at our NEW website:
alumnitravel.utoronto.ca

Call us at 1-800-463-6048 or
416-978-2367.

*Explore
the World*



UNIVERSITY OF
TORONTO

Life on Campus

“This is a beautiful ending to my 36 years as mayor.”

Hazel McCallion, after watching a musical about her life, performed by U of T Mississauga and Sheridan College students

p. 13



From left: U of T professors Craig Simmons and Peter Zandstra and PhD students Jennifer Ma and Curtis Woodford are among the dozens of researchers who will work to advance treatments for heart patients at the Ted Rogers Centre for Heart Research

A Boon for Heart Health

Largest private donation in Canadian health-care history will improve cardiac care across the lifespan

WITH THE GOAL TO REDUCE HOSPITALIZATION FOR HEART FAILURE by 50 per cent over the next decade, the University of Toronto, the Hospital for Sick Children and the University Health Network (UHN) have announced the creation of the Ted Rogers Centre for Heart Research, funded by an unprecedented donation of \$130 million from the Rogers family – the largest monetary gift ever made to a Canadian health-care initiative.

“We’re thrilled to be able to bring the Ted Rogers Centre for Heart Research to life,” says Loretta Rogers, wife of the late Ted Rogers. “We know Ted would have been proud of this bold initiative that will improve heart health for all.”

“The generosity and magnitude of this gift, and the transformational effect it will have on heart research, truly reflects the pioneering and innovative spirit of Ted Rogers and his family,” says Dr. Michael Apkon, president and CEO of Sick Kids. “This powerful, collaborative partnership among Sick Kids, UHN and U of T will have a global impact. Together we hope to accelerate discovery and cardiac care at an unprecedented pace.”

Heart disease represents a considerable economic strain on the Canadian health-care system. The annual cost for managing moderate and severe heart failure patients in ➤



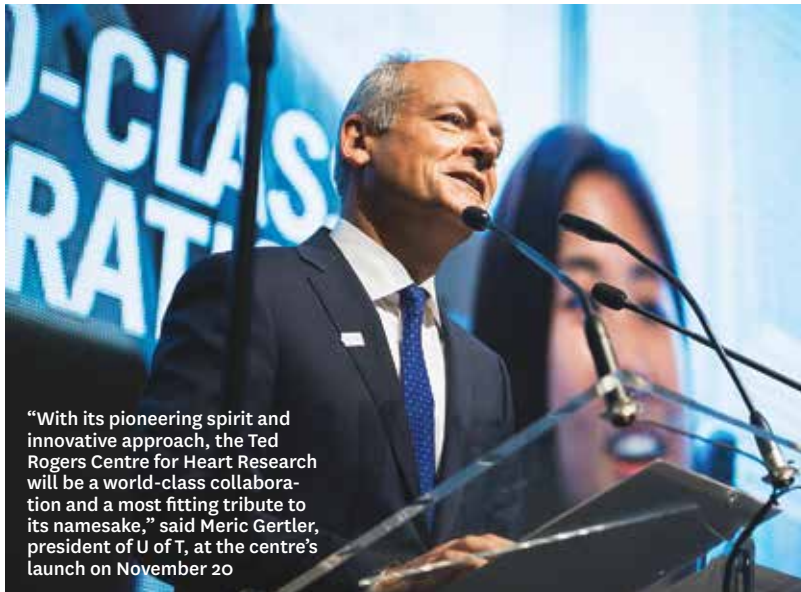
According to the Heart and Stroke Foundation, about 30 per cent of all deaths in Canada are caused by cardiovascular disease

➤ Canada is as much as \$2.3 billion. “Today, one million Canadians are living with heart failure, and that number is projected to increase 25 per cent over the next 20 years,” notes Dr. Barry Rubin, chair and program medical director of the Peter Munk Cardiac Centre and a professor of surgery at U of T. “This unprecedented gift will enable research teams in the Ted Rogers Centre for Heart Research to develop new therapies that will dramatically improve the lives of patients with heart disease.”

The Ted Rogers Centre for Heart Research will bring together more than 30 expert clinicians and researchers from across the partner institutions, as well as up to 80 graduate students, post-doctoral fellows and clinical fellows who represent the future of the field. This critical mass of expertise will improve treatments for heart patients – and develop entirely new therapies. The centre will be a magnet to attract additional research talent from around the world, solidifying Toronto’s and Canada’s position as a global leader in cardiac care, notes Meric Gertler, president of U of T.

“The Toronto region is home to one of the world’s largest biomedical science and health education clusters,” says Gertler. “This exceptionally powerful network of researchers and educators is translating exciting ideas, innovations and therapies in stem cell research and regenerative medicine into clinical settings where they will address the most challenging problems across the spectrum of heart disease. With its pioneering spirit and innovative approach, the Ted Rogers Centre for Heart Research will be a world-class collaboration and a most fitting tribute to its namesake.”

The centre will have facilities in each of the three participating institutions (see below). It will be the first in the world



“With its pioneering spirit and innovative approach, the Ted Rogers Centre for Heart Research will be a world-class collaboration and a most fitting tribute to its namesake,” said Meric Gertler, president of U of T, at the centre’s launch on November 20

to bring together research, education and innovation in personalized genomic medicine, stem cell research, bioengineering, and cardiovascular treatment and management under one umbrella with a single focus: improving heart health across the entire lifespan, from children to adults.

Professor Peter Zandstra, a lead U of T investigator for the Ted Rogers Centre for Heart Research, says patients with valve disorders, for example, typically need several complex operations during their lifetime to implant larger valves to accommodate the growing heart. They also require drugs to keep their heart from rejecting valve replacements. “Research at the centre could one day lead to the regeneration of a valve with the patient’s own cells – eliminating a lifetime of chronic illness,” he says.

Cardiac fibrosis is a stiffening of the heart tissue that leads

The Power of Three

The Ted Rogers Centre for Heart Research brings together three of Canada’s leading centres for cardiac care and research. Each will take the lead in a particular area:

The Hospital for Sick Children will harness the power of genomic science to decode the genetic foundations of cardiac disease, which will allow for heart disease to be better predicted before it occurs, and will support individualized therapies for children and adults, based on the unique genome of each patient.

The University Health Network, through the application of powerful databases, new biomarkers for cardiac disease, regenerative and individualized medicine approaches and state-of-the-art, real-time home monitoring and telecommunications technologies, will focus

on the translation of research discovery into the delivery of care for patients. Foundational to this approach is a customized cardiovascular data module for a new electronic patient record. This record is linked to a Biobank, which will house a vast array of biologic samples that come from both adult and pediatric patients.

The University of Toronto will focus on combining stem cell technology with novel approaches in cellular and tissue engineering for the regeneration of heart muscle, coronary vessels and heart valves. This cutting-edge science, which is crucial to restoring damaged hearts, will be led out of U of T’s Institute for Biomaterials and Biomedical Engineering, and is one of the many fields in which U of T is recognized as a world leader.

to a variety of cardiac diseases, including heart failure. Zandstra says advances in tissue engineering at U of T will accelerate the discovery of biomaterials that could be used to treat fibrosis, bringing new hope to patients.

Research at the university will also enlarge our understanding of how genetic, molecular signalling and cellular networks function as the heart develops, opening up the possibility for more effective heart therapies.

U of T scientists will also create technologies and tools for improved heart physiology monitoring, in clinical settings and for patients at home. These efforts will lead to more seamless, integrated care for heart patients.

The Ted Rogers Centre for Heart Research will also establish a competitive innovation fund to drive discovery and development of next-generation therapies for heart failure, and an education fund to attract the best and brightest students and postgraduates to ensure a deep pool of talent in Canada for cardiac care and research.

Over the next decade, the Ted Rogers Centre for Heart Research will help enable more people – adults and children alike, in Canada and around the world – to live long, healthy and happy lives. – **STAFF**



“We’re thrilled to be able to bring the Ted Rogers Centre for Heart Research to life,” says Loretta Rogers, wife of the late Ted Rogers. “We know Ted (pictured) would have been proud of this bold initiative that will improve heart health for all.”





Flying High!

Students, staff and faculty got a sneak peek at the newest addition to U of T's international-level athletic facilities in early October, as the Goldring Centre for High Performance Sport opened its doors for the first time.

Varsity basketball and volleyball players encouraged visitors to join pick-up games while others marvelled at the building's innovative design, created by Patkau Architects and MacLennan Jaunkalns Miller Architects.

The main field house is below street level, and windows high along the walls allow pedestrians to

watch athletes in action below. The three upper floors of the building are suspended from a steel superstructure. "It's not an unusual way to make a bridge," says architect Shane O'Neill, "but it's an unusual way to make a building."

The facility houses an expanded David L. MacIntosh Sports Medicine Clinic, classrooms and research labs, a strength and conditioning centre and a fitness studio – all for use by U of T students. The Goldring Centre is supported by donations from the Goldring family and from the Kimel family, whose gift will create the Kimel Family Field House within the complex. – **STAFF**

SOUND BITES

What is (or was) your favourite place to study at U of T?

The nook of green couches facing the big windows at UTM's IB building is perfect for study daydreams.

Pree-Uh, @PriPri4250

Gerstein Library gets my vote! It's quiet, has comfy chairs and allows me to bring my thermos.

Charlie K, @cekivi

The stands at the athletic centre pool. It's relaxing with the warmth and water.

Naima Sundiata, @NSundiata

Robarts Library, 13th floor, south side. The view inspires you to become a beneficial part of this awesome city!

Amin, @AminSh72

Join the conversation at twitter.com/uoftmagazine.

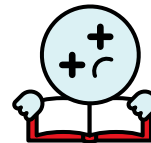
Poll | How many hours of sleep do you get?

When school and work start piling up, students sacrifice sleep to get everything done. But skipping slumber can have adverse effects. In a 2010 study, for example, U of T psychologists found that memory retention in young adults correlated with the amount of sleep they got.

Her usual five hours of sleep "could be better" confesses Hyuna Yun, a first-year student in cognitive science at University College. She's not alone among our surveyed students, but researchers say teens need, on average, nine to 10 hours a night, adults seven to eight. Those who sleep less than their body requires risk sleep disorders, stress and depression.

Students who enjoyed the most shut-eye say time management is the secret. "I just figure out what could be put off," says third-year physics and astronomy student Ariel Amaral. "Then it's possible to delegate for another day and get a few extra hours of sleep." – **SAMINA SULTANA**

This highly unscientific poll of 100 students was conducted on the St. George campus in November, during mid-terms.



46%
6 hours or less



35%
6.5 or 7 hours



19%
7.5 or 8 hours

0%
More than 8 hours

She Shoots! She Scores!

Mississauga students honour Hazel McCallion with musical tribute



U OF T MISSISSAUGA CELEBRATED the legacy of Mississauga Mayor Hazel McCallion in November with a musical play based on her life and times. The original production, “She Shoots! She Scores!”, was commissioned to honour the mayor as she retires after nearly five decades in municipal and regional politics. It chronicles her life from her youth in Gaspé, Quebec,

through to her remarkable political career.

After the performance, Deep Saini, U of T Mississauga’s vice-president and principal, presented McCallion with a bound edition of the script. He thanked the mayor for her service to the city and her long-standing support of the university. “Mayor McCallion has been the greatest of friends, a booster and a champion of this campus,” he said. “She advocated for the establishment of the Mississauga Academy of Medicine, encouraged her councillors to support our expansion, and always said yes to the hundreds of requests to visit our campus.”

McCallion, whose last day of office was at the end of November, was visibly moved by the tribute. “This was a fantastic presentation that showcased the talent that exists within the walls of this university,” she observed. “I have always said that if you give the best with whatever you do, the best comes back to you. The best came back to me tonight. This is a beautiful ending to my 36 years as mayor.”

Directed by alumna Melissa Jane Shaw, “She Shoots! She Scores!” was performed by students from the joint theatre and drama studies programs of U of T Mississauga and Sheridan College. Theatre Erindale’s founding artistic director, Patrick Young, wrote the musical. - **BLAKE ELIGH**

SCHOLARSHIPS FOR DESERVING STUDENTS

STATE-OF-THE-ART FACILITIES

44 LIBRARIES ON THREE CAMPUSES

COLLABORATION WITH WORLD-CLASS SCHOLARS

12 MILLION PRINT VOLUMES IN 341 LANGUAGES

EVERY GIFT ADDS UP.

Combined with other donations, your gift to the Annual Fund means boundless support for the entire University of Toronto community.

Please give today at donate.utoronto.ca

UNIVERSITY OF TORONTO

BOUNDLESSIMPACT



Ian Hacking's groundbreaking book on probability, *The Taming of Chance*, was named one of the 100 best non-fiction books of the 20th century by the board of the Modern Library

What Is Real?

Philosophy prof Ian Hacking's ideas about science earn him \$800,000 prize



PROF. IAN HACKING, one of today's most influential philosophers, has been awarded one of the largest prizes in the humanities. The Switzerland-based International Balzan Prize Foundation honoured the long-time U of T professor with its US\$800,000 prize for his "fundamental and pioneering contributions to philosophy" and for his groundbreaking work in many branches of the history and philosophy of modern science.

When told of the award in September, Hacking told *U of T News* that it was "unexpected," adding that he's delighted that a condition of the award is sharing the prize money with up-and-coming

colleagues. "Half of the money will be given to the philosophy graduate department to support younger researchers," he said. Prof. James Robert Brown, who also teaches philosophy at U of T and has known Hacking for many years, called the prize money a "terrific" bonus for the department.

Hacking, who now holds the title of University Professor Emeritus, earned his PhD from the University of Cambridge and joined U of T's philosophy department in 1983. He's written 14 books and authored more than 300 papers. "Ian is one of the most important philosophers in the world," Brown says. "If you were to try to list the 10 top philosophers working today, Ian would be right in the thick of it."

Hacking is known for his contributions to the history and philosophy of science and medicine, the philosophy of mathematics, and, especially, the philosophy of experimental science. For decades, philosophers debated various versions of "scientific realism," arguing about what should and should not be considered real in the light of modern scientific investigation. In the 1980s, most philosophers were focusing almost exclusively on scientific theory, but Hacking wasn't afraid to put experimental science under the microscope, so to speak. He came up with the idea of "entity realism" – the notion that entities should be considered real if they can be manipulated in the laboratory, even if the objects themselves are too small to be seen. In his 1983 book *Representing and Intervening*, Hacking used electrons as an example: They're real, he said, because physicists routinely make use of them. "If you can spray them, they are real," he wrote. Adds Brown: "It's one of those things that people have picked up; it's become like a bumper sticker."

Even when an object can be seen, that's not enough, Hacking argues. It's when we manipulate the object that we know it's really there. "When you can poke at things – like cells in a microscope – or use things, like electrons, to poke other things, that's what clinches their reality," Brown says. The flip side is that when entities can't be manipulated, Hacking calls for skepticism. He has argued, for example, that no matter how confident we are in the theory that predicts the existence of black holes, because we can never manipulate them, we should not treat them as "real."

Hacking's work, Brown says, "stimulated an enormous amount of research into the experimental side of science." – **DAN FALK**

People



Edward Iacobucci

Professor **Edward Iacobucci** begins a five-year term as dean of the Faculty of Law on January 1. An expert in corporate law, competition law, and law and economics, Iacobucci recently served as associate dean of research and has won awards for both teaching and scholarship.

Aboriginal studies program instructor **Lee Maracle** won the 2014 Premier's Individual Artist Award for Excellence in the Arts. A member of the Stó:lō First Nation, Maracle is an award-winning novelist, poet and short-story writer.

IBBME prof **Paul Santerre** won the 2014 Ernest C. Manning Principal Award, worth \$100,000, for inventing and commercializing medical tubing embedded with an anti-clotting aid.

The founding director of the Rotman International Centre for Pension Management, **Keith Ambachtsheer**, was named the most influential consultant in the institutional investor world by *Chief Investment Officer* magazine.

U of T's 13 new and 12 renewed Canada Research Chairs will receive \$29.6 million in funding this year. The new chairholders: **Evdokia Anagnostou** (pediatrics), **Daniel Bender** (historical and cultural studies, UTSC), **Aimy Bazylak** and **Goldie Nejat** (mechanical and industrial engineering), **Craig E. Boutilier** (computer science), **Elizabeth A. Edwards** (chemical engineering and applied chemistry), **Anver M. Emon** (law), **Prabhat Jha** (public health), **Gillian King** (occupational science and therapy), **Peter Roy** (molecular genetics), **John Rubinstein** (biochemistry), **Bianca Schroeder** (computer and mathematical sciences, UTSC) and **Dvira D.S. Segal** (chemistry).



Film director David Cronenberg made his first feature, *Stereo*, at UTSC in 1969



UTSC students have a lot to celebrate!

such as the Toronto Zoo (a research partnership) and the East Scarborough Storefront, a centre that houses neighbourhood services where students engage in research and experiential learning. The department of athletics and recreation works in partnership with the Kingston-Galloway/Orton Park neighbourhood to offer KGO Kicks, a soccer program for children from these underserved areas.

Two professors in the department of human geography have partnered with Malvern Action for Neighbourhood Change to develop an urban farm in Rouge Park. Working on the farm gives students first-hand experience with the issues of food security faced by new immigrants and others with low incomes. “They learn more about the political economy of food provisioning in relation to class, income and city structure,” says Prof. Kenneth MacDonald. “They gain insight into the dynamics of community formation.”

UTSC’s global character draws on the multicultural makeup of the student body and the faculty, many of whom also come from other countries.

Ju Hui “Judy” Han, a professor of human geography who is originally from South Korea, asks her students to think about “travel” broadly – not only as holidays, but also experiences of displacement and migration, then write essays about personal travel using the critical geographical lens they develop in her course.

“Many of them vividly remember their first trip as migrants to Canada,” she says. “Many of them also write emotionally charged and conflicted accounts” of their first trips back to where they or their parents grew up, she adds. Their stories are shared online in *On the Move*, an undergraduate journal of creative geography. These “critical reflections on personal and first-hand experiences can open all our eyes to the intimacy of the global, and cultivate curiosity and mutual understanding,” says Han.

Kidd, the principal, believes that UTSC is an extraordinary campus. “It’s a happening place,” he says. “We’re internationally connected, but what is happening right next door is also of vital importance.” - **ELAINE SMITH**

Global Outlook, Local Roots

Fifty years on, UTSC has forged a unique identity

FIFTY YEARS AFTER IT FIRST OPENED ITS DOORS TO STUDENTS, the University of Toronto Scarborough (UTSC) has become a campus recognized for its unique blend of global and local. “Both in terms of research and teaching, this campus walks the talk by being engaged locally and globally,” says Professor Bruce Kidd, interim principal and vice-president.

The campus’s commitment to the Scarborough community is partly shaped by location and partly by demographics. UTSC is located next to a low-income community, home largely to immigrants from places as diverse as Sri Lanka and China. “A lot of our students are first-generation and are deeply connected and rooted in our community and they bring that lens to the university,” says Kimberley Tull, UTSC’s manager of development and community engagement. And 16 per cent of UTSC students are international students from 80 different countries.

UTSC’s community engagement is apparent in the many partnerships the campus has formed with local organizations

Changing Lives for 100 Years

When the Factor-Inwentash Faculty of Social Work was founded a century ago as the Department of Social Service, it was the first academic program in Canada – and among only a handful in North America – to educate professional social workers.

At the time, a group of civic-minded women had approached U of T about creating a school to train social workers. The university agreed there was a need, but didn’t have the funds. One of the women, Sara Warren, a well-known philanthropist, agreed to pay the bills for the first three years, and the school opened its doors in September 1914. Today,

the faculty is recognized as a research leader.

Celebrations for the faculty’s centennial kicked off in late October with a reception at the Royal Ontario Museum, which is hosting an exhibit called “Classroom to Community: A Century of Social Work in Toronto.” A commemorative book outlining the faculty’s history is available, and Margaret Norrie McCain (BSW 1955) was a featured speaker at an event in November. Celebrations continue until June 2015. - **SCOTT ANDERSON**

Visit socialwork.utoronto.ca for more information.



Artists, judges, doctors, teachers: Read profiles of U of T's extraordinary Aboriginal alumni at the U of T Aboriginal Gateway website (www.aboriginal.utoronto.ca)

OISE Receives \$5 Million Gift

Landmark donation to U of T will advance indigenous education in Canada and globally



affirms that stature and provides the support required to ensure that U of T continues to lead the way."

The OISE Indigenous Education Initiative initially will include a focus on literacy and will pursue research in related areas such as indigenous languages and language revitalization. "One of the great divisions between those who succeed and those who struggle relates to literacy and education. This is especially true with indigenous children," says Kenn Richard, executive director, Native Child and Family Services Toronto. "I applaud this initiative as we need to know how to build a system where all succeed." - **STEVE ROBINSON**

THE ONTARIO INSTITUTE FOR STUDIES IN EDUCATION (OISE) has received a \$5-million gift from an anonymous donor to strengthen indigenous education research in Canada.

The gift – the largest ever made to a Canadian faculty of education for such research – launches a five-year initiative to understand and advance the educational needs and aspirations of aboriginal peoples in Canada and around the world.

The donation also establishes a fellowship – to be held first by Chief Shawn A-in-chut Atleo, the former National Chief of the Assembly of First Nations in Canada. Chief Atleo will play a lead role in forging new partnerships among indigenous peoples in Canada, government agencies and others.

"The University of Toronto is already recognized as a world leader in indigenous education," says U of T President Meric Gertler. "This gift

Why I Give



Over the course of his 30-year career as an entrepreneur and consultant, **David Scrymgeour (BCom 1979)** has advised a wide range of corporate and community organizations. In 2013, he created the **Scrymgeour Scholarship in Entrepreneurial Management**, and earlier this year he endowed the **Building Canadian Leaders Matching Scholarship Program**.

David: "I've always been motivated by a good organization with a good cause, and in my experience there is no more effective cause than a university scholarship. One hundred cents on the dollar goes to talented young students every year in perpetuity – and you can't say that about many donations.

"I think most entrepreneurs are mavericks. They want to build. They are not looking to fit in to any of society's boxes. They are contrarian. They run with ideas, despite people telling them it's not possible. And I don't think you can be a successful entrepreneur without the leadership skills to build a talented team, and then chase a vision together. Rotman Commerce facilitates this.

"Entrepreneurship and leadership require so much more than good marks. That's why these scholarships consider contributions to sports, music, culture and community. I want to encourage students who are making a difference in their community, however that is defined."

U of T: Canada's Best University



U of T



UBC



McGill



	U of T		UBC		McGill	
Times Higher Education World University Rankings	20 th	1 st	32 nd	2 nd	39 th	3 rd
QS World University Rankings	20 th	1 st	43 rd	3 rd	21 st	2 nd
U.S. News & World Report Best Global Universities Rankings	14 th	1 st	30 th	2 nd	44 th	3 rd
Shanghai Jiao Tong University's Academic Ranking of World Universities	24 th	1 st	37 th	2 nd	67 th	3 rd
National Taiwan University Ranking	4 th	1 st	27 th	2 nd	33 rd	3 rd

It was another banner year for the University of Toronto on the slate of international university rankings released this past fall. "We are pleased to be recognized once again as the premier university in Canada, and to be named among the world's very best," says Meric Gertler, U of T's president. "Our continued strong performance is a testament

to our world-class education and research, as well as the excellence of our faculty, staff and students."

Since 2011, U of T has consistently placed in the top 25 internationally. This year, the Times Higher Education report ranked U of T eighth among public universities, while QS put U of T at 13th overall for academic reputation.



The Fund in Public Health in Honour of Robert Remis will endow scholarships for U of T grad students researching ways to prevent infectious disease. Give at dlsph.utoronto.ca

IN MEMORIAM

Robert Remis

His research on HIV-AIDS transmission saved countless lives



of a strange and fatal new illness known as AIDS. He made it his life's mission to track and prevent it as best he could, while becoming a top expert on how the virus that caused it was transmitted.

Colleague Dan Allman, co-director of the HIV Studies Unit of U of T's Dalla Lana School of Public Health, says Remis's lengthy experience as an epidemiologist ultimately made him an *éminence grise* at yearly AIDS conferences. By the time of his death at age 67, Remis "had seen more of the epidemic than most people; I mean, he really did see it all."

In 1996, Remis accepted a faculty position at Dalla Lana. With funding from both the university and the Ontario government, he established and directed the Ontario HIV Epidemiologic Monitoring Unit, which would serve as a model for other provinces.

In an effort to identify the presence of HIV in Ontario as painstakingly as possible, he designed numerous groundbreaking studies. Currently, "hundreds of children are born free of HIV infection because Dr. Remis advocated for prenatal HIV testing in Ontario," wrote Dalla Lana dean Howard Hu on the occasion of Remis's passing.

The tireless physician was, according to Allman, a stickler for precision. "He was challenging to work with, because his brain went so fast. You'd be on deadline, and he'd show up with yet another question. But it was only because he wanted to make the work better. He was so quick to grasp and argue concepts: a very frustrating colleague, yet one you couldn't live without."

Remis was a fierce advocate of traditional public health, says Allman. "Despite his enormous compassion, he was not willing to sacrifice public health for individual rights." Remis was assailed by activists angry at what they perceived to be a core belief he held: that people with HIV who failed to disclose their status to sexual partners should face prosecution. While Remis "recognized the complexity of human nature, and the complexity of HIV disclosure," Allman says, "he would hold fast to his beliefs, grounded as they were in a traditional public health approach. He felt that was his role. He was tough that way."

HIV-AIDS was Robert Remis's enemy, but also his passion: "because it presented such a conundrum, after so many years," says Allman. "Also because of the complex role of stigma and discrimination within it. In his quest for social justice, that was something he thought important to address." - **CYNTHIA MACDONALD**

IT WAS CLEAR FROM EARLY ON that Robert Remis thrived on excitement. His work as a physician in the 1970s took him around the world – from remote Aboriginal communities in Canada to India, Burundi and Comoros. Ever restless, Remis would not settle down until he could find a health challenge to work on that was just as fascinating and complicated as he was.

In the human immunodeficiency virus, history gave him what he needed.

Remis, a Winnipeg native and long-time U of T prof who died of cancer on September 25, 2014, began to investigate HIV-AIDS in the epidemic's earliest days. He obtained a master's in public health from Harvard University in the early 1980s, and worked briefly for the U.S. Centers for Disease Control before moving to Montreal. There, he began to explore the spread

IN MEMORIAM

Erik Spicer




Erik Spicer wasn't only a great librarian – he was a great professional. The U of T alumnus (BLS 1949) served for 34 years as the Parliamentary Librarian at the Library of Parliament in Ottawa, which was established at Confederation, and made it an essential source of information and non-partisan service for all parliamentarians.

The first professionally trained librarian to head the Parliamentary Library, Spicer is recognized for bringing the Parliamentary Library into the modern age, and credited with many advancements, including the establishment of a Research Branch and installing new technology. It was one of the first libraries in Canada to get a photocopier and it hosted Parliament's first word processor and first network of linked terminals. Spicer retired in 1994 and was named to the Order of Canada that same year.

Spicer was dedicated to library associations and helped developing countries – such as Nigeria, Bangladesh, Trinidad and Tobago, Cameroon and Tunisia – to establish their own parliamentary libraries. He died on September 27, 2014, at the age of 88.

"The Faculty is saddened by the loss of this high-profile library leader who contributed so much to the field," says Faculty of Information dean Seamus Ross. "He set the bar high as a well-respected librarian dedicated to providing information and research of the highest quality." - **KATHLEEN O'BRIEN**

A close-up portrait of a young woman with long, straight, reddish-brown hair and bright blue eyes. She is wearing a dark blazer over a light-colored top and has a slight smile. The background is a plain, light grey.

“The McAllister scholarship lets me pursue my engineering degree and the skills I’ll need as an entrepreneur.”

Megan Mattes
BASc 2017

Thanks to the J.E. McAllister bequest, Megan Mattes is exploring her options in the TrackOne generalist year at Canada's top-ranked engineering faculty. By including a bequest to U of T in your will, you too can nurture the creative inquiry of future entrepreneurs like Megan.

To find out more, contact
michelle.osborne@utoronto.ca,
416-978-3846 or give.utoronto.ca



UNIVERSITY OF
TORONTO

BOUNDLESS LEGACY

Leading Edge

“It’s right at the edge of physics”

Prof. Barth Netterfield on a new telescope that will give astronomers clues to the universe’s first moments

p. 21



Prof. Max Friesen’s research team excavates a 400-year-old, large cruciform house at Kuukpak in the Northwest Territories

The North’s Vanishing Past

Max Friesen is racing against time to preserve the cultural history of Canada’s western arctic people

WHEN MAX FRIESEN, a professor of anthropology, arrived at an excavation dig alongside the Mackenzie River this past June, he was stepping into a rich history that was literally eroding before him. An arctic archaeologist, Prof. Friesen had travelled hundreds of kilometres north of the Arctic Circle to explore Kuukpak, a centuries-abandoned settlement whose frozen secrets could alter our understanding of Canada’s polar peoples – if erosion due to global warming doesn’t swallow those secrets first.

The summer’s excavation yielded an impressive find: Friesen’s 10-member research team discovered a perfectly preserved, five-by-seven-metre cruciform pit house that’s about 400 years old.

Cruciform is a “southern” (by which Friesen means below the Arctic Circle) descriptor for a semi-subterranean arctic residence that the western Inuit’s (the Inuvialuit’s) ancestors built from the abundant driftwood logs on the Mackenzie River, using animal skins and sod for roof insulation. The term “cruciform” does not describe the shape of a religious symbol – rather it describes the overall layout of the house, which, when seen from above, is in the shape of a cross. A tunnel from the entrance leads to a square central floor, with side and forward branches into three alcoves. Typically symmetrical, each alcove would house one family, or more; tight-knit, to be sure.

The Kuukpak cruciform is not unique for being well ►



In its *Jeopardy!* match, Watson flubbed a question in the category "U.S. Cities." Watson's surprising response was "What is Toronto?" The answer was Chicago

➤ preserved. (Permafrost prevents the kind of decay common to archaeology sites elsewhere in the world.) However, it is one of the biggest ever discovered, as well as the first to feature a larger, asymmetrical rear alcove, which Friesen speculates may have been used by a more influential family – “maybe the lead hunter.” It’s also the first house to be completely excavated using modern methods. Until now, nobody knew exactly what the originals looked like, or how they were built, says Friesen. “Nobody since the 19th century has seen these houses.”

Friesen’s team is currently examining material discovered inside the cruciform house – traded goods and indicators of wealth and status such as ivory, soapstone and native copper – to see if the larger alcove at the back held more. If it did, it could change our understanding of hierarchy within arctic communities.

Friesen, whose Kuukpak excavation is co-organized by the Inuvialuit Cultural Resource Centre in Inuvik, will return to the dig next year. Time is of the essence. As the Beaufort Sea rises, erosion along the Mackenzie River is an unstoppable, ever-swelling threat. In fact, due to warming, the entire pan-arctic region’s cultural history stands at risk, says Friesen. This project and Friesen’s overall mission, then, is to preserve aspects of history that will otherwise be destroyed. His research has become a matter of prioritizing: making difficult decisions as to which sites merit saving, or even just documenting, while time permits. The payoff, he says, is significant: unique insight into “a major, beautifully preserved cultural history that we really don’t know enough about.”

– GARY BUTLER

Elementary, My Dear Watson

Computer science students are developing a legal application for IBM’s Jeopardy-winning computer as part of a \$100,000 contest



IT’S THE OPPORTUNITY OF A LIFETIME. Using the vast capabilities of IBM’s Watson – the cognitive computing technology widely known for winning the 2011 *Jeopardy!* challenge – a group of computer science students will help develop artificial intelligence-based applications that could potentially revolutionize the way information is accessed in the field of law.

U of T is the only Canadian participant among an elite group of 10 universities invited to take part in the IBM Watson Cognitive Computing Competition. The competition is structured as a half-year, fourth-year course that challenges students to think like high-tech entrepreneurs. Their goal is to develop an effective, commercially successful business plan using Watson to solve a real-world challenge.

The U of T students are working in teams, using Watson to develop various applications that can access vast amounts of legal information. Students are developing the skills to upload relevant legal information into Watson’s body of knowledge and train it to collate this unstructured data to produce relevant responses. They can also teach the system to improve with every natural-language interaction.

Student Vicky Butka is eager to take advantage of how Watson understands context and can search for ideas rather than just keywords. Fellow student Akash Venkat says one of the challenges is figuring out what legal professionals need from the application. “We have to create a system that mimics the way a lawyer would approach legal research. So we need to consult with people in the profession.”

One of the five teams at U of T will be selected to go on to the Watson Challenge in New York, in January 2015, where groups representing each of the participating institutions will compete for a \$100,000 US prize. The winner will be the team that creates the most insightful and articulate business proposal. – KIM LUKE AND DALE SPOULE

LINGO

Biochar



Most people know charcoal as something they use to fire up their barbecue – it burns slowly, making it a reliable source of heat for cooking. The briquettes you use to grill your steak – like all charcoal – are created by heating organic material (usually wood) in the absence of oxygen. But the properties of charcoal vary significantly depending on the precise conditions under which it’s created.

In the past few years, agricultural scientists have become interested in “biochar” – a kind of super-porous charcoal that can absorb and hold soil nutrients, such as nitrogen, potassium and phosphorous. It also holds on to carbon. This could make biochar useful both as a soil additive and as a way of reducing the amount of carbon that’s released into the atmosphere when organic material degrades.

Sean Thomas, a professor of forestry, is investigating ways to produce biochar using waste from the wood industry, such as tree bark and sawdust, and evaluate its effectiveness as a soil additive in forests. He’s also interested in using biochar to restore contaminated or degraded land. These properties make biochar a potential environmental “champion,” he says. – STAFF



NASA prepares the launch of a balloon-borne telescope from Antarctica, in 2012

a dozen other institutions from Canada, the U.S., the U.K. and South Africa are also collaborating on the project, but U of T scientists make up one of the largest contingents, designing the main SPIDER structure, its pointing system (vital for keeping it aimed at the particular patch of sky that it's studying), and much of the electronics. (SPIDER is not an acronym: "It's just the formal name of the project," explains Jamil Shariff, one of the U of T graduate students working on the telescope. "We decided to write it in all caps, somewhat arbitrarily.")

Because the earth's atmosphere absorbs much of the radiation they're trying to study, scientists need to peer above it – and so SPIDER, about the size of a large SUV, will be lifted into the stratosphere by a giant helium balloon. Then its array of six telescopes, each containing several hundred individual detectors, will scan the sky,

examining the detailed structure of the cosmic microwave background. A few weeks later, when the experiment is complete, the detectors (and the vital, data-filled hard drives) will be returned to earth by parachute. The project brings "an enormous increase in sensitivity" compared with earlier experiments, Netterfield says.

The inflation model of the big bang, dating from the 1980s, is the leading theory for explaining our cosmic origins. But if inflation happened, it should have unleashed a flood of gravitational waves – ripples in the fabric of space-time, predicted by Einstein's general theory of relativity, but never directly observed. These waves may have left their imprint in the cosmic microwave background, distorting it in a particular way – similar to the way ripples on a pond would distort one's view of the rocks below.

Earlier this year, scientists involved with another cosmology experiment announced that they had observed these gravitational waves using a ground-based telescope – but that turned out to be premature; the team now says that the patterns they were seeing could just as likely be caused by interstellar dust as by the much sought-after gravitational waves. ("Stardust got in their eyes," as a writer for *The New York Times* put it.) With its greater sensitivity, SPIDER should be able to distinguish the two effects – the gravitational waves, and the dust – and provide compelling evidence for the inflation theory. (That is, assuming the waves are out there waiting to be found.)

If SPIDER succeeds, it will be a big thumbs-up for inflation, and also the closest that scientists have peered toward "time zero." "The universe was so different then," says Netterfield. "It's right at the edge of physics." – DAN FALK

THE BIG IDEA

When Time Began

A new telescope may shed light on the universe's first moments

THE UNIVERSE STARTED WITH THE BIG BANG some 13.7 billion years ago. But the details of what happened slightly after "time zero" are murkier: Was there a period of "inflation" moments after the beginning of the universe? Inflation can explain why the universe appears as it does today – with clusters of galaxies spread out smoothly in all directions – but so far there's been no direct confirmation of the theory. Evidence for inflation may finally be at hand, however, thanks to an ambitious balloon-borne set of telescopes to be launched from Antarctica this winter.

The project, known as SPIDER, will give scientists a new look at the cosmic microwave background, sometimes described as the "echo" of the big bang. This microwave background is more than 13 billion years old – but as ancient as it is, it may hold clues from an even earlier epoch. By studying how the individual light waves are oriented – that is, their polarization – physicists believe they can learn about the era of cosmic inflation, a fleetingly brief period when the universe underwent an exponential growth spurt, in the first moments after its fiery birth.

"We have the potential to learn something about what was happening in the universe a tiny fraction of a second after the big bang," explains astronomy professor Barth Netterfield, who leads the U of T team working on SPIDER. About

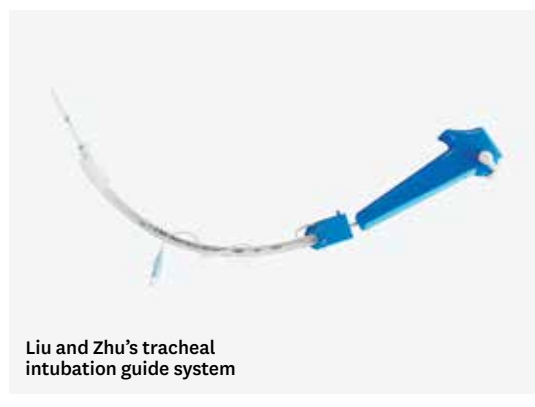


According to the *Journal of Laryngology & Otolaryngology*, the earliest known depiction of a tracheotomy is found on two Egyptian tablets dating to around 3600 BC

PROTOTYPE

A Life-Saving Innovation

Recent grads win engineering design award for a low-cost medical device that will help keep patients breathing



Liu and Zhu's tracheal intubation guide system

A PIECE OF STRING, a \$1 spring and some 3-D-printed plastic – it doesn't sound like much. Yet, two U of T students brilliantly combined these items to make a prototype for a new tracheal intubation guide system for difficult intubation patients that would cost less than \$20.

It's an innovative design that has netted its creators, Qian (Linda) Liu (BASc 2013) and Kaiyin (Cathy) Zhu (BASc 2013) this year's John W. Senders Award for Imaginative Design from the Faculty of Applied Science and Engineering.

Tracheal intubation is the placement of a flexible plastic tube into someone's windpipe (the trachea) to ensure the patient can continue to breathe. Intubation is often needed in the operating room and in high-risk situations in emergency wards or intensive care units.

But if the procedure is not done properly, or the patient is particularly vulnerable because of age, it can cause internal damage.

Leveraging the capabilities of 3-D printing, the pair was able to create an inexpensive prototype for an intubation tool that improves on current devices, and whose novel design is intended to help patients who are difficult to intubate. Liu and Zhu say traditional prototyping methods would have cost them upwards of \$10,000.

Current intubation devices require the physician to estimate the shape of the patient's trachea before inserting the tool. If the shape is not gauged correctly, the device must be withdrawn and adjusted – all while the patient is not breathing. Liu and Zhu's prototype is equipped with a steerable tip that would enable physicians to adjust the angle of the tip as they go to compensate for any errors in their initial prediction.

"We were designing a tool with the steerability of a bronchoscope and the malleability of a stylet," says Liu, who recently began a master's degree in biomedical design at Johns Hopkins University. "Our device allows physicians to dynamically steer the intubation tube while it is inside the patient's throat."

The project began as a final assignment for a course run through U of T's Institute of Biomaterials and Biomedical Engineering. Students in the course worked in teams to tackle real-world biomedical engineering problems submitted by industry and health-care professionals, as well as by professors looking to solve a particular problem.

Liu and Zhu's goal was to improve the function and design of current tools, but also to keep costs low

Working with Dr. Sherif Eskander, the pair developed the tool to the point where it was ready for mannequin trials, in which it performed extremely well. Currently, Dr. Eskander and the inventors are working with other experts to perfect the design. Liu and Zhu, who is doing her masters of engineering at U of T, say they see a market for their tool among anesthesiologists in the U.S. and Canada. – ERIN VOLLIK

Findings

Gene Detectives



Researchers from U of T and the Centre for Addiction and Mental Health (CAMH) have helped identify more than 100 locations in the human genome associated with the risk of developing schizophrenia.

The findings identify biological mechanisms and pathways that may underlie schizophrenia, and could lead to new approaches to treating the disorder, which has seen little innovation in drug development in more than 60 years. "The result is a major advance in understanding the genetic basis of brain functioning in schizophrenia," says Jo Knight, a psychiatry professor at U of T's Faculty of Medicine and a CAMH senior scientist.

Roughly two dozen genomic regions are linked to the illness, which often emerges in the teens or early 20s. The study implicates certain genes expressed in brain tissue and a smaller number that are active in the immune system. – ANITA DUBEY

The Very Hungry Caterpillar



A U of T prof is part of an international team of researchers fighting an invasive plant species known to Ontarians as dog-strangling vine. The rapidly spreading weed is typically controlled by uprooting it with machines or using chemical herbicides – "ineffective and costly" methods, says forestry professor Sandy Smith.

Smith and her team have spent years testing a natural control method: the Hypena caterpillar. Native to Ukraine, the Hypena eats dog-strangling vine and won't feed on native plants, which means its population rises and falls with the availability of the host plant.

The researchers recently oversaw the first field releases of Hypena caterpillars at several Ontario sites. Smith says that once established at the initial sites, Hypena moths will disperse to find new patches of the weed.

– DON CAMPBELL AND DOMINIC ALI

Q&A

On Shaky Ground

How should we evaluate the risks and benefits of fracking?

The impact that hydraulic fracturing has on the environment is increasingly a matter of debate. It's been a hot potato in the United States for years and recently became a pivotal issue in the New Brunswick provincial election. Writer **Dale Sproule** tapped into the expertise of **Andrea Olive**, a political science professor at U of T Mississauga, to find out what's gotten people agitated about fracking.

What is fracking? It's a technology to get oil and gas out of rock formations. It involves drilling down into rock at least 10,000 feet vertically and then another 1,000 to 5,000 feet horizontally – then blasting water mixed with sand and chemicals down into the drill site. It's essentially shaking the rock until gas or oil is released, collected and brought to the surface. The drilling companies are getting better at it. They realized that you don't have to keep drilling over and over vertically. You just drill down once and then start drilling horizontally.

In the last 10 years, fracking has taken off. During the 2008 recession, places such as Pennsylvania and Saskatchewan used fracking as a way to create jobs and economic growth.

Why are people concerned about it? Water quality and quantity have been major concerns from the beginning. In Saskatchewan there's not a lot of surface water, so the drilling companies are pulling from ground water – taking water that is presently used for other things, such as farming. There's a question about whether the drilling companies are polluting aquifers through the chemical mixture that's used during the actual fracturing process – as well as what happens after. They certainly recycle the water they use during fracking. But in the end they have to store it and that can potentially leach into the ground and pollute groundwater.

What kinds of chemicals do these companies use in the water? FracFocus.ca is a chemical disclosure registry (some Canadian provinces require disclosure). Their information gives an indication of the classification of the chemicals, but we don't



know the actual formula or the makeup. Obviously, that's suspicious to a lot of people. And when the companies pull that water back out from the rock, it contains not just the chemicals they put in – they're also pulling up the heavy metals from the earth.

How have governments responded? From a policy standpoint, we're dealing with a technology that industry is able to implement and use before science has been able to catch up and evaluate it – before policy-makers have been able to assess risks. And even when risk *has* been assessed and everyone has access to the same science, we see policy-makers reaching different decisions. Nova Scotia – moratorium, Quebec – moratorium, but Saskatchewan – full-steam ahead fracking.

Has Saskatchewan's approach had any noticeable environmental impact? The grasslands ecosystem in Saskatchewan is one of the most endangered in North America and it's the only ecosystem shared by the United States, Canada and Mexico. The greater sage grouse, which can't mate successfully within a two-mile radius of an oil and gas site, has declined about 95 per cent in the last two decades and it's going to go extinct. I think it's too late – at least in Canada.

Any predictions for the future of fracking in Canada? I don't think Saskatchewan is going to stop fracking for an environmental reason. But there are things the province could be doing better to minimize the impact. They could also make the public more aware, because there's so much secrecy around hydraulic fracturing. How do we regulate what we don't know? How do we legislate when there's a risk that's uncertain or unknowable?

Read a more in-depth conversation with Andrea Olive at magazine.utoronto.ca



Tower Trouble



Rapid urbanization worldwide means high-rise apartment buildings have sprouted on the peripheries of new megacities, such as Karachi, Delhi and Lagos.

Deborah Cowen, a professor of geography, is interested in the political lives of people who occupy these buildings. She has teamed up with Emily Paradis, a research associate at the Factor-Inwentash Faculty of Social Work, and with the National Film Board's Emmy-winning HIGHRISE project, a multimedia documentary that explores "vertical living" in 21 global cities.

In India, the team is focusing on the illegal demolition of apartment complexes and how citizens are using digital technologies to fight back. Cowen notes that in India's largest cities, urban renewal schemes, globalized real estate markets and institutional corruption have created a thriving but violent economy around the demolition and reconstruction of apartment towers. In many cases, authorities collude to promote builders' financial interests at the expense of residents' rights.

Residents of the building at left were able to stop demolition before it was completed, and several families are still living in the structure out of fear that they will lose their claims to their apartments if they leave. But it's a scenario that will continue to brutalize India's low-income citizens until the balance of power shifts from those who speculate on the redevelopment of urban land to those who inhabit it, says Cowen. – SCOTT ANDERSON

Detecting the DTs

New app helps physicians diagnose alcohol withdrawal – and can tell when someone is faking it

A NEW IPHONE APP CAN DIAGNOSE the differences between severe, mild and faked alcohol withdrawal symptoms, all of which are major issues in hospital emergency rooms.

Developed by Parham Aarabi, a professor in the Edward S. Rogers Sr. Department of Electrical & Computer Engineering, in partnership with Mount Sinai Hospital, the app uses the phone's motion detector to measure the intensity, frequency and consistency of withdrawal-caused body tremors as the patient holds the phone.

The app analyzes the measurements to determine whether someone needs psychoactive medications to treat their withdrawal, or whether they are merely gaming the system to gain access to the drugs.

"We can determine whether the person has a real tremor

or is faking it," Aarabi says. "And if they have a real tremor, how severe is it? Are they in severe alcohol withdrawal or is it more subtle?"

Currently, diagnosis is labour intensive, requiring multiple measurements spread out over several hours. Aarabi's app makes collecting and analyzing measurements easier.

Tremor frequencies tend to be higher among genuine sufferers than fakers, Aarabi says. But the most illuminating data concern consistency. "Real tremors are more constant," he says. "Fake tremors tend to vary a lot more. Initially they are more intense, and as time goes on, the person becomes tired, and the tremors become less intense."

The app is currently being evaluated and fine-tuned at several Toronto hospitals.

"The app in its current form is on par with a junior physician, slightly less accurate than a senior physician," Aarabi says. He and his team are already working on improvements, as well as seeking additional applications. "One direction I'm interested in is expanding this to diagnosing and assessing other tremor-related diseases like Parkinson's."

Once medically validated, the app will be available for free.

– PATCHEN BARSS

TD Insurance
Meloche Monnex

Chart the best course for your life in the years ahead.

Start with **preferred insurance rates.**

**On average, alumni
who have home and auto
insurance with us
save \$400.***

Supporting you...
and the University of Toronto.

Your needs will change as your life and career evolve. As a **University of Toronto graduate**, you have access to the TD Insurance Meloche Monnex program, which offers preferred insurance rates, other discounts and great protection, that is easily adapted to your changing needs. Plus, every year our program contributes to supporting your alumni association, so it's a great way to save and show you care at the same time. **Get a quote today!**

Our extended business hours make it easy.
Monday to Friday: 8 a.m. to 8 p.m.
Saturday: 9 a.m. to 4 p.m.



HOME | AUTO | TRAVEL

Ask for your quote today at 1-866-296-2168
or visit melochemonnex.com/utoronto



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 Crémazie, Montreal (Quebec) H2P 1B6.

Due to provincial legislation, our auto and recreational vehicle insurance program is not offered in British Columbia, Manitoba or Saskatchewan.

*Average based on the home and auto premiums for active policies on July 31, 2014 of all of our clients who belong to a professional or alumni group that has an agreement with us when compared to the premiums they would have paid with the same insurer 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.

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



Hanna Janossy is the co-founder of Syncadian. She and colleague Ryan Love are working with U of T's Creative Destruction Lab - one of seven business accelerators on campus - to build their company

By **John Lorinc**
Photography by **Anya Chibis**

From Dream to Reality

Canada's next billion-dollar tech start-up
might just come from U of T

ON THE AFTERNOON OF SEPTEMBER 19, Hanna Janossy raced into the Rotman School of Management's striking glass-and-brushed-steel building and took her place at the presenter's table in a second-floor conference room. The lanky 23-year-old engineering grad had just flown in from Rome, where she was attending a medical conference, and had hurried back to the St. George campus.

Janossy was booked that day for an intensive series of back-to-back interviews with Rotman MBA students. The meetings would serve as preparation for a session two weeks later with members of the Creative Destruction Lab's "G7" – a panel of successful entrepreneurs who select a handful of teams to enter Rotman's three-year-old business accelerator.

Despite the long flight, Janossy didn't have jet lag. For the past year, she has immersed herself in the science of circadian rhythms and has developed a research-based technique for avoiding traveller's fatigue. In fact, based on a gut feeling about the market potential for this knowledge, she and a colleague, Ryan Love, established a company called Syncadian, with an eye to helping travellers and shift workers manage fatigue.

By this past summer, the tiny firm had evolved to the point where Janossy and Love figured they could take a shot at getting into the Creative Destruction Lab, which selects 18 ventures per year from a field of more than 130 applications. The two scientists faced dozens of tough, probing questions over the course of the afternoon about everything from the

focus of their business venture to privacy issues. Afterwards, Janossy recalls feeling euphoric. “There was a big intellectual adrenalin rush.” But as she and Love reflected on their admittedly uneven performance that day, they weren’t filled with optimism. “We felt there was no way we’d been accepted.”

That hunch, as it transpired, proved to be wrong.

As aspiring entrepreneurs, Janossy, who is finishing a master’s degree in industrial engineering, and Love are aiming to join a club of tech-savvy innovators who increasingly define both the trajectory of our economy and the way we live our lives. Anyone who uses a laptop, carries a cellphone and communicates via social media lives in a world summoned to life by driven, creative people with the vision, guts and networks to create products and services we never knew we’d come to value so highly. Indeed, the early years of the 21st century are defined by iconic entrepreneurs – Steve Jobs, Mark Zuckerberg, Larry Page and Sergey Brin – in the same way Henry Ford, Andrew Carnegie and J.P. Morgan loomed large over the early 20th.

Some business empires accrue to those with the luck to be in the right place at the right time. But as those who have sought to reverse-engineer entrepreneurship will understand, the innovation process, though fraught with the ever-present threat of failure, is not as random as many people believe.

“The ideas are the easy part,” says Will Mitchell, a strategy expert at Rotman and the Anthony S. Fell Chair in New Technology and Commercialization. He points out that once you peel away the mythology surrounding Microsoft’s creation, you can see that Bill Gates pursued a path of discovery that entrepreneurship experts constantly emphasize with aspiring innovators such as Janossy and Love. “He didn’t start with a product,” Mitchell observes. “He started with a sense of what people wanted to do.”

Indeed, successful entrepreneurs have figured out how to refine a discovery so the resulting product or service solves

real problems and makes life easier, more efficient or less expensive for their target audience. In other words, the process of bringing a novel technology to market requires entrepreneurs to search relentlessly for unsolved problems, talk to potential customers and reorient their work to reflect what they’re learning about the market.

While many start-ups take root outside universities, many research institutions are looking to create the conditions that allow teams of student entrepreneurs to learn the “ideation” process, network with customers, colleagues and investors, and gain “artisanal” knowledge by working directly with seasoned entrepreneurs, says Ajay Agrawal, the Peter Munk Professor of Entrepreneurship, and the founder of Rotman’s Creative Destruction Lab. In doing these things, he says, start-ups learn to identify and then achieve key strategic milestones. “This process breaks down how to get from A to B.”

U of T, like many research universities, has had a commercialization office since the early 1980s. But it’s only in the last few years that the university has set up facilities designed to help both undergraduate and graduate students identify and refine good ideas, create business plans, set up companies and launch products or services. Last year, efforts were begun to integrate these business incubators and accelerators. And in October, U of T received a \$3.1 million grant from the Ontario government’s campus commercialization program, the proceeds of which will go towards further bolstering the university’s entrepreneurship ecosystem.

Scott Mabury, vice-president of university operations, was a key player in bringing all of U of T’s campus incubators and accelerators under the umbrella of the new Banting & Best Centre (see below). The goal, he says, goes well beyond the traditional revenue streams that flow back to the university in the form of licensing fees from commercialized research. As he points out, university-gestated start-ups provide employment opportunities and real-world experience to students facing uncertain job markets.

OPEN FOR BUSINESS

U of T launches the Banting & Best Centre, one of North America’s largest entrepreneurial hubs

With seven business accelerators underway and another in the works (see p. 33), and more than 50 courses, programs, labs and clubs devoted to entrepreneurship, U of T offers a huge variety of resources for students and faculty who think they have the next big idea. Now, the university is bringing these pieces together conceptually under the Banting & Best Centre. Named for two of the men credited for discovering insulin at U of T, the centre will help members of the U of T community navigate the university’s vast entrepreneurial ecosystem. Visit entrepreneurs.utoronto.ca.

U OF T ACCELERATORS

CREATIVE DESTRUCTION LAB
Rotman School of Management
creativestructionlab.com

FOCUS: Information and communications tech
ENROLMENT: 130 applicant companies; 18 admitted; one team is cut from program every two months
FUNDING: Potential investment by a successful entrepreneur
SERVICES: Mentoring with a successful entrepreneur; working with MBA students

THE HATCHERY
Applied Science & Engineering
hatchery.engineering.utoronto.ca

FOCUS: Engineering
ENROLMENT: 13 mostly undergrad teams admitted from 50 applicants
FUNDING: \$5,000 summer fellowship, plus grants from a prototype fund
SERVICES: Mentorship, business support



For the past year, Hanna Janossy, a graduate student, has immersed herself in the science of circadian rhythms. She and colleague Ryan Love co-founded Syncadian, a company to help travellers and shift workers manage fatigue. They're among the dozens of U of T students and alumni gunning for business with the help of a campus incubator.

"U of T is a top research university," adds chemistry professor Cynthia Goh, who is the director of the Impact Centre and began developing entrepreneurship courses for undergrads at U of T more than a decade ago. "We want to capture that and give value to society."

Hanna Janossy hails from a long line of woman engineers, going as far back as one of her great-grandmothers. "As a girl growing up," she says, sitting in a nook in an incubator suite at the MaRS Discovery District, "I was destined to be an engineer." Her father is an inventor – and an inspiration. "I knew from kindergarten onwards that I would be an entrepreneur. That was never a question. The only question was, in what field?"

A precocious kid, Janossy learned how to captain a sailboat, making her one of the youngest independent sailors in Canada. Later, in her teens, she decided to play violin, and raced through the exams at breakneck speed. Still later, at U of T, Janossy didn't pay much attention to the difference between undergraduate and graduate courses, and somehow finished most of her master's degree in fourth year.

While pursuing industrial engineering, she gravitated towards fields such as systems optimization and so-called "human factors" design – how to build things that people can use. Her interests spilled over into biophysics. Janossy spent a semester in Budapest studying that field (her family is originally from Hungary) and another in Zurich, soaking up the latest research on bio-electronics.

The entrepreneurial aspirations clicked in during a fourth-year "capstone" assignment, when she ended up doing a course-based project with the research arm of the Department of National Defence. After lobbying one of the staff for an interesting task, she found herself assigned to a team focused on fatigue research.

The military, she says, had been dealing with fatigue-related accidents and had created a new rest policy, "but there were

THE HUB UTSC

blog.utsc.utoronto.ca/thehub

FOCUS: Information and communications tech

ENROLMENT: 26 undergrads currently enrolled; 10 projects

FUNDING: None

SERVICES: Work stations, break-out space, board-rooms, MaRS workshops, mentorship

I-CUBED

U of T Mississauga

utm.utoronto.ca/imi

FOCUS: Open to all disciplines; undergraduate, graduate, alumni

ENROLMENT: Ramping up to 10 teams, 50 students

FUNDING: Modest stipend to be determined

SERVICES: Meeting/office space in the Institute for Management and Innovation, 3-D printer, workshops, hackathons, mentors

THE IMPACT CENTRE Arts and Science

impactcentre.utoronto.ca

FOCUS: Natural sciences
ENROLMENT: 30 companies currently enrolled, mostly grad students and post-docs; 70 start-ups since 2010

FUNDING: None

SERVICES: Office/lab space, small-scale production; mentorship, networking

TECHNA INSTITUTE U of T and UHN

technainstitute.com

FOCUS: Medical technology
ENROLMENT: 43 principal investigators, engineers, post-docs, medical trainees

FUNDING: Principal investigators raise own project funds from industry, grants

SERVICES: Equipment, project management, financial services, software engineering

UTEST U of T and MaRS Innovation

FOCUS: Early-stage software companies

ENROLMENT: 80 to 100 applicant teams a year, five admitted

FUNDING: \$30,000 per company

SERVICES: Office space, MaRS workshops, mentoring. U of T takes 2.5%; MaRS Innovation takes 2.5%, with option to invest up to \$200,000 in second round of funding



From left: Stefan Attig, Ashrith Domun and Tian Tian want their company, Hydron, to equip U of T's shuttle buses with hydrogen fuel cells

TESTING THE WATERS

U of T offers undergrads the chance to try being entrepreneurs – without any of the risk

Ashrith Domun, a third-year chemical engineering student, was learning about business plans in an entrepreneurship course when he stumbled across what he reckoned was a good market opportunity: business incentives meant to kick-start the sluggish hydrogen fuel cell industry. “It seemed like a green light all the way.”

This past March, he pitched his roommate, Stefan Attig, a fourth-year student in environmental studies, on joining forces to apply for a spot at the Hatchery, a three-year-old business accelerator run by the Faculty of Applied Science and Engineering. An engineering science student, Tian Tian, approached Domun and Attig about joining the team and the three put in a pitch. Several months later, they’re working on a plan to operate buses equipped with hydrogen fuel cells. They’re testing the commercial viability of their plan with a proposal for the shuttle bus service between U of T’s Mississauga and St. George campuses.

The Hatchery serves students in the earliest stage of the entrepreneurship “ecosystem” at U of T, offering undergraduate teams that include at least one engineer an opportunity to launch start-ups, based on a strong idea that solves customers’ problems. Each team is assigned a private-sector mentor and receives help with registering patents and creating a business plan. UTSC has launched a similar early-

stage innovation centre, known as The Hub, and, in February, U of T Mississauga will open its own version, I-Cubed.

Joseph Orozco, who co-founded the Hatchery, says the program has attracted multi-disciplinary teams working on wearable technology, medical applications and software. A few have gone on to commercialize their products. One Hatchery start-up, FuelWear, which makes thermal garments that heat up when you’re feeling cool, has raised \$80,000 on a crowdfunding website.

Basic start-up advice and feedback are key components of the Hatchery’s program, whose students likely have no business experience. Domun says meetings with other hydrogen entrepreneurs gave his team a feel for the gaps in the Canadian market, validated their assumptions about the industry and provided contacts with potential equipment suppliers. At the Hatchery’s “demo day,” Domun’s team, called Hydron, presented its plan to other students and mentors.

The feedback they got throughout the Hatchery process prompted Hydron’s partners to reorient their game plan. The original idea was to build a hydrogen refuelling infrastructure for the province, but they learned that the sector is dogged by a chicken-and-egg problem: refuelling infrastructure only generates a return if there are vehicles, but no one purchases vehicles because there’s no refuelling infrastructure. With their revised market strategy – running corporate vehicle fleets using fuel cells – they also learned the importance of a compelling sales pitch. “The Hatchery makes you do things that you don’t think are important,” says Domun. “They forced us to focus on communications a lot.”

– JOHN LORINC

no guidelines to help soldiers shift their circadian rhythms.” The fatigue researchers had published lots of studies with detailed graphics, but they came to the realization that these documents did little to help military personnel.

Janossy’s capstone project was a smartphone app that allowed users to input variables such as sleep patterns, flight details and destinations, and generate a tailored schedule with suggested times for going to sleep, waking up, taking naps, taking melatonin and seeking and avoiding light.

After completing the project, Janossy partnered with Ryan Love, then a post-doctoral fellow in biomedical engineering at U of T who was also working on fatigue with the National Defence research group. Together, Janossy and Love decided to explore the commercialization potential of circadian rhythm research and applied for a position with the UTEST incubator. A partnership between U of T and MaRS Innovation (a not-for-profit organization independent of the MaRS Discovery District), UTEST each year offers five entrepreneur teams a one-year \$30,000 grant, office space and access to mentoring and company-building workshops. In exchange, U of T and MaRS Innovation each receive a 2.5% equity stake in the company. The teams, which almost always work in digital technology, can also rely on help from the commercialization experts at U of T’s tech transfer office, says Kurtis Scissons, who manages UTEST.

Since they set up shop at UTEST in the summer, Janossy and Love have been immersed in a prolonged “ideation” phase, generating several potential products, including a jet lag app for travellers and a disposable, do-it-yourself melatonin levels tester. They’re also partnering with a scientist who devised a software model that enables companies and institutions to schedule individual shift workers so they’re not on the job when they’re most likely to be tired. The two principals at Syncadian have also been looking at the potential savings for companies that adopt their technology. “Jet lag is a rather small market,” observes Janossy. But the industry for treating fatigue and sleep disruption, she adds, is worth billions of dollars.

The big opportunities, she continues, will come from corporate or institutional customers willing to buy services related to Syncadian’s modelling software as a way of measuring the cost of retaining additional staff on night shifts whose main role is to catch mistakes committed by fatigued shift workers.

During their session with the G7 in October at the Creative Destruction Lab, Janossy and Love were grilled energetically about how they’d monetize their products, how unions would respond to the scheduling system, and what happens if they can’t build good software – a notoriously tricky aspect of any tech venture, especially if attempted quickly.

To their surprise, Janossy and Love learned the next week that they’d been admitted to the program and soon found

Budding entrepreneurs often struggle to use their best judgment as they launch a new business. Founders face hundreds of choices about how to allocate their time and energy. If they choose poorly, and focus on minutiae, the company will run out of energy and capital

themselves in a follow-up session, during which they were given some key milestones to achieve over the next two months. “It’s very simple to explain and very difficult to do,” muses Janossy about their marching orders. The gist: that Syncadian is developing too many products geared at too many markets. “We should focus on one really niche market and own it and prove we’d really be successful there.”

Agrawal observes that budding entrepreneurs often struggle to use their best judgment as they launch a new business. Founders face hundreds of choices about how to allocate their time and energy. If they choose poorly, and focus on minutiae, he says, the company will run out of energy and capital. What’s more, Agrawal adds, many university business accelerators fail to teach venture teams about the art and science of making strong, forward-looking choices. “There’s a failure in the market for judgment,” he says.

When Rotman was developing what became the Creative Destruction Lab, Agrawal says, the faculty looked at other university-based accelerators and then decided to develop a unique model intended to avoid shortcomings, such as providing ventures with too much coddling and not enough world-tested guidance. Each team is assigned a mentor – Syncadian’s is Michael Serbinis, an angel investor who co-founded Kobo, the e-reader company. The mentor pushes ventures to focus on the things that matter, and ask tough, probing questions about the viability of their business model.

Agrawal also notes that the Lab deliberately chose not to offer facilities, support services or capital, although some teams have landed early-stage equity investments from their G7 mentors. (Rotman MBA students also help some of the teams, and sit in on the G7 “summits,” which take place every two months.) What’s more, the G7 cuts at least one team after every summit, a structure that’s intended to inject some real-world tension into the exercise. “It’s in the rule set and everyone knows that,” says Agrawal. “We’ve tried to bake into the design a certain type of pressure that is measured.”



Grad students Scott McAuley (left) and Leo Mui aim to help hospitals control the spread of infections

FROM LAB TO LIVELIHOOD

Science graduate students learn how to turn cutting-edge research into viable businesses

While pursuing graduate work in chemistry, Leo Mui and Scott McAuley discovered that in most hospitals, infection control has become a serious issue: one in 10 patients now develops an infection while admitted for other medical problems.

Working from lab space at U of T's Impact Centre – an accelerator for students in the natural sciences and engineering – Mui and McAuley formed a company, Lunanos, and began developing a new surface disinfectant. Soon, though, the plan changed. Cynthia Goh, the director of the Impact Centre, suggested that Mui and McAuley ask hospital infection control experts what specific problems they face. Based on these discussions, Mui and McAuley recast their idea, focusing instead on finding a way for hospital staff to determine if the thousands of pieces of moveable equipment – wheelchairs, IV poles, etc. – in every institution have been properly cleaned in a timely way. Mui says he and McAuley subsequently attended an infection control conference and talked to as many attendees as they could.

The result: a plan to develop a permanent, reusable sticker, that takes on a new colour for 12 hours after it's been dabbed with hospital disinfectant. The adhesive markers, Mui explains, would be affixed to every rolling piece of equipment in a

readily visible spot, revealing to hospital staff whether it has been cleaned. Lunanos is now developing a prototype, which will be tested in hospitals in Toronto and the Philippines in coming months.

Lunanos is one of 30 start-ups currently working out of the Impact Centre, which is outfitted with prototype equipment, wet labs and common areas where the principals with the different firms can exchange ideas. "There's no other space at U of T where you can have a chemist and an engineer sitting side by side, developing the next product," says Goh, adding that 70 ventures have come through the Impact Centre since it launched in 2010.

The program is aimed at aspiring entrepreneurs with solid scientific credentials – primarily grad students and post-docs who are conducting cutting-edge research. There are no timelines. "We don't want to interfere with the research," Goh says. "We go at the pace of the students." Yet Goh stresses that applicants must demonstrate a willingness to learn about technology and entrepreneurship, including the necessity to shift gears. "You're perpetually reassessing."

Goh and the other Impact supervisors offer mentoring, technical and entrepreneurial advice, and contacts from their networks. Some companies working out of the Impact Centre have a handful of employees and some revenues, but none are yet profitable. Indeed, most operate like Lunanos – bootstrapping their way to commercialization. Mui and McAuley have secured grants and consulted with firms that make chemical disinfectants. And they are following Goh's advice: "The only way you can understand the market," she says, "is by getting out there." - JOHN LORINC

Jesse Rodgers, the Lab's director, adds that the selection process seeks to identify entrepreneurs with passion, a technology that can be scaled up for a mass audience and a proven capacity to stick with a demanding process. The evaluators, he adds, take care not to be won over by a slick presentation or a buttoned-up business model. "We want to make sure we don't miss the ones who can't communicate well," he says. "I look for the ones with technology I can't easily understand. If we miss those people, then we're not doing our jobs."

What's apparent is that the Lab's talent-spotting technique is producing results. One company that recently graduated from the program – Whirlscape, which has created a new kind of virtual keyboard – has raised \$500,000 from angel investors including Y Combinator, a high-profile California accelerator, and BDC Ventures. Another is Bionym, which is selling a wristband that uses a person's unique cardiac rhythm as a password for various devices. The company initially raised \$1.4 million and then secured a second round worth \$14 million, says Rodgers.

In fact, the Creative Destruction Lab itself has far exceeded its goals. Rodgers says the Lab targeted \$50 million in equity creation by its graduating companies over the first five years of its existence. But in the first year, the companies brought in \$65 million, and the second cohort doubled that figure. Today, he adds, the Lab's 10-year plan is for its graduates to have generated \$1 billion of equity.

One cool morning in early November, Janossy and Love turned up at Michael Serbinis's office in the MaRS building, where he's developing League, his recently announced health-care start-up. It was the first tête-à-tête with their G7 mentor and so Syncadian's founders began by grilling Serbinis about why he'd chosen to mentor them. The reason, Serbinis explained, was that they were in a field connected to health and he could see potential synergies down the road.

After Janossy and Love pitched a more detailed version of their vision, Serbinis offered some advice on what they'd need to do to avoid getting cut at the next G7 summit, set for December. He said they'd need to figure out how to gain "market traction" by refining their sales pitch and planning how to get themselves in front of the right people in the companies they're targeting. If Syncadian's aim is to use a foothold in the world of small-scale manufacturing as leverage to graduate to larger organizations, such as hospitals or auto parts factories, Janossy realized they'd need to persuade the G7 with more precise estimates of the potential market size. "We didn't have those numbers."

Coming out of the session, Janossy and Love nonetheless felt they had a game plan of sorts: they'd use a few personal contacts in the manufacturing world to field test their scheduling software on shift workers as a means of showing how these firms can use the product to identify when their

workers are most fatigued, and then schedule accordingly. After working out the bugs and making sure there's a good value proposition, Janossy says, they could tackle "the big guys": hospitals, automotive giants, oil and gas rigs.

At present, they're focused on those specific milestones, but Janossy and Love know there will be a time when they leave the Creative Destruction Lab and must face alone the challenges and risks associated with getting their fledgling company off the ground. They've talked often about the entrepreneurial lifestyle, and all the associated questions: money, family, ambition, exit strategies. Mostly, though, they come back to their shared desire to solve a dilemma that afflicts so many people.

"Fatigue is a huge, growing and solvable problem," Janossy reflects a few hours after meeting with Serbinis. "We're very motivated to put in our two cents."

Journalist John Lorinc (BSc 1987 UC) covers politics and business for *The Walrus*, *Spacing* magazine and *Canadian Business/Profit*, where he writes a weekly column about entrepreneurs who export. He is the author of *The New City: How the Crisis in Canada's Urban Centres is Reshaping the Nation* (2006).

Alumnus Elevates Entrepreneurship with \$1-million Donation

Philanthropy key to supporting student inventors



Francis Shen

U of T's aim to help students create the next generation of successful Canadian companies got a lift this past summer from Francis Shen (MAsc 1983), who built his own multimillion-dollar business right out of grad school.

Shen has donated \$1 million to U of T's Institute for Aerospace Studies to develop an entrepreneurship incubator, providing future engineers with the kinds of competencies and opportunities

he's gained over decades in business.

"I want to show graduate students that there are more options than simply finding a job after you graduate," says Shen. "Instead of working for someone else, you can create jobs for yourself and others, building prosperity within your community and giving back to your economy."

Shen's program will provide mentorship, networking and funding to participants with promising ideas, while encouraging collaboration amongst the groups.

"The Institute for Aerospace Studies is an ideal place for an entrepreneurship program of this type," says Prof. David Zingg, director of the institute. "Our cutting-edge research has the potential to be commercialized in so many different areas, both within and outside aerospace, as has so often been demonstrated in the past."

In 1983, Shen founded Aastra, a research and development consulting firm that rapidly grew to become North America's largest provider of caller ID units. The firm recently merged with Mitel Networks Corp. for a combined worth of more than \$1 billion. The merged company serves more than 60 million customers around the world.

Shen looks forward to being involved with the program and seeing students progress. "I want to do something meaningful with my time and with my resources," he says. "I want to give back to the place that helped me get my start."



Since becoming CEO of Canada Goose in 2001 at the age of 27, Dani Reiss (BA 1997 Woodsworth) has built the company into one of Canada's most recognized brands

By **Marcia Kaye**
Photography by **Daniel Ehrenworth**

the reluctant CEO

Arts grad Dani Reiss wanted to become a writer,
then realized there was more than one way to tell a story

THE LAST THING DANI REISS WANTED TO DO WITH HIS LIFE was go into the family business. Manufacturing winter jackets? No thanks. He'd seen how hard his parents worked at Canada Goose, the Toronto-based apparel company his grandfather had founded, and he envisaged a more creative life for himself. Armed with a BA from U of T, he would travel the world and write. Not a novel – his attention span wasn't long enough for that – but he thought he could write and sell short stories.

His parents, David and Marilyn, agreed that Dani shouldn't plan to take over the shrinking company, which they were in the process of downsizing from 100 to 35 employees. It was simply too stressful, and David was heading toward burnout.

“We weren't that encouraging for Dani to start working there,” recalls Marilyn (BA 1967 UC), a U of T arts grad herself and a former English and history teacher before joining the family company. “But compared with travelling to India to write, we thought the business might be the better option.” Besides, Dani needed some travel money, so he agreed to work for three months, focusing on boosting sales. To no one's surprise, he didn't like it at all. At first.

But several events conspired to sharpen his interests in the company and cause him to abandon his travel plans. He started reading letters from satisfied customers, people who couldn't have done their outdoor jobs if not for the company's

With revenues more than 40 times what they were a decade ago, Canada Goose sells about 500,000 jackets annually in over 50 countries, and is valued at an estimated one-quarter of a billion dollars

jackets. He accompanied his dad to a trade show in Germany, where he discovered that Europeans valued the “made in Canada” aspect of Canada Goose. Increasingly, he was encountering people who had worn the company’s survival jackets in the coldest places on Earth, trekking to the South Pole, filming documentaries on polar bears in Siberia or conquering the world’s highest peaks. Each had a fascinating narrative, and the company’s outerwear products were a meaningful part of that. Not only was it all becoming enjoyable, but it appealed to Reiss’s pursuit of storytelling.

There’s more than one way to write a story, he realized, suddenly galvanized. Instead of writing fiction, here was something tangible and authentic that he could develop. Building the company’s brand could be a creative process.

And a lucrative one too. Reiss stayed with the company, taking over from his father as CEO in 2001 at age 27. Since then, Canada Goose has become one of the country’s most successful luxury brands. The signature down-filled jackets bearing the distinctive red-blue-and-white insignia are now as ubiquitous on city streets as on oil rigs and Arctic expeditions. With revenues more than 40 times what they were a decade ago, the company sells about 500,000 jackets annually in over 50 countries, and is valued at an estimated one-quarter of a billion dollars. “I love this company, I love the freedom and creativity, and I love coming to work every day,” Reiss says.

Reiss, 41, a married father of two, is one of a new breed of contemporary CEOs who have developed careers in business without the benefit of a business degree or even a single business course. (Today, fully one-third of all CEOs of Fortune 500 companies have a liberal arts degree.) But then, Reiss has never followed a formula. He’s only ever followed his instincts.

A quiet boy growing up in Toronto’s Forest Hill neighbourhood, he wasn’t much for math or science and didn’t do many sports, but he loved reading. “His favourite book was *The Lord of the Rings*,” recalls Marilyn. Uninspired by the curriculum at his local high school, Reiss transferred to City School, an alternative program focusing on student-centred learning

and ethical citizenship. “It was much more liberal, more creative, and I loved it,” he says. “I’ve always been the kind of person who doesn’t like being told what to do. I like doing things my way.” After graduation he travelled around Europe, again flouting convention. Instead of the usual backpacking and hostelling route, he and his then-girlfriend bought a Citroën AX supermini and lived in the car for a year.

Back home, now a student at U of T’s Woodsworth College, Reiss took courses in his areas of interest – mainly English lit and philosophy, including several ethics courses – and didn’t worry about where they would lead. “I never thought, what am I going to do with this degree? I wanted it for myself.” He didn’t worry about marks, either, often eschewing straightforward essay topics for tougher, more challenging ones. “I figured that getting a BA is important, but how important is getting a 90 in English as opposed to an 80 or a 70?” says Reiss, who ended up with a respectable roster of mostly Bs, with a few As and Cs. Reiss’s natural shyness kept him from contributing much in tutorials. “I think I had a ton to say, but I wasn’t confident enough to speak publicly.” (He admits he still gets very nervous before speaking engagements but pushes himself to do it. “To me, your own personal challenges are more fun than challenges that other people present to you.”)

During his time at U of T, Reiss and two buddies continued running a small computer company in his parents’ basement that they had started in high school, tallying statistics for sports pools – a service that was in demand at a time before stats were easily available online. With such a time-consuming extracurricular, it took him more than four years to finish a three-year degree, graduating in 1997.

While Reiss always respected the history of the family business, it had never beckoned to him. Canada Goose was started by his grandfather, Sam Tick, a denture maker from Poland who, unable to find work in his field when he immigrated to Canada, took a job as a cutter in a garment factory. After a few years, urged by his wife, he opened his own shop, Metro Sportswear, in 1957 and hired six sewers to make woollen garments and snowmobile suits to sell to northern workers. The company was profitable enough to allow Tick to support his family. When son-in-law David took over in the mid-1970s, he invented a down-filling machine, which revolutionized the industry. He also launched the Snow Goose brand. But since that name was already registered in Europe, he called the Europe-destined products Canada Goose; everything else was Snow Goose.

When 24-year-old Dani became involved the summer after graduating from Woodsworth, he quickly learned about the power of branding. As a teenager he had been so opposed to any show of branding that he had cut the green alligator logo off the Lacoste shirts his mother had bought him. “I used to think brands were pretentious,” he says. “I didn’t understand that some of these brands weren’t just showy and flashy but had substance behind them that meant something and that people could relate to.” He discovered not only that customers

valued the quality of the jackets but that the Canada Goose label had a special appeal in places that romanticized Canada as a land of open wilderness and crisp winters – the kind of place where people would know about a good, warm, hooded parka. In some circles, the high-end jackets were becoming a status symbol. Formerly available only for men, women in Stockholm were snapping up men's XS sizes. (Women's wear now slightly outsells men's.) Canada was not only cold, Reiss realized; Canada was cool. And this meant that the jackets, always known to be warm, could potentially become hot.

This led Reiss to two key decisions. He made the first decision soon after taking over, the second one a few years later. He abandoned the Snow Goose name and renamed the whole company Canada Goose. And, while many apparel companies were moving their operations to cheaper factories in Asia, he decided to keep 100 per cent of the manufacturing in Canada. "People in the world today want real things," he says simply. "We have an authentic story, a real product that really works, and there aren't a lot of real brands left in the world today." That decision meant consistently high quality but also high prices. Today, the jackets retail from \$450 to \$1,200, and they're never discounted.

"Keeping operations in Canada was a very bold move of Dani's," says friend and colleague Jordan Banks. Facebook's global head of vertical strategy and managing director of Facebook Canada, Banks knows branding. "Dani is an incredible patriot, a visionary and a brand builder." To those who suggest Reiss simply inherited a successful company and took it up a notch, Banks says, "What people forget is Dani transformed a sleepy little business and is now stewarding one of the great brands of his generation."

In October, the company held the grand opening of its new global headquarters and 8,300-square-metre factory in west-end Toronto. It also recently expanded its Winnipeg production facility. The total workforce tops 1,000. Notable Canadians of all types are happy to align themselves with the product as brand ambassadors, including mountaineer Laurie Skreslet, the first Canadian to summit Mount Everest; ultra-marathoner Ray Zahab, who's run or trekked across several continents, including Antarctica; rapper Drake, sporting a \$5,000 limited-edition bomber jacket with 24-karat gold-plated detailings; and, most recently, top-ranked tennis star Milos Raonic, now endorsing the company's lighter outerwear.

Over the past few years Canada Goose jackets have increasingly cropped up in Hollywood (on Nicolas Cage, Matt Damon, Hilary Duff). Last year the company became the official outerwear sponsor of the Sundance Film Festival in Utah. Growth is strong even in locales where the temperatures rarely dip below freezing, such as Tokyo. And, in February 2013, the company landed the ultimate magazine cover, the *Sports Illustrated* swimsuit edition, with supermodel Kate Upton rocking an unzipped Canada Goose white-fur-trimmed parka

over nothing but a bikini bottom. Canada Goose was now, officially, hot.

With that hotness comes the risk of counterfeiting, which has become such a problem for the company that its website, in addition to the usual links for "customer care," "careers" and "contact," also lists "counterfeit." The fake jackets, usually made in Asia and sold in flea markets or on rogue websites, may look like the real thing but instead of premium goose down (a byproduct of the poultry industry) they may contain a feather mulch complete with mould, feces or sweepings from a factory floor. The trim around the parka hoods, for which Canada Goose uses coyote fur because it doesn't freeze or hold water, in the bogus coats could be from raccoon or even dog. Attempting to stay one step ahead of the counterfeiters, in 2011 Canada Goose began adding difficult-to-reproduce holograms to the tags sewn into every product.

The use of *any* fur at all has brought criticism on Canada Goose from animal rights supporters. "If coyotes were endangered, we wouldn't use coyotes," Reiss responds. "But coyotes are overpopulated." Indeed, some provincial governments have put bounties on the animals. "We use only Canadian coyote, it's all hunted wildly – we won't buy from fur farms – and we're supporting Canadians who've been hunting and trapping for generations." He adds, "I think we're doing the right thing. Some people don't. That's cool. I understand. U of T taught me that – to respect diversity of opinion."

The company has also been chastised on social media since announcing in December 2013 it had sold a majority stake to U.S. firm Bain Capital, the Boston-based private equity giant co-founded by failed presidential candidate Mitt Romney. Horrified critics posted angry comments online, such as "Goodbye Canada, hello Bangladesh" and "Now with American ownership, the warm and fuzzy feeling I have is dissipating."

Reiss isn't fazed. "Nothing about the company has changed at all," he says. "My partners at Bain are very much behind our made-in-Canada philosophy. We want to become a truly enduring Canadian brand, and the way we've chosen to finance our company does not in any way take away from that." Manufacturing will continue to be 100 per cent in Canada, he promises, but the additional resources will help grow markets, especially in the U.S. "People have told me before I've done the wrong thing, but I know what's right for this company." Bain has invested in other growing Canadian businesses – notably national chains Dollarama and Shoppers Drug Mart.

Meanwhile, Reiss has been ramping up his company's philanthropic activities. Canada Goose spent a long time looking for a charity that could be integrated with the company's values. It chose Polar Bears International, an organization dedicated to saving sea ice, the bears' main habitat. Since two-thirds of the world's polar bears live in Canada, Reiss sees it as a Canadian leadership issue to increase awareness of climate change in the North, where the company's first customers lived and worked. There's

Reiss has visited many of the world's coldest spots, including the geographic South Pole, an experience he describes as "super-awesome"

a Canadian board, based in Winnipeg, as well as a U.S. one; Reiss chairs both. He sees no contradiction between his company's use of fur on the one hand and his support of animal habitats on the other. "Polar Bears International is not an anti-hunting organization. First Nations and Inuit people in northern Canada hunt polar bears and PBI does not think that's wrong. PBI stands for the preservation of polar bear habitats so that our grandchildren and future generations can see polar bears in the wild."

Canada Goose's other major philanthropic work involves sending discontinued fabrics, zippers and other sewing supplies to the North, where coat-making talent is abundant

but materials scarce. There are now four Canada Goose Resource Centres – in Pond Inlet, Rankin Inlet, Iqaluit and Kuujuaq – where local sewers can help themselves freely to supplies.

Reiss has visited many of the world's coldest spots, including the geographic South Pole, an experience he describes as "super-awesome." Canada Goose's chief marketing officer, Kevin Spreekmeester, says Reiss's enthusiasm is genuine. "When you see Dani experience something new, you can feel his excitement," Spreekmeester says. "A couple of years ago we were in Nunavut and Dani jumped out of a boat onto an ice floe in the middle of a fjord. He went for his BlackBerry – which I thought was funny, because there was no reception." But then he realized Reiss wasn't trying to phone or text; he simply wanted to type notes. "You could see how inspired he was, the emotions and thoughts just flowing."

While Reiss still does a little writing these days, he's not ready to publish, least of all his memoirs. First, he doesn't have the time. (Such a workaholic, says his mother Marilyn: "Sometimes I think his BlackBerry is an extension of his body.") Second, he says the story is only half written. He doesn't know how far the company can go, nor whether he'll be passing the business down to his children, who are now only six and three. All he knows is that the story will continue. "Give me some more time," he says, smiling. "I'm not done yet."

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

CALL FOR NOMINATIONS FOR CHANCELLOR OF THE UNIVERSITY OF TORONTO

Nominations open on Friday, December 12, 2014 at 12:00 noon for the position of Chancellor. Nominations must be made in writing and signed by two alumni of the University of Toronto.

Nominations should be sent in confidence to:

The Secretary
College of Electors
Simcoe Hall, Room 106
University of Toronto
Toronto, Ontario
M5S 1A1
416-978-6576

The deadline for receipt of nominations is Friday, January 9, 2015 at 4 p.m.

For further information on the election process for the Chancellor, please visit:
<http://www.governingcouncil.utoronto.ca>



UNIVERSITY OF
TORONTO

The College of Electors invites nominations for the position of Chancellor of the University of Toronto for a three-year term commencing July 1, 2015.

The present Chancellor, The Honourable Michael Wilson, is eligible to stand for another term.

The Chancellor is required by statute to be a Canadian citizen.

ROLE OF THE CHANCELLOR

Under the *University of Toronto Act*, 1971, the Chancellor serves as chair of convocation, and confers all degrees of the University. In fulfilling these responsibilities, the Chancellor presides at convocation ceremonies, of which there were 33 in 2014. In addition, the Chancellor serves as Chair of the Committee for Honorary Degrees.

The Chancellor is the titular head of the University and, with the President and the Chair and Vice-Chair of the Governing Council, represents the University to the internal and external community. In this role, the Chancellor is an advocate for the vision of the University as it is articulated by the President and endorsed by the Governing Council. He/she plays an essential ambassadorial role in advancing the University's interests within the local, provincial, national and international arenas.

The Chancellor will be a distinguished person with a record of demonstrated excellence in his/her chosen field and in service to the community. Ideally, the Chancellor will be an individual whose reputation and experience will assist the Chair of the Governing Council and the President in "opening doors" both nationally and internationally.

The Chancellor serves as a volunteer, and receives no remuneration.

EMBA. ASAP.

Learn more about the fastest way to further your career with Canada's top business school. Go to www.getaheadfaster.ca to join an information session on Rotman's Executive MBA Programs.



Rotman School of Management
UNIVERSITY OF TORONTO

The ship Antigua, carrying photographer Daniel Kukla and a group of artists and scientists on a 15-day expedition, anchors in the Arctic Ocean off the coast of Svalbard – about halfway between Norway and the North Pole.





Photography by [Daniel Kukla](#)
Text by [Cynthia Macdonald](#) and [Scott Anderson](#)

Voyage into Ice

MANY THINK SCIENTISTS ARE THE OPPOSITE OF ARTISTS - the former rational and methodical, the latter emotional and creative. But Daniel Kukla begs to differ.

Kukla (BSc 2007 Victoria) believes the two disciplines have a great deal in common, and he should know: before starting his career as a photographer who documents stunning vistas in the natural world, the Indianapolis native studied biology, as well as evolutionary ecology and human anatomy, at U of T.

“Both science and art are incredibly creative,” says the 31-year-old, who’s currently based in New York. “Everything scientists do is based on a hypothesis, and they’re very curious people. But science also involves a lot of observation and research. I use those techniques in my art practice, by collecting images and observing things over time.”

Kukla’s work has taken him across the planet. He often treks through vast, desolate landscapes that hardly seem to inhabit the same Earth as the crowded city he calls home. Most recently, he joined an interdisciplinary group of artists and scientists as they sailed around a remote Norwegian archipelago in the Arctic Ocean. Each day, the band of explorers would roam beaches and glaciers teeming with birds and walruses; except for a small research station, the area was bereft of human beings.

“We had to work within a very tight perimeter because polar bears are a serious issue up there; fortunately and unfortunately, we didn’t see any,” Kukla grins. Handling camera equipment with freezing hands was tough, and there were other dangers too: “I hadn’t realized that when glaciers calve and icebergs fall into the sea, it can actually cause a small tidal wave. At one point we heard an incredible boom, and found ourselves scrambling up the shore to safety.”

Like any scientist in mid-experiment, Kukla isn’t yet sure what the startling images he collected in the Arctic will ultimately reveal. But like any artist, he’s leaving that revelation up to viewers.

Is the evidence he provides of climate change – melting glaciers, newly revealed landforms – expressly political? Kukla says the answer is ours to give. “There are some political notes certainly, but people interpret my work in so many diverse ways,” he replies.

Kukla has also documented American zoo enclosures, salt flats in Bolivia, the behaviour of Bahamian teenagers as they pass a mirrored window, and the quiet beauty of the Sonoran and Mojave deserts. His provocative images of a world beyond the one we see every day are sharp reminders of French artist Edgar Degas’ famous maxim: “art is not what you see, but what you make others see.”



A Rocky, Barren Place

CLOCKWISE FROM TOP RIGHT: A laminated map of the northwest coast of Svalbard hangs in the ship’s dining hall, showing each day’s route and anchoring sites.

Members of the expedition clamber up a mountain during a long hike on the island of Amsterdamøya, at the northernmost part of their journey. By mid-October, the polar night is rapidly approaching, leaving the group with just a few hours a day in which to explore. Much of their time is spent in a dusky twilight, says Kukla.

Looking north across Amsterdamøya reveals a rocky, barren landscape, not far from the edge of the polar sea ice. With no trees or other landscape markings, says Kukla, distances appear compressed. Faraway hills tend to look closer than they are.





Humans Leave Their Mark

CLOCKWISE FROM TOP LEFT: This Russian coal-mining town was abandoned in 1998. Residents left behind everything from clothes to musical instruments, says Kukla.

At Ny Ålesund, a research station, artist Rob MacInnis watches as an ozone-measuring device is lifted into the air.

Unusually calm waters in Magdalena Fjord surround a rocky outcropping, formed by a retreating glacier.

In the early 20th century, airships were launched from Ny Ålesund. In 1926, a team of explorers, including Roald Amundsen, was the first to fly from Europe to North America over the North Pole.

Stones mark the grave site of trapper “Stockholm Sven.” Gun-toting guide Sarah Gerats (in blue) and her dog Nemo scan the landscape for polar bears, a constant threat.





Art in a Frozen Place

CLOCKWISE FROM TOP ROW: Kukla uses a green screen as part of a video shoot. Later, in editing, he will swap out the green for other footage. "I was interested in seeing what I can do in post-production, but also in the contrast that the green makes with the landscape," he says.

In front of the glacier Fjortende Julibreen, Kukla records himself on video reading aloud the entire 2014 report of the International Panel on Climate Change: *Impacts, Adaptation and Vulnerability*. "Reading to a glacier is completely ridiculous," he says, "but I think it speaks to how we're dealing with climate change."

This Polaroid image of mountains is triple-exposed, says Kukla, reflecting his sense of the North as a series of overlapping landscapes, and his desire to push the boundaries of photography. Having returned to his home in New York just over a month ago, Kukla says he's not sure how the Arctic expedition will affect his artistic practice. But he's intrigued by the possibilities. "I'm experimenting," he says.



BOUNDLESS GRATITUDE

The Boundless campaign is strengthening alumni and donor engagement with the university's top priorities and driving new levels of support for students, faculty, research, discovery, innovation and entrepreneurship. This past year, donors contributed to a diverse array of projects and initiatives across our three campuses. Thanks to this support, U of T is developing the next generation of leaders to address global challenges.



UNIVERSITY OF
TORONTO

BOUNDLESS

THE CAMPAIGN FOR THE UNIVERSITY OF TORONTO

With support from 86,840 alumni and friends, Boundless: The Campaign for the University of Toronto is having a meaningful impact on some of the most critical challenges facing our city, country and planet – from addressing climate change and chronic disease to confronting social inequality and driving economic prosperity.

To date, our donors have contributed more than \$1.5 billion toward U of T's highest academic priorities as well as its boldest ambitions. The multiplying effect of this generosity is benefitting every aspect of our university. It's helping to empower the talent to make the discoveries and innovations

needed to tackle a broad spectrum of societal needs and issues. And it's inspiring the leaders, alumni and philanthropists of tomorrow.

The university wishes to express its thanks to the following benefactors who have made landmark gifts to the Boundless campaign of \$1 million or more. We are grateful to all our donors for helping to establish U of T as a philanthropic priority in Canada, and demonstrating their belief in the university's pursuit of accessible excellence. A more extensive list of Boundless donors can be found at boundless.utoronto.ca.

\$25,000,000 OR MORE

The Dunlap Family
The Honourable Henry N. R. Jackman
Russell and Katherine Morrison
Peter and Melanie Munk
—
Heart and Stroke Foundation
The Rogers Foundation

\$10,000,000 TO

\$24,999,999
Paul and Alessandra Dalla Lana
Michael and Amira Dan
John H. and Myrna Daniels
Marcel A. Desautels
Terrence Donnelly
Lynn Factor and Sheldon Inwentash
Goldring Family
Kimmel Family
Sandra and Joseph Rotman
—
City of Mississauga
FDC Foundation
The MasterCard Foundation
5 Anonymous Donors

\$5,000,000 TO

\$9,999,999
David A. Asper
Frances and Lawrence Bloomberg
Ira Gluskin and Maxine Granovsky-Gluskin
William and Catherine Graham
Jerry Heffernan

Frederic L. R. (Eric) Jackman
Lee and Margaret Lau
Joannah and Brian Lawson
George E. Myhal
Mark M. Tanz
William and Kathleen Troost
—
The Lassonde Foundation
The Law Foundation of Ontario
The Leona M. and Harry B. Helmsley Charitable Trust
Anne Tanenbaum at the Jewish Foundation of Greater Toronto and the Lawrence & Judith Tanenbaum Family Foundation
2 Anonymous Donors

\$1,000,000 TO

\$4,999,999
Peter and Jocelyn Allen
Roma and Marvin Auerback
Ruth M. (Rolph) Bell
Stewart L. Blusson
Paul M. Cadario
Wendy M. Cecil
Vasu Chanchlani
Frances and Edmund Clark
Walter Curlook
Joan Dique
Edward L. Donegan
William Downe
Graham Farquharson
Patrick Yuk-Bun Fung
Blake Goldring
Judy Goldring

Lauran, Bill, Jim, Ted and Donald Guloien
Ralph and Roz Halbert at the Jewish Foundation of Greater Toronto
Daisy Chiu-Fung Ho
Kwok Yuen and Betty Ho
Elisabeth Hofmann
James D. Hosinec
Lynn and Arnold Irwin
Sonia and Arthur Labatt
Lewis, Oberman, Townley Family & Kimmel Family
David and Jana Lucatch
Jane Brushey-Martin and Geoff Martin
Frank Milligan
Marco Muzzo
Anne H. Nethercott
Hilary V. Nicholls
Margaret and Wallace McCain
Martin Ossip Family at the Jewish Foundation of Greater Toronto
The Honourable David Peterson
Richard Rooney
Arthur and Susan Scace
C. John Schumacher
Gerald Schwartz and Heather Reisman
T. David Scrymgeour
Isadore and Rosalie Sharp
Francis and Eleanor Shen
The Slaughter Family
Edward and Fran Sonshine
Anne E. H. Steacy
The Stollery Family
Karen and Stuart Tanz
William and Phyllis Waters
John and Josie Watson
Jack Whiteside
Henry King-cheong Wu

John Yaremko
—
Alzheimer Society of Ontario
The Andrew W. Mellon Foundation
The Arthur L. Irving Family Foundation
AstraZeneca Canada Inc.
BCE Inc.
Blake, Cassels & Graydon LLP
BMO Financial Group
Brookfield Partners Foundation
Buddhist Education Foundation for Canada
C. D. Howe Memorial Foundation
The Catherine and Fredrik Eaton Charitable Foundation
CIBC
Covidien
The Daniels Corporation: Mitchell Cohen, Tom Dutton, Jim Aird
The Davenport Family Foundation
Deer Park United Church
Erin Mills Development Corporation, in memory of Marco Muzzo
Explora Research Limited
The Friends of the Trinity College Library
Goldcorp Incorporated
Google Inc.
Hatch
Helmhorst Investments Ltd.
HSBC Bank Canada
Jackman Foundation

John C. and Sally Horsfall
Eaton Foundation
John D. & Catherine T. MacArthur Foundation
The Korea Foundation
The Krembil Foundation
March of Dimes Canada
Max and Larry Enkin Foundation
McCarthy Tétrault LLP
N.S. Robertson Charitable Foundation
Novo Nordisk
Ontario College of Pharmacists
Osler, Hoskin & Harcourt LLP
The Peter Cundill Foundation
The Peterborough K. M. Hunter Charitable Foundation
Pfizer Canada Inc.
The Purpleville Foundation
Radiation Oncologists – PMH

LASTING LEGACIES

The University of Toronto recognizes donors whose gifts were made through realized bequests, trusts or insurance of \$1,000,000 or more.

Jeanne F. E. Armour
Grace V. Becker
Jack H. and Mary E. Clark
Jessie Roberts Current
Yvonne De Buda
Dorothy Jane Metcalf
Deane
Freda Fejer
Saul Highman
M. Isabel Hodgkinson
Judith Howard
Raymond Jow
Miet and Wanda Kamienski

Anne Lawson
Elizabeth L. Mathews
James Samuel McCleary
Dora Burke Playfair
Clifton Graham Roberts
Nathan Roth
Linda Lauren Timbs
James Walters
George and Isobel B. Winnett
Alexandra Maria Yeo
5 Anonymous Donors

LEADING GIFTS

Our annual donor listing recognizes the generosity of donors who have made new gifts or pledges to the University of Toronto of \$5,000 or more between May 1, 2013 and April 30, 2014.

\$10,000,000 OR MORE

City of Mississauga
2 Anonymous Donors

\$5,000,000 TO \$9,999,999

Jerry Heffernan
Joannah and Brian Lawson
—
The Leona M. and Harry B. Helmsley Charitable Trust

\$1,000,000 TO \$4,999,999

Wendy M. Cecil
Frances and Edmund Clark
Joan Dique
Kwok Yuen and Betty Ho
Lee and Margaret Lau
Lewis, Oberman, Townley Family & Kimel Family
Anne H. Nethercott
T. David Scrymgeour
Edward and Fran Sunshine
Anne E. H. Steacy
Stanley Timoshek
William and Kathleen Troost
Henry King-cheong Wu
—
The Arthur L. Irving Family Foundation
CIBC
John D. & Catherine T. MacArthur Foundation
Max and Larry Enkin Family Foundation
University of Toronto Engineering Society
3 Anonymous Donors

\$100,000 TO \$999,999

Kenneth Alexander and Sharyn Langdon
John and Margaret Bahen
Noah Leslie Blackstein
Paul M. Cadario
John and Mary Cassaday
Tony and Elizabeth Comper
Peter P. Copses and Judith V. Mueller
Norma Craig
C. William Daniel
Frederick C. Dawkins
Alberto and Caroline Di Giovanni
Stuart Foster
Norman Fraser
Peter E. Gilgan
Joseph J. Heffernan
Ann Kaplan

Marty Kelman
Edward J. Kernaghan
Vic Kurdyak
Ting Keung Lam
Albert K. Li
George J. and Linda Luste
The Honourable Margaret Norrie McCain
Robert D. and Joan McKeracher
Frank and Helen Morneau
Raymond H. W. Ng
Louis L. and Patricia M. Odette
Parnoja Family
Raymond S. G. Pryke
Melinda Mary Rogers
Richard Rooney
Dorothy Ross
Sandra and Joseph Rotman
Dan Scrimger
Joel Seigel
Roger J. Short
Donald McNichol
Sutherland
Dorothy Y. Szymaszek
James C. Tai
Jacqueline Tanz
Gaye Trombley
F. Michael and Virginia Walsh
Jessica Wang and Thomas Liu
John and Josie Watson
Mark Weisdorf and Lorraine Bell
Jack D. Winberg
Agnes Wong and William Webb
Zhang Bin and Niu Gensheng
—
A. K. Prakash Foundation
Accenture Inc.
Alex and Ruth Dworkin Tolerance Fund
Allergan Inc.
ARIAS: Canadian Opera Student Development Fund
Astellas Pharma Canada Inc.
ATCO Group
Brookfield Partners Foundation
Canadian Friends of Finland Education Foundation
Carswell, A Division of Thomson Canada Limited
Chemical Engineering Class of 8T2
Colon Cancer Canada
Covidien

The Cryptic Rite Charitable Foundation of Ontario Inc.
DePuy Synthes
The Dow Chemical Company
E-Fund Education Foundation
Fasken Martineau DuMoulin LLP
FirstService Corporation
Foundation to Promote Open Society
The Frank Gerstein Charitable Foundation
Google Inc.
Granovsky & Gluskin
Graduate Program in Jewish Studies Fund
Iovate Health Sciences International Inc.
Jackman Foundation
Jericho Foundation
The Kenneth M. Molson Foundation
Knowledge First Foundation
KPMB Architects
The Law Foundation of Ontario
The Lawrason Foundation
The Lawrence & Judith Tanenbaum Family Foundation
Legal Aid Ontario
Liberty Global, Inc.
Loblaw Inc.
The Lupina Foundation
Margaret and Wallace McCain Family Foundation Inc.
McCarthy Tétrault LLP
Miller Khoshkish Foundation
N.S. Robertson Charitable Foundation
National Bank of Canada
Nestlé
Novartis Pharmaceuticals Canada Inc.
Qualcomm Incorporated
Radiation Oncologists – PMH
The Rossy Family Foundation
Seagate Technology Inc.
Semiconductor Research Corporation
TD Bank Group
Texas Instruments Incorporated
The Tides Foundation
Triangle Community Foundation
UJA Federation of Greater Toronto

University Health Network – Department of Ophthalmology
Walter and Duncan Gordon Foundation
15 Anonymous Donors

\$25,000 TO \$99,999

Syed and Rafat Ahmed
Cameron Allen
Greg Anderson
Keng-Lam Ang
Zubin Austin
Gregory Baker
Preet Banerjee
Nilesh Bansal
Jack and Barbara Baron
Diana Bennett and Spencer Lanthier
Heather S. Boon
David G. Broadhurst
Charles W. Brown
Velda Brown
Alexandra Bulchak
Joe and Christina Caldarelli
Choong Kong CHANG
Robert Conway Chen
Ralph Chiodo
Robert and Andrea Chisholm
Charles Chung
Virginia Cirocco
David Eugene Clark
Gary R. Clewley
Janice Colbert
David J. Daniels
Ronald J. Daniels and Joanne Rosen
Gail Darling
Marc de Perrot
Dina Dichek
Dan Donovan
Lorraine Drdul
Kwong Wah Er
Henry Farrugia
Reza Fazeli
Anthony Fell
Nicholas Forbath and Anne B. Kenshole
Jane Forest
Christopher Forrest
Jane C. Freed
Paul E. Garfinkel
Michael Gibbens
Judith Goldring
Paul W. Gooch and Pauline Thompson
Gooi Seong Heen
Gooi Seong Lim
Michael Goutama
Roscoe Reid Graham
Barbara R. Griffiths
Mike Guinness
Patrick J. Gullane
Lawrence P. Haber
Ralph and Roz Halbert at the Jewish Foundation of Greater Toronto
Ulrich and Preeya Hanke
Hart and Brigitte Hanson
Maria Hanus
Penny and Bill Harris
Clare Hasenkampf and Dan Riggs
Morteza Hashemi

Jonathan Hausman and Stacy Rosen
Richard and Donna Holbrook
The Friends of Bobby Hundal
James L. Hunter
Paul and Judith Huyer
The Honourable Henry N. R. Jackman
Shaibly Jain and Sachin Ghai
C. Douglas Jay
P. Thomas Jenkins
Iyiope Afolabi Jibodu
Doris C. Kalamut
Allan S. Kaplan
Claire M. C. Kennedy
Shaf Keshavjee
Diane M. King
Michael and Sonja Koerner
Koh G. Yong
Nikolaos Koudas
Robert Krembil
Aleksandar Krstajic
Arthur and Sonia Labatt
Steven Robert Lamb
Joseph Lebovic
Jonathan Ryan Lee
Bonny and Molyn Leszcz
Susan Loeff
Nickolas Lim
Paul F. Little
Molly (Patterson) and Bill Macdonald
Frederick Marker
Martha McCain
Dorothy McRobb
Brian Miron and Monica Vegejl
Joseph Molnar
Somen Mondal
Benoit Mulsant
Jeanette R. Munro
Alastair McD and Jennifer Murray
George E. Myhal
Michael J. Needham
Nesbitt Family
James Norcop
Peter O'Hagan
Marion and Earl Orser
Diran Otegbade
Elie Park
Walter Peters
The Honourable David Peterson
Pina Petricone and Ralph Giannone
Craig Pho
Andrew Pierre
Erwin Psotka and Linda Cahill
Ewing A. Rae
John and Lynda Rogers
David Samuel
David and Susan Scandiffo
Gino Scapillati
Gerald Schwartz and Heather Reisman
Wayne Scott
Aysan Sev'er
Robert Shapiro
Harvey and Nirmala Shear

Nan Shuttleworth
Wayne L. L. Simmons
Alexander Simpson
Cathy and David Snowden
Marion C. Soloway
P. C. and Sharron Stangeby
Joe Stanziani
Paul M. Stein and Beth Weingarden
John Steinsky
Margaret and Andrew Stephens
Kevin Stolarick
John and Barbara Switzer
James C. Temerty
James John Thomson
Mark Tinnerman
Vera and Lawrence Tomkins
Kathy Tse
Henry and Christine van Driel
Michael Vertin and Margaret O'Gara
Tom and Lisa Waddell
Catharine Whiteside
Jack Whiteside
Douglas R. Wilson
The Honourable Michael H. Wilson
Ian Witterick
Bob Wong
Calvin Ka Wai Wu
David Wu
Kazuhiro Yasufuku
Marina Yoshida
Janet and Bill Young
—
Abbvie Corporation
The Adam Mickiewicz Foundation in Canada
AGF Management Limited
Agilent Technologies
Alphora Research Inc.
Amgen Canada Inc.
Amyotrophic Lateral Sclerosis (ALS) Society of Canada
Aon Hewitt Inc.
Arts & Science Students' Union
AstraZeneca Canada Inc.
Audrey's Place Foundation
Avana Capital Corporation
Bayer
BCE Inc.
Black Creek Investment Management Inc.
The Brown Group of Companies Inc.
C. L. Burton Trusts
Canadian Jewish News Fund
Canadian Mathematical Society
Canadian Tire Corporation Limited
Carolyn Tuohy and The Walter and Mary Tuohy Foundation
The Canadian Academy of Facial Plastic & Reconstructive Surgery
Channel Foundation
Chemical Engineering Class of 7T8

Christakis Arenson
Medicine Professional
Corporation
Church and Dwight
Canada Ltd.
Coca-Cola Company
Convocation Flowers Inc.
The Cumba Charitable
Foundation
Cvachovec Foundation
The Dallas Morning
News Inc.
The Delaney Family
Foundation
The Department of
Medical Imaging –
Class of 2005
The DiCapo Family
Foundation
Dr Pepper Snapple Group
Company
The Dr. Charles H. Best
Foundation
Epstein Cole LLP
Fielding Chemical
Technologies Inc.
Friends of Victoria
University Library
and Victoria College
Book Sale
Gera & Nirula LLP
Hellenic Heritage
Foundation
Intel Corporation
Intellectual Ventures
Management
International Association
for Energy Economics
The J.M. Kaplan Fund Inc.
Jack Weinbaum Family
Foundation
Janssen-Ortho Inc.
Jeffrey Cook Charitable
Trust
Kim Jang Hoon
Foundation
The Lee Foundation
The Loch Hame
Foundation
The McLean Foundation
Medtronic of Canada Ltd.
Mentor Medical Systems
Canada
Merit College
meta Company
NetApp
The Norman and Margaret
Jewison Charitable
Foundation
The Norman and Marian
Robertson Charitable
Foundation
Ontario Pharmacists'
Association
Petro Jacyk Education
Foundation
Pharmasave Ontario
Postmedia Network Inc.
Power Corporation of
Canada
RBC Foundation
The Salamander
Foundation
Self Reliance New York
Federal Credit Union
ShawCor

Sisters of Social Service
SKF Canada Limited
Skoll Foundation
St. Michael's/Wellesley
Psychiatric Associates
Students' Administrative
Council of the U of T
Teck Resources Limited
TELUS Corporation
The Ticker Club
Toronto Crown and
Bridge Study Club
The Toronto Notes for
Medical Students Inc.
Torys LLP
TRCA
U of T Women's
Association
U of T Medicine Class of
2003
Vancouver Foundation
Varsity Grads Foundation
The W. Garfield Weston
Foundation
The William and Nona
Heaslip Foundation
Women in Capital Markets
Woodbridge Company
Ltd.
Zimmer of Canada Ltd.
32 Anonymous Donors

\$10,000 TO \$24,999

Dominick Amato and
Joan Hodges
Gordon J. Anderson
Jamie and Patsy Anderson
Elizabeth Baird
John Beckwith and
Kathleen McMorrow
Giovanni Bianchini
Grayce M. Bohannon
Jean Bohne
Risa B. Bordman
Harvey Botting
Carol Parkin Bower
Vladimir Bregman
Robert L. Brews
Meyer Brownstone
Terry Buckland
Maria E. Bystrin
Peter and Sally Cant
Jack L. Carr
Glenn H. Carter
John and Margaret Catto
Caroline Y. C. Chen
George A. Cohon
Michael P. Collins
Sydney and Florence
Cooper and Family
Robert and Phyllis Couzin
Elizabeth Crawford
Richard J. Currie
Ron Dembo
Saro Der Haroutiunian
William J. DesLauriers
Bill Dowkes
Kristine Drakich
James Dryburgh
Melanie Duhamel
J. Michael and Catherine
Durland
George A. Elliott
Gloria Epstein
Faramarz Fardshishev
David Feather

Dorothy Fetterly
George A. Fierheller
Suzanne Gayn
Tony George
Stephen M. Glogowski
Blake Goldring
Malcolm Graham
Denis M. Grant
Bruce J. Grantier
Cyril Grasso
Sean Haberer
Mary C. Ham
Harold P. Hands
William B. Hanna
W. Jason Hanson
Ethel Harris
Richard F. Haskayne
Dianne W. Henderson
Catherine E. Heron
Brian D. Hodges
Ernest Howard
Shirley Hoy
Alan Hudson
Jonathan Hunter
John and Carmen L. Iton
Maruja Jackman
K. Wayne Johnston
Ruby Maud Jolliffe
Larry Lundy and Elizabeth
(Langford) Julian
Moti G. Jungreis
Sidney M. and Elaine
Kadish
Stephen H. Kauffman
Thomas E. Keirstead
Shana O. Kelley
Richard Kerr
George B. Kiddell
Marie Korey
Michelle M. M. Kranjc
John B. Lawson

Albert C. L. Lee
Michael Chen-Teng Lee
Marcel Leroux
Hugh and Laura
MacKinnon
John and Gail
MacNaughton
William C. McDowell
John and Aileen McGrath
E. R. S. McLaughlin
John D. McNeil
Angela McPeck
Jim and Joan Mergelas
Sylvia Mureddu
Steven Muzzo
David and Mary
(Bosworth) Neelands
Ardis M. Nolan
John D. Novak
George Nowak
Edmond Odette
Minoru Ozima
Katalin Pap
Patricia Parkin
John and Janet Paterson
John and Thea Patterson
John R. and Maire E. Percy
Jack and Eleanor Petch
Jake Phillips
John H. and Catherine F.
Phillips
Herbert Ross Pitman
Bruce Pollock
Paula J. Ravitz
Raymond M. and Anita
Reilly
Douglas Richards
Shauna Rolston and
Andrew Shaw
Barrie D. Rose and Family
Harry Rosen

Michael and Sheila Royce
William and Meredith
Saunderson
Ezra and Ann Schabas
Lionel and Carol Schipper
Johanna Sedlmayer-Katz
Jessica Shelley
Roy J. and Muriel
Shephard
Fred Shore
Dorothy Siminovitch
Katherine A. Siminovitch
Ronald G. Slaght
Donald Smith
Jay Smith
Maureen J. Somerville
John C. and Ellen Spears
Annette Maureen Spillane
C. Alexander Squires
Barbara Stymiest
Janette Marie Sullivan
William Tatham
Steven Temple
Richard Iorweth Thorman
Mark Tiffin
Robert T. Turner
Dan Van Le and
Tinh-Chau Nguyen
Wayne C. Vance
Paul D. Warner
Bert Wasmund
Garnet T. Watchorn
William and Phyllis
Waters
Gordon Watson
John and April (Kono)
Watt
Gordon E. Webb
Jennifer Witterick
Borys F. Wrzesnewskyj
John and Betty Youson

Michael Zhang
—
Abbott Laboratories
Limited
Active Auto & Tire Centre
Alumni Association of
Woodsworth College
Aquasonic
Bennett Jones LLP
Betty and Chris
Wansbrough Family
Foundation at the
Toronto Community
Foundation
Boehringer Ingelheim
Canada Ltd.
Borden Ladner Gervais
LLP
Braemar College Inc.
Browns Corner United
Church
Buddhist Compassion
Relief Tzu Chi Foundation
C. M. Harding Foundation
Canadian Macedonian
Senior Citizens Centre
Association
Canadian Sugar Institute
Chadha Family
Foundation
Chartered Professional
Accountants of Ontario
(CPA Ontario)
The Cyril & Dorothy,
Joel & Jill Reitman Family
Foundation
Dairy Farmers of Canada
Dare Foods Limited
Deloitte & Touche
Foundation Canada
Diana's Seafood Delight



BOUNDLESS SCHOLARSHIP: A professor in the Institute of Biomaterials and Biomedical Engineering and the department of chemical engineering and applied chemistry, Milica Radisic has come up with a way to repair a damaged heart using specially engineered human tissue. Radisic, who was recently awarded a \$250,000 Steacie Fellowship for her research, is growing dime-sized patches of beating heart tissue in the lab.

The Boundless campaign has raised \$174 million to support faculty such as Radisic. These funds will enable U of T to secure the very best teaching and research talent and help the university create more than 200 new chairs and professorships in key research areas across its three campuses.

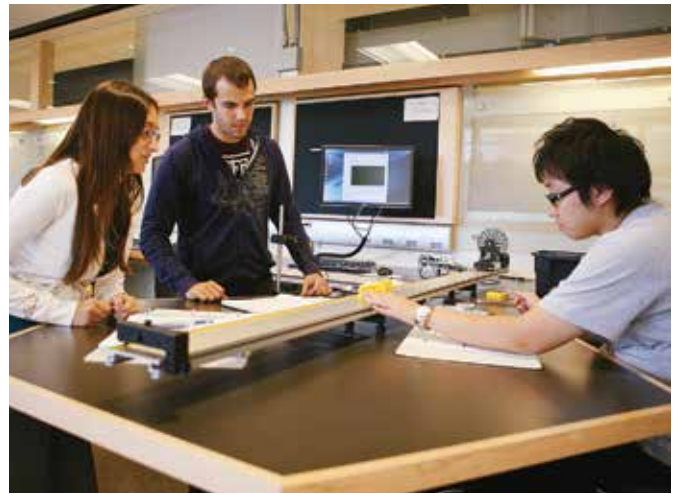
Donner Canadian Foundation
 Dopomoha Ukraini Foundation
 Duff & Phelps Canada Limited
 Eli Lilly Canada Inc.
 Epsom America, Inc.
 Erin Boynton Medicine Professional Corporation
 Fackoury Family Holding Corporation
 Federation of Chinese Canadian Professionals (Ontario) Education Foundation
 Fednav Limited
 Galin Foundation
 George and Helen Vari Foundation
 The Global Fund for Women
 Golf Canada Foundation
 Greater Toronto Sewer and Watermain Contractors Association
 Hal Jackman Foundation
 The Henry White Kinnear Foundation
 The Hope Charitable Foundation
 Ingredient Canada Inc.
 The Joan and Clifford Hatch Foundation
 Katedra Foundation
 Kellogg Canada Inc.
 KLS Martin Group
 Kraft Canada Inc.
 The Krembil Foundation
 The Langar Foundation
 Later Life Learning
 The Love Family Trust
 Manulife Financial
 Maple Leaf Foods Inc.
 Mattson Thermal Products
 Mawer Investment Management Ltd.
 Mead Johnson Nutritionals
 Metabacus Inc.
 The Michael Young Family Foundation
 Molise Trust Ontario Inc.
 Morneau Sobeco
 Mount Sinai Hospital – Department of Medicine Research Fund
 Olthuis, Kleer, Townshend LLP
 Ontario Association of Landscape Architects
 Ontario Professional Engineers – Foundation for Education
 Open Text Corporation
 Oral Health Journal
 Orbis Investment Management Limited
 Quaker Tropicana
 Gatorade Canada Inc.
 Purves Redmond Limited
 Rebekah Assembly of Ontario – IOOF
 Scarborough Campus Student Union

The Sheldon Inwentash and Lynn Factor Charitable Foundation
 Sherman Foundation
 The Sixty Three Foundation
 Sorin Group Canada Inc.
 St. Mark's Coptic Orthodox Church
 St. Michael's Medical Imaging Consultants
 Target Corporation
 Torkin Manes LLP
 Unilever Canada Inc.
 University of Toronto Faculty Association
 Victoria Women's Association
 Wells Gordon Ltd.
 The Youssef-Warren Foundation
 16 Anonymous Donors

\$5,000 TO \$9,999

Arnold Aberman
 Donald Ainslie
 Hussein A. Al-Dhalaan
 Lyla Al-kholani
 Derek Allen
 Richard Alway
 Scott Anderson
 Winston Ang
 Meg Angevine
 John K. C. Au
 Marilyn and Charles Baillie
 John Bajc
 Richard J. Balfour
 Joseph J. Bannicke
 James Richard Beattie
 Timothy M. Beattie
 David and Gwendolyn Bell
 Thomas A. B. Bell
 Roland and Marie Bertin
 Cynthia Bettcher
 Hal Boshier
 Walter M. Bowen and Lisa Balfour Bowen
 Lenna M. Bradburn
 Margaret A. Brennan
 Frank C. Buckley
 Gloria Buckley
 Donald Buschlen
 George and Martha Butterfield
 Jonathan Andrew Cardella
 Jack A. Carr
 Arun Channan
 Joseph Cheng
 Harry Tycer Cherry
 Donna J. Chow
 David and Valerie Christie
 Michael Church
 Ian D. Clark
 Brian Clough
 Margaret E. Cockshutt
 Graham B. R. Collis
 George and Sheila Connell
 William J. Corcoran
 Elizabeth Cowper
 David L. Crane
 A. Roger Creasor
 Thomas Joseph Critelli
 Michael B. Cruickshank
 Charles and Barbara Cutts
 Marcelo Cypel
 Terence Dalgleish

Katherine Dalziel
 Sandra A. Dalziel
 Michael and Amira Dan
 Janet Dewan
 Barbara Dick and Malcolm Burrows
 Mary Louise Dickson
 Thomas DiGiacomo
 Nicholas R. DiGiuseppe
 Neil H. Dobbs and Susan Girard
 Sandra Donnelly
 Paul R. Dooling
 Mary Drakich
 B. Elan Dresher
 Linda D. Dresser
 Freda M. Eickmeyer
 Margaret E. Emmerson
 Marie-Anne Erki
 The Evans Family
 Bob Ewen
 Ambrose Fan
 Kathryn Feldman
 Graeme and Phyllis Ferguson
 John C. Field
 Pat and Brian Flood
 Georgiana Forguson
 Judith Fox-Shapero
 William F. Francis
 Lynne V. Freed
 Judith Friedland
 Robert Fu
 Kwok-Chak Fung
 Hugh R. Furneaux
 Greg Gilhooly
 Neil Glossop
 John and Mary Goodwin
 Leslie Gord
 Michael Gordon
 Stephen T. Goudge
 Diane Granato
 Douglas and Ruth Grant
 Sandra Forbes and Stephen Grant
 Melvyn Green
 Patrick and Freda Hart Green
 Edward L. Greenspan
 Helen Gurney
 Graham Hall
 The Harquail Family
 Paul T. Hellyer
 D. G. Hewson
 James and Rebecca Hilton
 James D. Hinds
 Stanley Y. Ho
 Sheila Hockin
 Huxley Hogeboom
 Sevan Hopyan
 Joyce B. Houlden
 Andrew Howard
 Renata L. Humphries
 Jo-Anne Hunt
 William H. Irwin
 Nathan Isaacs
 Heather, Kate and Elizabeth Jackson
 Howard L. and Karen J. Kaplan
 Mikhail Kassam
 Terry Kavanagh
 David Keddie
 Simon Paul Kelley
 Maria O. Koel



BOUNDLESS LEARNING: Based on the timeless truth that you learn more by doing than by listening, Physics Practicals engage some 800 to 1,200 undergraduates per year in a new kind of lab experience. The Physics Practicals' three rooms have been designed to include several work stations, each with four students, who can either sit or stand around a table as they experiment, discuss and learn.

Donors to the Boundless campaign have given \$256 million to support student-focused initiatives such as new classrooms and labs, as well as study abroad programs, smaller learning communities, international internships and peer mentoring. These funds also support financial aid for graduate and undergraduate students.

Todd Krauser
 Horace Krever
 Daryl S. Kucey
 Arjun Kumar
 O. Allan Kupcis
 Peter D. Lauwers
 Marcus Law
 Ross Douglas Lawrence
 Don Lebovitz
 Jay W. Lee
 Ping Lee
 Fei Fei Liu
 Mark A. Lloyd
 Timothy Loftsgard
 Anne Luftack
 Rita Mariani
 Agnes N. Mark
 Coral and William Martin
 Joe Martin
 Robert G. Maunder
 Christopher McCulloch
 Rodney D. McEwan
 Carolyn I. McEwen
 Bill McFarland
 J. A. (Sandy) McIntyre
 Linda McKellar
 R. Greg McKnight
 Alexander McLean
 Mark McLean
 The McQuade Family
 Subhash Mehta
 William C. Michell
 Carole R. Moore
 William R. R. Moriarty
 Gillian Morrison
 Lucas Murnaghan
 Dennis J. Murphy
 Alastair and Jennifer Murray
 Stephen Murray
 Unni Narayanan

David Naylor
 Judith Nicol
 Daryl N. Chan
 Foek Ning Chan
 Sumit Kumar Oberai
 Louis L. Odette
 Brian and Anneliese O'Malley
 Jocelyn Palm
 David N. Palmer
 Mauro Pambianchi
 Brian Taewon Park
 Mary Ann Parker
 Alexander C. Pathy
 John Patkau
 Rose M. Patten
 N. Jane Pepino
 Olive Wallace Pester and Family
 Paul and Patricia Phoenix
 David Powell
 Christine J. Prudham
 Anita and Chandran Ratnaswami
 David Rayside
 Mary Redekopp
 John Reilly
 Mrs. Jack Reynolds
 Karen Rice
 Jennifer Riel
 E. A. Robinson
 Anne Rogers Stransman
 J. Barbara Rose
 Donald M. Ross
 Gary William Ross
 Peter H. Russell
 Edward and Stella Rzdak
 Hilary Pearson and Michael John Sabia
 Elvino Sauro
 Eric Schenk
 Patrick David Schmidt

Alan M. Schwartz
 Wes Scott
 Stanley Sebba
 Gary P. Selke
 Harry and Lillian Seymour
 Kim Shannon and Ho Sung
 Barbara Shum and Manos Vourkoutiotis
 Charles Simon
 Sonja Sinclair
 Ken and Gail Smith (Bozek)
 Kenneth Carless Smith and Laura C. Fujino
 Sandra D. Smith
 Richard Sommer and Laura Miller
 Suzanne Sousa
 Paul Spence
 Angela L. Stanziani
 Janice Gross Stein
 Robert Steinberg
 Ann D. Sutton
 Tom and Marilyn Sutton
 Michael Szamosi
 Nabil Tadros
 Anne Weldon Tait
 Lorne Tepperman
 John S. Teshima
 Doris A. Thompson
 J. Michael and Naomi Tomczak
 Joanna Eurydice Tountas Wolff
 A. S. J. Tozer
 Paul Tozer
 Peter W. Vair
 Bill and Sarah Vanderburgh
 Ronald D. Venter
 Marie Luise Vogel

Elizabeth Vosburgh
Brian Walker
David J. Watt
Neil Watters
John H. Wedge
Thomas G. Willcock
LaDale C. Winling
Kyle Winters and
Howard Rideout
John and Anne Witt
Evelyn S. Wong
James G. Wright
Albert Yee
Michelle Yi and
Alex Limion
Reinhard Zeller
Katherine Zettle
—
Adelle and Paul Deacon
Nanton Fund at the
Toronto Community
Foundation
Ballantyne Yates LLP

Bausch & Lomb
Blake, Cassels & Graydon
LLP
BMO Financial Group
Boston Scientific Ltd.
Butterfly Luncheon
Committee
Canadian Union of Public
Employees
Cassels Brock and
Blackwell LLP
Chemical Engineering
Research Consultants
Ltd.
Cisco Systems
Canada Co.
COS Shore Inc.
Crowe Soberman LLP
Davies Ward Phillips &
Vineberg LLP
Department of Paediatrics
– Sick Kids/University of
Toronto

Dr. Ruth Kurdyak Music
Fund
Ecosmart Energy
The F. K. Morrow
Foundation
Famee Furlane Golf 2004
Flora Morrison Research
Fund at the Toronto
Community Foundation
Florence Margaret
Thompson Charitable
Foundation
Geoffrey B. Scott
Memorial Fund at the
Toronto Community
Foundation
Glass & Associates
Goldhart & Associates
Hamby and Woolley Inc.
Harmonize for Speech
Fund – Ontario District
SPEBSQSA
Heenan Blaikie

International Life
Sciences Institute –
North American Branch
The Islamic Institute of
Toronto
J.P. Bickell Foundation
Joe and Rosanne Falcone
C/O Falconeco Ltd.
John & Marie Levitt
Foundation
The Lawrence and Frances
Bloomberg Foundation
The Lawson Foundation
Letko Brosseau &
Associates Inc.
The Leukemia &
Lymphoma Society of
Canada
The Lionel Gelber
Foundation
Long & McQuade Musical
Instruments
Mackenzie Investments

Margaret and Robert
Montgomery Fund at The
Calgary Foundation
Martha McCarthy &
Company LLP
McDonald's Restaurants
of Canada Limited
Merck Canada Ltd.
Miller Thomson LLP
New Routes to the Future
Ecological Foundation
The Northup/Lawson
Memorial Trust Fund
Norton Rose Fulbright
Canada LLP
Ontario Association of
Architects
Ontario Principals'
Council
Pratt & Whitney Canada
Inc.
Pzena Charitable
Foundation Inc.

The Regional Municipality
of Halton
Riddell Family Charitable
Foundation
The RLS Charitable Giving
Fund
The Ryckman Trust
Sanofi Canada
Senior Alumni University
of Toronto
St Andrew's United
Church
St. George's on the Hill
Church
Taylor Hazell Architects
Ltd.
Towers Watson
United Steelworkers
The William and Nancy
Turner Foundation
23 Anonymous Donors

GIFTS-IN-KIND

This list recognizes donors who have made gifts-in-kind of \$5,000 or more between May 1, 2013 and April 30, 2014.

Kay Armatage
George P. Baird and
Elizabeth Baird
Fern P. Bayer
Stan Bevington
Christine F. Bissell
Lynne Black
Paul Bouissac
Robert C. Brandeis
A.A. Bronson
Ruth Budd
Phillip H. Byer
Michal A. Calder
Rocco Capozzi
Frances Dafoe
Linda Deshman

Alberto and Caroline
Di Giovanni
Maya R. Dille
Zoe Dille
Janusz R. Duksza
Margrit Eichler
Nadav Elituv
The Evans Family
Helen A. M. Farquharson
George Fetherling
Lois (Sutherland) Fleming
Aleksander Frejzmidt
Irene Frey
Mimi Fullerton and
Myer Brody
Peter A. Gale

Phyllis Grosskurth
Timothy G. M. Hadwen
Elliott Halpern,
Yap Films Inc.
Maureen Scott Harris
Amir Hassanpour
F. David Hoeniger
Samuel Hollander
Michael G. Ignatieff
Luis Jacob
William Johnston
Helen R. Kahn
Herbert W. Kee
Crad Kilodney
Lena H. Kim
Marie Korey

Bruce S. Kovner
Eva Kushner
Simon Langlois
Robert Lantos,
Serendipity Point Films
Richard Borshay Lee
Hartland M. MacDougall
Kyo Maclear
Alberto Manguel
Barbara Mann
Ronald Mann
The Estate of Doris
McCarthy
John and Myrna Metcalf
Michael and Jane
Millgate
Karen A. Mulhellen
Mariel O'Neill-Karch and
Pierre Karch
Eric Ormsby
Charles S. Pachter
Panayot Panayotof
Cranford Pratt
Michael H. Redhill

Ann Robson
Angela Rudden
Linda M. Schuyler
Antanas E. Sileika
Jonathan G. Silin
Beverley Slopen
Stephen Smart
David Solway
Rosalia Souster
John D. Stanley and
Helmut Reichenbacher
Paul G. Stanwood
Alan Stein
Craig Stephenson
Judith Ann Teichman
Joanne Tod
Guy and Sandra Upjohn
Cyrus Vakili-Zad
B. David Wall
F. Michael and Virginia
Walsh
Terence Watada
Christopher C. Wells
Mary F. Williamson

Andrew E. Wright
Yvonne Young
—
3i Implant Innovations
Canada
5 Corners Productions Inc.
770393 Ontario Inc.
Adidas (Canada) Limited
AirGenuity Inc.
Angus Glen Golf Club Ltd.
Consulate-General of
the People's Republic of
China in Toronto
Forum Research Inc.
Kaplan (Canada) Ltd.
Lost Cause Production Inc.
Nobel Biocare Canada Inc.
The Rossy Family
Foundation
Straumann Canada
Limited
Wilson Sports Equipment
Canada Inc.
8 Anonymous Donors

LASTING LEGACIES

The University of Toronto recognizes donors whose gifts were made through realized bequests, trusts or insurance between May 1, 2013 and April 30, 2014.

Geoffrey Adams
Jeannette E. Anton
Ivor Arnold
Hilja Aun
Antonina N. Balciunas
Anne-Louise Barcham
Mary Agnes Bennett
Benjamin Herbert Birstein
William Brown Boyd
Mary Ann Boyle
Ernest A. Bradshaw
Adrian Brook
Robert Bruce
Anne E. Bullman
C. L. Burton Trusts
Alice M. Buscombe

Samuel Castrilli
Mollie E. Christie
Peggy Colston
Kenneth B. Conn
Marsh A. Cooper
James A. Coutts
William Douglas Crome
Jessie Roberts Current
Robert G. and Mary
Dale
Margaret J. Davis
Yvonne De Buda
Satinder Kaur Dhillon
Frederick and Douglas
Dickson Memorial
Foundation

Ian MacDonald
Drummond
Reuben Dubrofsky
Catherine A. Fallis
Fred C. Farr
Clarence B. Farrar
John Charles Fields
Alice F. S. Fischel
Thomas F. Foster
Ellen B. Freeman
Goldwin French
Harold B. Gardner
Jean Glasgow
Beatrice C. Glasier
Majorie Aileen Grant
Rose Greenstein

Virginia Griffin
Gerald N. Haworth
George McGillivray
Hendry
John A. Hethrington
Judith Howard
Ethel B. Jackson
James H. Rattray
Memorial Trust
James H. Joyce
Katharyn Jefferies
Karrys
Louisa West Davie
Keith
Linda M. Kennedy
Penelope C. Kennedy
Mary M. Kern
Irene Mary Klawe
Oscar S. Kofman
Mary Elizabeth (Morrison)
Lambert
Michael Lawee
Zella Josephine Leavey
Reuben Wells Leonard

Margaret Jean
Leppington
Frances Elizabeth L.
Lindenfield
R. Douglas Lloyd
David Locker
Alexander E. MacDonald
Valio William Markkanen
Mary H. Martin
Alice Mary Matheson
J. Edgar McAllister
Sophia McCaffery
A. R. McCormick
Mary E. Mercer
William C. Michell
Marjorie E. Moore
Northup/Lawson
Memorial Trust Fund
Laura Kathleen Nye
T. Eric Oakley
Edmond G. Odette
Barbara D. Palmer
Jack J. Parlow
James Gareth Poupore

Manuel E. Pusitz
Robert S. Rawlings
Sidney I. Richardson
Mary E. Rudling
Ryckman Trust
Ralph Scane
Mary Schaefer
Ethelwyn B. Scott
Christof J. Scriba
Geoffrey C. Seymour
Robert G. Shelley
Julius D. Solomon
Czeslaw Stanek
James C. Stanners
Anne C. M. Starr
Gwendoline Dora Steele
Astrid L. Taim
Jean Vale
Florence Warren
Wing Joe
David Yasuzawa
12 Anonymous Donors

KING'S COLLEGE CIRCLE HERITAGE SOCIETY

The King's College Circle Heritage Society recognizes and honours alumni and friends who have thoughtfully made a provision for the university through a future bequest, life insurance or trust gift between May 1, 2013 and April 30, 2014.

Douglas Kenneth Laird Allen	Barbara A. Greer George Gross	Val Rachilis and Anita Rachlis
Joan Alice Dagmar Andersen	Martin Hlavacek Theo and Doris Hofmann	Elizabeth A. Reid Janice J. Rickerby
Christina Attard and Jim Farney	Nathan Isaacs Alexandra F. Johnston	Donald and Joni Saunders Jennifer Laura
Peter Bartlett The Bowman Family	Warren C. Law Laura and Guilio Lepschy	Meiorin-Schumacher Harvey and Nirmala Shear
Kiran Champatsingh Frederick H. K. Chapman	Teza Layos Lwin Michael and Joan Maloney	David P. Silcox Maureen J. Somerville
Raffaello D'Andrea and Leanna Caron	Wanda Matuszkiewicz John T. and Melinda Mayhall	Doris A. Thompson Frederick J. Thorpe
Cynthia Dann-Beardsley Janet Davison	W. Ross McKean and Mark G. Merryfield	Rodrick Toms Marilyn Toth
Joseph R. Desloges and Caroline A. Donkin	Croft Michaelson Donald R. Milne	Paul Tozer Joy Tyndall
David Lloyd Drew Debbie Dykes	Alec Monro Paula Vainio-Paunic	Paula M. Vine Ian Witterick
Katherine A. Fitzgerald Katrina Florendo	Carolyn Purden Anthony	Gerald Wright Kim Wright
Eleanor Gooday		68 Anonymous Donors



BOUNDLESS OPPORTUNITY: The next generation of entrepreneurs have a new home at U of T Mississauga: the Innovation Complex. The new, four-level, \$35-million facility houses the Institute for Management & Innovation, which offers students the chance to combine management studies with another discipline of their choosing – from biotechnology to accounting to sustainability.

The Boundless campaign has generated \$431 million for critical infrastructure projects, such as the Innovation Complex. These funds will help ensure U of T is able to provide students and faculty with the space – the labs, classrooms and study areas – outfitted with the technology they need to succeed.

CORPORATE MATCHING GIFTS

We would like to acknowledge the generosity of corporations who matched charitable contributions made by their employees, directors and retirees between May 1, 2013 and April 30, 2014. To find out if your company is a matching gift partner, please call (416) 978-2177 or visit our website at boundless.utoronto.ca/how-to-give.

AIM Trimark Investments Alliance Data Matching Gift Program	Chubb Insurance Company of Canada ConocoPhillips Canada	Manulife Financial Microsoft Corporation Marsh & McLennan Companies
AllianceBernstein Amgen Foundation Apache Canada Ltd.	Dow Chemical Company Foundation Ernst & Young Matching Gifts Program for Higher Education	Owens Corning PCL Constructors Inc. PepsiCo Foundation Pratt & Whitney Canada
Aurion Capital Management Inc. Autodesk Matching Gift Program	FM Global Foundation GE Canada Inc. Goodview Investments Co. Ltd.	R. Howard Webster Foundation Rio Tinto Alcan Sun Life Financial
Bank of America BMO Financial Group The Bank of New York Mellon Community Partnership	Google Matching Gifts Program IBM Canada Limited Intact Foundation	Suncor Energy Foundation SYSCO Corporation TELLUS Towers Perrin
BCE Inc. Brookfield Properties Corporation Burgundy Asset Management Ltd.	Investors Group Matching Gift Program John Deere Foundation of Canada KPMG Foundation Land O'Lakes Foundation	TransCanada Corporation Vale Canada Limited W. K. Kellogg Foundation Wells Fargo Foundation Employee Matching Gift Program
CA Technologies Chevron Humankind		

PRESIDENTS' CIRCLE

Through their commitment and annual giving at the leadership level, Presidents' Circle members help the university educate deserving students, attract and retain great faculty and build innovative faculties and programs. Our thanks to Presidents' Circle members for their foresight, leadership and generosity. For more information about making a leadership gift to U of T, or to view our member listing, please visit giving.utoronto.ca/PC or call (416) 978-3810.

IN HONOUR AND IN MEMORY

The University is grateful to the many donors who choose, each year, to honour members of our community through gifts to U of T. In recognition of these tributes we have posted a comprehensive list on our website at boundless.utoronto.ca/donors.

We are grateful for the continued support of all our generous donors. We strive to make our lists as accurate as possible. For more info, or if you have questions about U of T's donor listing, contact Christine Concannon at (416) 946-5915 or christine.concannon@utoronto.ca.

GO BACK TO SCHOOL FOR THE WEEKEND

Spring Reunion 2015

May 27–31



If you graduated in a year ending in 0 or 5, save the date now for a jam-packed weekend of lectures and lunches, tours and talks, dinners and dialogue. This is your Spring Reunion and here's what we're planning for you:

U of T-wide Signature Events for Alumni of Every Description

WEDNESDAY, MAY 27
LGBTQ Spring Soirée

THURSDAY, MAY 28
SHAKER Classic
for Young Alumni

FRIDAY, MAY 29
Chancellor's Circle Medal
Ceremonies for 55th to 80th
Anniversaries

50th Anniversary Ceremony

Stress-Free Degree Lectures
With speakers known for expanding minds

SATURDAY, MAY 30
Stress-Free Degree Lectures,
campus tours and other events

U of T Alumni Celebration

Alumni BBQ
Sponsored by your UTAA

Events at Your College or Faculty

Many U of T colleges, faculties and departments create opportunities for their own alumni to reconnect.

Registration for all events opens on March 3, 2015 at:

springreunion.utoronto.ca



UNIVERSITY OF
TORONTO

Find out more: 1-888-738-8876 416-978-5881 spring.reunion@utoronto.ca springreunion.utoronto.ca

All About Alumni

“In some places it’s dangerous to put on these events, but they do it anyway, because they believe in the power of ideas”

TEDx manager Becca Pace
p. 55



Jonathan Keebler

Breaking News

Jonathan Keebler’s software has changed the way you stay up to date

THERE’S AN UNOBTRUSIVE BOX embedded on your screen. The latest news updates pop up at the top – text, tweets, links, pictures, video – telling you a story as it unfolds.

“When big things are happening in the world – like natural or man-made disasters – ScribbleLive makes it possible to communicate, in real time, right from the ground,” says Jonathan Keebler (BSc 2003 UC), the U of T grad who developed the software you’ve seen on news sites from Reuters to Rogers. “News can be shared *instantly*.”

When Keebler graduated from U of T’s computer science

department a decade ago, he didn’t know what the future would hold. “I loved coding. But the dot-com bubble had burst,” he explains. “I wasn’t sure where I’d fit in. I wanted to be part of a small company where I could make a big impact.”

Keebler and ScribbleLive co-founder Michael De Monte landed website and technology jobs at CTVglobemedia and got a detailed look at how the media works. “Reporters were out there, on the ground, watching the news happen in front of them,” says Keebler. “But they had to come back to the office to file their stories, which were sometimes held back until the prime-time news slot.”

It was time, the two realized, to create a way to share stories in real time. With ScribbleLive, reporters can log into web pages to post text, pictures and videos, or give updates via email, voice mail or mobile apps. Pages update immediately, and readers see the latest without having to refresh. ➤



The law changes slowly. For example, the Criminal Code of Canada still forbids challenging anyone to a duel

21st-Century Law

Helping Ontario courts join the digital age



Arin Klug

IN THE ELECTRONIC AGE, the Ontario court system sticks out like a notepad in a sea of laptops for its reliance on paper-based methods – fax, mail and courier – to deliver and exchange documents. Thanks to lawyers Arin Klug (MA 2006, JD 2009) and Michael Tweyman, the first software for electronic legal-document exchange in Ontario – CourtSide EDX – is finally making inroads into tasks that were the exclusive province of paper.

“The legal profession is slow to adopt modern technology,” says Klug, who practices in the areas of tax and estate planning at Robins Appleby LLP in Toronto. “People tend to do things the old-fashioned way, but a tradition of inefficiency is not something we should cling to.”

CourtSide EDX began with the co-founders’ desire to find a faster, cheaper and environmentally friendly alternative for delivering court documents. Klug and Tweyman latched

on to a section of Ontario’s *Rules of Civil Procedure* that covers physical document exchange and updated it for the computer generation. The pair proposed a regulation amendment to permit electronic document exchange, which was approved by the province’s Civil Rules Committee in August. When the updated law takes effect on January 1, 2015, users will be able to upload documents to other subscribers of the tool – the first web-based software designed specifically to conform to the new rules.

Unlike email or Google Docs, the system automatically generates a printout of the “record of service” required by law, eliminating the need for an affidavit of service. “It gets rid of a confusing step that can cause a bottleneck in the process,” says Klug.

Although the record of service must still be filed in person, Klug hopes CourtSide EDX will eventually help make paperless filing a possibility.

“We’re all comfortable with computers,” says Klug. “These changes were a long time coming for the legal community.” – **AMY STUPAVSKY**

OVERHEARD



The ad revenue we generated after a year was \$2 per month. Just pathetic. Instagram and YouTube are outliers; it takes years to build a foundation. Great companies rarely happen overnight.



Allen Lau (BAsc 1991, MAsc 1992), speaking with *Canadian Business* magazine in May about founding online self-publishing company Wattpad.



➤ For example, in 2011, when Egypt temporarily blacked out Internet access during the January 25 revolution, Al Jazeera reporters used the platform to call in audio updates and keep audiences in other countries in the loop.

It seems a simple idea – now – but making it happen took time. “You have to get in there, try things, hack around, experiment, and play with technology – that’s where you really learn to solve problems,” says Keebler. He adds some love for his alma mater: “At U of T, I learned *how to learn*. Now I pick things up quickly because I have a framework. And the university taught me critical thinking; that’s been key to my ability to solve problems, innovate and recognize opportunity as an entrepreneur.”

Six years after its launch, ScribbleLive has evolved to

become an “end-to-end content engagement platform,” says Keebler. In addition to liveblogging, the software generates statistics to show how readers and viewers reacted to a story. It can also be adapted to create live chats or Q&A sessions, and update conference-goers or cover live events such as sports games or concerts. Keebler reels off a list of high-profile clients: “Red Bull, Ferrari, Bayer, Global TV, CNN, The Associated Press, Samsung, and ESPN.” With four rounds of financing under its belt, ScribbleLive has offices in Toronto, London, New York, Dubai and Melbourne. Keebler looks forward to the next major milestone: growing to 100 employees.

“For me, one day is never like the last,” says Keebler. “I’m always solving new problems and learning new things – it’s an aspect of my work I really love.” – **SANDRA KAHALE**



Since 2009, more than 15,000 volunteers have translated TED Talks into 105 languages, including Swahili, Malagasy, Thai, Bengali, Irish (and yes, Klingon)

Becca Pace



The Power of Ideas

TEDx manager Becca Pace is helping the world listen in – and speak up

ON A STEEP HILLSIDE IN RIO DE JANEIRO lies the largest urban slum in Brazil. Rocinha favela is plagued by poverty, unsanitary living conditions and the dangers of armed conflicts between drug gangs. But what helps make life better in this difficult environment is a public health clinic and a children’s after-school program.

“I was struck by the extreme poverty I saw, but found the warmth of the people who live in Rocinha to be most memorable,” says Becca Pace (MBA 2010). Pace is global development manager of TEDx, an offshoot program of the

TED ideas conference that helps individuals, communities and developing countries plan TED-style events. In Rocinha, Pace and TEDx organizers “discussed, ‘How do we take these issues and turn them into compelling talks?’”

Bringing TEDx events to communities in sub-Saharan Africa, India and China has been Pace’s goal since she joined the company full time in 2010. The initiative is driven by organizers from these locales who, despite obstacles – poverty, war, repression – believe powerful ideas can improve life in their communities. Pace helped write guidelines for them on how to plan their own inspirational conferences and organize their own live speakers. She also provides access to free TED Talk videos they can screen.

Changing the world has been on Pace’s own radar since June 2006, when she interned with the Clinton Global Initiative. She first became involved with TED in May 2007 as director of marketing and operations for Pangea Day, an international multimedia event it held in 2008 to promote global unity through short films, music and talks.

While completing her MBA at U of T’s Rotman School of Management, Pace was approached by TED to consult on creating TEDx. The program launched in 2009 and, since then, there have been more than 10,000 events in some 160 countries.

Exporting the TED concept to the developing world isn’t straightforward. Most communities lack the physical equipment needed to screen talks, so Pace provides a free loan of the TEDx in a Box – a projector, recorded talks, sound system and microphones. The recorded talks are all in English – but that’s solved by the thousands of volunteer translators who create subtitles in the language of the community holding the event.

“TEDx organizers are so much more than event organizers,” says Pace. “Some work in places such as Mogadishu and Baghdad, where it’s dangerous to be putting on these events. But they do it anyway, because they believe in the power of ideas. To me, that’s really moving.” – **SHARON ASCHAIK**

Seeing Through a New Lens



Betty Xie

“Filmmaking is a transformative experience,” says Betty Xie (BA 2014 Woodsworth), a writer-director who majored in both cinema and Asia-Pacific studies. *The Home Promised*, Xie’s recently released second documentary, was a collaboration with her crew of four current or former U of T students, and also with the residents of Shaoxing, a small “city” within the city of Taipei. Xie describes it as a collective effort that challenged everyone’s ideas about what constitutes a community.

Like other improvised urban districts originally built by people fleeing persecution or poverty, Shaoxing faces demolition to make way for new

development, as well as the forced resettlement of its citizens. Xie learned of their plight in 2012. Although she expected to ask “abstract questions about home and belonging,” Xie shed that plan after sitting in on a residents’ meeting. Rather than focus on the search for an ideal home, the filmmakers documented the daily routine of living with the threat of eviction, and how a united community emerged from uncertainty.

One of the films chosen for the fall’s Toronto Reel Asian International Film Festival, *The Home Promised* won the Air Canada Short Film Award and will be screened on flights in 2015. – **JO CALVERT**

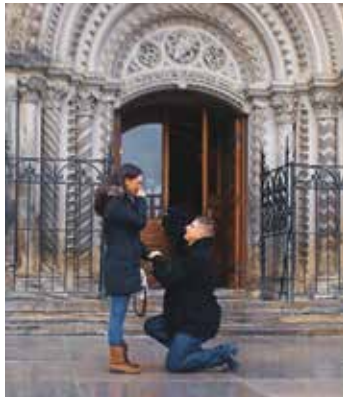


The tiny holes in the Fleurt chair were envisioned to let the green grass show through – but they also help the chair dry quickly after rain

THE TWO OF US

School Story

For Brock Laschowski and Katherine Cornacchia, a proposal on Front Campus capped a very U of T romance



BROCK (BPHE 2012): During Frosh Week in 2009, I was at a retreat with the Physical Education faculty and I saw a really pretty girl on the other side of a bonfire. I really wanted to talk to her, but I couldn't work up the courage just then. I introduced myself to her later in the week at a Blue Jays game. After that, we were inseparable. We're very different people. I'm fire and she's ice. I'm more outgoing and loud, and she's calm and down to earth. But we balance each other really well. We've now been together for over five years, and she's my family.

There was, for me, a clear moment when I knew that I wanted to marry Katherine. In my graduating year, I went on a trip to Cuba with my friends. When I flew home, Katherine met me at the airport with a homemade sign that just said, "Baby." It was so sweet and so funny; a little thing that just made my day. That summer, I started looking at rings.

KATHERINE (BPHE 2013): Brock's proposal in December 2012 was pretty funny. We had dinner plans and by mid-afternoon, he was pacing. We left the house at 2 p.m. because he was so anxious. He's hypoglycemic and a real mess when he doesn't eat, so I figured he was just hungry. We walked through campus to University College, where Brock asked a random guy to take a picture of us. As the guy was taking pictures, Brock got down on one knee. We were both crying, and I don't remember much else.

Brock and I have a lot in common. We work out together every day, take our dog for a walk and watch movies. We spend our entire lives – with the exception of work – together. Since I first got to know him, I've just had a really good feeling about being with him. We've really grown up a lot together, and we have a lot of plans for the rest of our lives. We're not in any rush to get married, but we do have a few baby names picked out.



Chairs scatter like wildflowers across the grass in this artist's concept for the Fleurt design

Designer at Play

Andrew Jones (BArch 1991) doesn't usually enter contests, but the 2012 Battery Conservancy Americas Design Competition, called Draw Up a Chair, caught his imagination. The chairs for this famous waterfront park in New York had to be stackable and light enough to move around easily – yet sturdy enough to comfortably support whoever sits in them. They also had to demonstrate a quality that the conservancy calls "aesthetic literacy."

As Prof. Jones tells his students at the John H. Daniels Faculty of Architecture, Landscape, and Design, "Any great design finds a synthesis of form, material, structure and use." In this case, he also asked himself, "How can 300 chairs add up to a much larger idea than a singular object?"

He says, "I really wanted people to understand the flower reference or metaphor." The name of his design, Fleurt, reflects Jones's belief that "when people flirt, it's like they are 'flowering' or at their best." He chose it "hoping that people would enjoy the pun" and participate in the spirit of play his chair was meant to inspire.

More than 650 entries were cut down to five finalists including the Fleurt. Prototypes were created – so that the public themselves could select the winner. When they chose the Fleurt, all doubt was removed: people not only enjoyed it – they loved it. – **DALE SPROULE**

Visit magazine.utoronto.ca to read Prof. Jones's account of the design process behind the Fleurt chair



Of the 5.5 million Torontonians surveyed in the Statistics Canada 2011 National Household Survey, 4.3 million declared a religious affiliation



FIRST PERSON

The Investigative Spirit

How a Munk School fellowship helped a religion major turn journalist

I WAS RAISED IN A SOMEWHAT RELIGIOUS FAMILY. My parents jumped around from church to church, trying to find one that fit; never staying at one for more than a couple of years. Every Sunday morning, my parents struggled to convince me to go. I'm not sure if this was because of my adolescent rebellious streak or my genuine dislike of church, or both. Either way, I grew up dismissing religion in general and, at times, even resenting it. Yet, I remained curious about those for whom religion is deeply important. I never thought that I would become a journalist who covers this topic.

Modern religions are an ever-evolving force to be reckoned with, and journalists are an integral part of ensuring we get the whole story

In 2008, I began my undergraduate degree at Trinity College. I took a course on religion and human rights that included material on the Dhamma-yietra – annual peace walks led by Cambodian Buddhist monks that began in 1992 as a means to restore order to a nation devastated by the Khmer Rouge. Learning about the Dhammayietra challenged my precon-

ceived notions about religion and brought to light the complex forces behind religious belief and its powerful potential for cultivating peace in times of despair.

After the course ended, I replaced my English major with one in religion and reconsidered my lifelong dream of going to law school. All I knew was that I wanted a career with some tie to religion, still unsure as to what exactly that would look like.

In my final year, I interned at the Tony Blair Faith Foundation (a group that uses religion to combat extremism) assisting with Faiths Act, its international interfaith fellowship program. People from different faith and non-faith backgrounds worked in pairs on projects in their communities related to the United Nations' Millennium Development Goals. While Mr. Blair has received much criticism, especially lately for his involvement in Middle East affairs and the *News of the World* phone hacking scandal, I'm still convinced that his aim to foster religion as a force for good is valuable.

Inspired by the foundation's work for human rights, I began my master's degree in human rights at the London School of Economics in 2012, writing my dissertation on Christian efforts to combat human trafficking in the U.S., where there is a huge amount of attention and money directed at the issue, and an even greater debate around whether this actually solves the problem. In my field research I heard compelling and sometimes heart-wrenching stories from human trafficking survivors and people working at anti-human-trafficking groups. I was able to recount some of these stories in my final paper, but was unsatisfied with having to confine them to the realm of academia. I realized that journalism might be an ideal way to combine my religion research with my desire to reach a wider audience.

Last May, I completed the Fellowship in Global Journalism at the Munk School of Global Affairs, where I reported for various media outlets, including the *National Post* and *VICE*, on the use of religion to combat, and sometimes contribute to, human trafficking. I wrote stories on the quirkier side of religion (an American Internet-based church that evangelizes at porn shows across the world) and its more inspiring side (a Catholic group that successfully turns thousands of refugees into Canadians). And as I currently investigate forced marriage in religious communities in Canada, I feel even more confident in my choice to write on religion for as wide an audience as possible. Modern religions are indeed an ever-evolving force to be reckoned with, especially as the line between religion and politics is increasingly blurring around the world, and journalists are an integral part of ensuring we get the whole story.

Rachel Browne (BA 2012 Trinity) is a reporter and editorial intern at *Maclean's* magazine.



Police refusal to identify any local instigators of the 1855 Circus Riot led to a complete overhaul of the force structure and a mass firing in 1859

60 SECONDS WITH

Robyn Yates Cameron

Sleuthing Toronto's odd history



A walk around Toronto with **Robyn Yates Cameron** (MA 2013) could be unnerving. You might discover that your favourite hairdresser is working beside a mass graveyard, or that your legislative buildings are haunted. But Cameron is just as familiar with the bright moments in Toronto history, whether they pertain to music, food or hockey. As Historian and Sleuth (yes, that's her official title) with a company called Urban Capers, Cameron designs historical scavenger hunts. Here, she travels back in time with **Cynthia Macdonald**.

Describe an Urban Capers adventure. We give you a booklet, a map and some instructions. Players walk for about two hours around a historical neighbourhood, and stop at some 20 different locations. They have to answer a tricky question or riddle at each stop.

How did a Mississauga native become an expert on Kensington Market?

I used to work at bingo halls in Kingston, and found gambling was a really interesting subculture. So I combined that with my existing knowledge of Asian-Canadian history, and did my master's degree at U of T on the history of gambling in Toronto's Chinatowns. When Jodi Sinden (the founder of Urban Capers) wanted to write a tour of Chinatown, she advertised in the U of T job listings for students and hired me!

In fact, one of your tours involves U of T. I guess the story of Reznikoff, the cuckolded stonemason who haunts UC, is pretty popular with scavengers. Refresh our memories?

One night Reznikoff and his rival had an epic knife-fight inside the half-constructed University College, and Reznikoff was killed. His body was thrown into one of the half-completed stairwells and covered up. They didn't find out about it until University College caught on fire in 1890. While they were setting up for a Valentine's Day dance, the decorations caught fire and the building burned down. Going through the rubble they found the skeleton of this guy – still wearing his stonemason's belt.

Everyone talks about how old Toronto used to be no fun at all, rolling up the sidewalks on Sundays and so forth. But your research shows it was actually full of scandal and mysterious secrets. Interesting things have always happened here. And Urban Capers' murder mysteries are our most popular tours.

Like the Circus Riot of 1855, in which firefighters and clowns brawled in a brothel on Front Street. Does Toronto do a good job of preserving its colourful history? A pretty good job; the Toronto historical plaque series lets you visit things that used to be there, even if they aren't any longer. But one of Toronto's major failings is that we don't have a historical museum dedicated to the city.

Do the winners of your hunts get prizes? Yes – but those have to stay a secret!

Milestones



Halifax-based architect **Omar Gandhi** (BA 2006 Victoria) has won the \$50,000 Canada Council 2014 Prix de Rome prize. Gandhi will be able to use the funds towards his work in designing buildings to withstand extreme weather, drawing on everything from novel manufacturing techniques to biomimicry and sustainability.

John Tory (BA 1975 Trinity), **Bonnie Crombie** (BA 1982 St. Michael's) and **Brian Bowman** (JD 1999) were elected mayors of Toronto, Mississauga and Winnipeg, respectively, in the October municipal elections.

Danika Billie Littlechild (LLB 2000) has been appointed vice-president of the Canadian Commission for UNESCO. She is the first indigenous Canadian to hold the position.

Opera singer **Andrew Haji** (BMus Perf 2011, MMus 2013) of *Rob Ford, the Opera* scored a hat trick of top prizes at the 50th International Vocal Competition 's-Hertogenbosch in the Netherlands in September. And **Alex Goodman** (MusBacPerf 2010) won the world's top jazz guitar prize at the Montreux Jazz Festival.

Two-time bobsleigh Olympic champ **Heather Moyse** (MSc OT 2007) has been named to the Order of Prince Edward Island.

George Jacob (MMSt 1996) is the new CEO of the Philip J. Currie Dinosaur Museum – a job title that includes the line “executive director of the River of Death and Discovery Dinosaur Museum Society.”

And **George Strathy** (MA 1971, LLB 1974) has been named Chief Justice of the Court of Appeal for Ontario, while **Janet E. Minor** (BA 1970 Victoria, LLB 1973) was elected treasurer of The Law Society of Upper Canada.

Learn more.

Kathryn Parker

Graduate, Strategic Leadership Advanced Certificate, U of T alumna, and Director of Academic Affairs at Holland Bloorview Kids Rehabilitation Hospital.

“We owe it to our families, our teams, our community to continue to strive for excellence. Continuing education provides us with an invaluable vehicle for growth.”

We offer boundless opportunity to enhance your skills and enrich your life.

Courses are available across the GTA, on all three U of T campuses, and online.

For easy registration or to order a free copy of our course catalogue, call [416.978.2400](tel:416.978.2400) or visit our website. Follow us on Twitter [@UofTLearnMore](https://twitter.com/UofTLearnMore).

learn.utoronto.ca



UNIVERSITY OF TORONTO
SCHOOL OF CONTINUING STUDIES



The second principal of the Scarborough campus, A. F. Wynne Plumptre, in UTSC's TV production studio



LIGHTS! ACTION! LEARNING!
Feb. 10, 1972

UTSC was ahead of its time in pioneering lectures-through-technology

The original building on U of T's Scarborough campus boasted a 560-square-metre television studio, designed to beam lectures out to 50 classrooms. With more than \$1 million of up-to-the-minute equipment, the studio and its closed-circuit system was one of the 1960s' most ambitious educational experiments.

All that high-tech wizardry was intended to stretch a scarcity of senior faculty across the growing number of baby boomer students. When full enrolment was reached, planners hoped, televised teaching would allow faculty to film lectures for up to half of the general courses, reducing instructional costs by 30 per cent.

The timing seemed right: 92 per cent of Canadian homes had TV sets by 1965. Yet some students balked at watching

lengthy televised lectures, and many faculty weren't comfortable with the process. This unease – along with lower-than-expected economic benefits – ended the revolutionary teaching-by-television experiment.

Today, new technologies are faring far better. About 40 courses each term can currently be accessed online, says UTSC psychology professor Steve Joordens, who works to create new learning tools. Web options offer his 1,900 students easy flexibility with when, where and how they learn – and creating the content is less intrusive and intimidating for the faculty. "Professors just walk into the class and do what they do," he says. Captured on video as they happen, lectures are up on the web "almost immediately." No studio required. – **JO CALVERT**

Show your pride

The rewards card for savvy alumni

The University of Toronto MBNA Rewards MasterCard® credit card



The more you use it the better it gets

Earn MBNA Rewards points you can redeem[†] for unlimited cash back, brand-name merchandise, worldwide travel, gift cards from top retailers and restaurants, even charitable donations.

- Earn **1 MBNA Rewards point[†] for every \$1** in eligible purchases
- Get **1,000 bonus points^{††}** after your first eligible purchase
- Receive **1,000 bonus points^{††}** each year on your account anniversary
- **Every eligible purchase** benefits student and alumni programs at The University of Toronto

See how fast your points can add up

Type of Purchases	Monthly Expenses	Monthly Points	First-Year Points
Gas	\$300	300	3,600
Groceries	\$600	600	7,200
Insurance and Utilities	\$500	500	6,000
Dining Out	\$200	200	2,400
Other	\$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 purchases.

Learn more today

Visit mbna.ca/myschool or call **1-877-428-6060[‡]**.

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.

^{‡‡}To qualify for bonus anniversary points, your account must be in good standing and you must have made at least one purchase transaction on your account within the prior calendar year. This bonus will be applied annually following the anniversary date of your account opening. This promotion is offered by MBNA and may be amended or cancelled at any time without further notice.

[‡]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 September 2014 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 42 NO. 2
MAGAZINE.UTORONTO.CA

U of T in Your Neighbourhood

Come take a front-row seat to lectures about world-changing ideas, close to home.

The U of T in Your Neighbourhood program brings our thought leaders to neighbourhoods in the Toronto area, where more than 250,000 alumni live and work.

Hear some of U of T's best-known researchers speak about intriguing issues of the day: the origins of the universe, cars that drive themselves, the use of technology in health care and much more.

Reconnect with old friends – or make new ones. Discover fellow alumni who share your interests. Pick up where you left off as a student. Join the conversation and be inspired.

alumni.utoronto.ca/gta