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Campaign sets new direction for campus

Letter From Lislehurst

T ast year, U of T Mississauga launched ambitious fundmost raising campaign in its history. In front of an audience of students. faculty, staff, alumni and community supporters, we set out our vision for our campus' next transformative phase: a vision where we will be defined as a global leader in critical research and teaching fields; as a driver of talent and ideas propelling economic prosperity, knowledge creation and the betterment of society; and as an engine of invention and innovation on the international stage.

Our world today is in rapid flux, facing challenges that are complex, unprecedented transnational. and Knowledge, information, talent and capital move seamlessly on a global scale. There is unparalleled convergence, communication and. of course. competition. In such an environment, our young people need to have more than knowledge of their own narrow disciplines to succeed.

And we must help them not only succeed but also thrive.

The Boundless Campaign for the University of Toronto Mississauga will prepare the global citizens to meet the global challenges that affect us all. Through the Campaign, we will provide a unique learning experience that will enable our students to work across borders, boundaries



and disciplines. We will foster international fluency and leadership skills, enhance cross-cultural understanding, ensure access and opportunity, and nurture collaboration and creativity. We will strengthen our research capacity, build on our great history of discovery and drive innovation.

Our \$60 million Boundless campaign will help us tackle the pressing challenges ahead for our city, region, country and world. And it will help us build a campus that will

shape our lives for years to come.

We hope you will join us on this next exciting phase of our journey. (To read more about the Campaign for the University of Toronto Mississauga, see page 24)

Deep Saini

Vice-President, University of Toronto Principal, U of T Mississauga

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TRANSIT OF VENUS

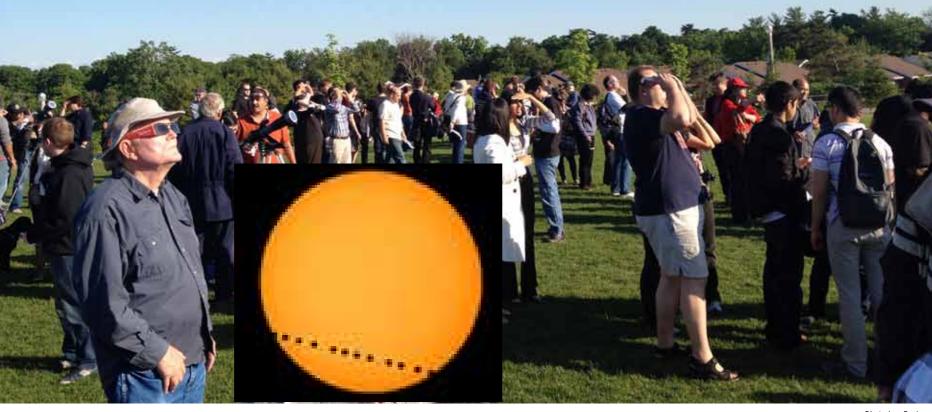


Photo Len Paris

RARE SIGHTING DRAWS CROWDS TO CAMPUS

A mateur astronomers and curious sky watchers gathered on the front lawn at U of T Mississauga last year to watch a transit of Venus, the last time this phenomenon will be visible until 2117.

The Royal Astronomical Society of Canada

was on hand with filter glass and specially adapted telescopes to allow visitors to view the transit safely.

A transit of Venus takes place when the planet Venus passes directly between the Sun and Earth, becoming visible as a small black disk moving across the face of the Sun, usually lasting for several hours.

Venus transits have also been historically important for scientists, as they were used to calculate the first realistic estimates of the size of the Solar System. **NICOLLE WAHL**

TEACHING THE TEACHERS

GOOGLE GRANT SUPPORTS COMPUTER SCIENCE

A t Evan Hardy Collegiate in Saskatoon, a group of grade 11 high school students sits enthralled in front of a class computer, watching while the program they created translates real-life earthquake data into a precise model of the earth's crust.

"It's all about making it interesting," explains teacher Leslie Ruo. But making computer science fun and bursting the myth that it's just for geeks isn't easy. Last summer, Ruo enrolled in CS4HS (Computer Science for High School) at U of T Mississauga, a workshop geared to helping high school teachers develop the latest skills and build computer science curricula guaranteed to keep students engaged.

"Computer science isn't a required course in high school, so there's a lack of consistency in what's being taught," explains senior lecturer Andrew Petersen. Some students who enrol in university-level courses have little or no programming knowledge, he noted. "We need a solid foundation on which to build."

Petersen rallied the support of his colleagues and a \$14,000 grant from Google to launch CS4HS in 2012. Google's Education Group supports universities around the world in developing workshops to promote computer

science among high school and middle school teachers, and increase the number of students pursuing computer science and engineering at university. U of T ranks among select North American institutions to engage with the multinational corporation on the project.

Over two days in July, 22 high school teachers from seven school boards across the country attended CS4HS, where they were introduced to the programming language Python, and to mobile and web technologies. The workshop also featured presentations by professors on digital forensics and human-computer interaction, and provided opportunities for participants to share their own winning ideas.

"This sort of approach is something teachers can take away with them," says Petersen. "We wanted to leave them talking about ideas they can apply in the classroom."

He also hoped to turn local teachers on to U of T Mississauga as an ongoing resource for computer science education and strategies. This fall, a teacher called to ask for ways of challenging a high-achieving grade 12 student—exactly the kind of outcome Petersen was hoping to achieve.

"Our university exists within a community. We need to cultivate those relationships and fill an important need that will help to make this region and this country even more competitive." **CHRISTINE WARD**



Photo Stephen Uhraney

LINKING GRADS TO GREAT JOBS

PROGRAM BUILDS PATH TO LIFE SCIENCE CAREERS

It wasn't that Osama Marzouk lacked experience. When he arrived in Canada four years ago, Marzouk had a 16-year history in pharmaceutical sales and marketing, a bachelor degree in medicine, an MBA and a good command of English.



"I was confident I would be able to find a job in my field," he says. But after a year of applying for jobs without a single interview, he realized he needed help.

"The goal of the Pathways to Employment in Biotechnology (PEB) program is employment," says Donna Heslin, former manager, Mentoring and Relationships. "The program was designed for new comers coming to Canada with a science or biotech background who are highly qualified, but having difficulty accessing work."

Julia Povieriena, who came to Canada in 2010 with a masters of science in biochemistry, says the program helped start her career in Canada. "The Pathways program had the information and opportunities I needed to become job ready, and prepared me for the hiring process."

The PEB program offered participants classes, networking opportunities and extensive employment preparation, including resume workshops and mock interviews.

"One of the greatest skills I learned in the program was to read job requirements carefully, looking for the key words to tailor my resume to the organization's needs," says Marzouk, now the program manager for a provincially funded diabetes program. "My current position posted for a nurse, but it was really about outreach, promotion and relationship building. These are all areas related to my marketing experience."

Elements of the program have been integrated into a Certificate in Life Science Enterprise, designed for internationally educated

"I LEARNED THE 'RULES' OF BEHAVIOUR AND CONVERSATION IN CANADA."

professionals and new graduates seeking to enter or re-enter the life science sector.

Povieriena says the program also helped prepare her for success in the Canadian work environment. "I learned the 'rules' of behaviour and conversation in Canada," she says. "This helped me to establish appropriate relationships with my co-workers when I got my first entry-level job in my field. I was happy to know what I learned from the program." She's now in her dream job—an analytical chemist. LANNA CRUCEFIX





EUGENIA DUODU JUGGLES AND MICROFINANCING T

Por many, the long, lazy days of August mean vacation. Maybe the cottage, with cool water and vivid late-summer sunsets. Perhaps Europe's elegant architecture and languid bistro lunches.

Or, if you're Eugenia Duodu, it means twelve frenetic days in east Africa helping to set up a microfinance operation and promoting the United Nations' Millennium Development Goals of achieving universal primary education and eradicating poverty.

Duodu, an organic chemist who is pursuing her PhD in medicinal chemistry and cancer therapeutics at the University of Toronto Mississauga, is one of 13 university-aged volunteers who traveled to the Tanga region in Tanzania. The volunteers are members of the non-profit group Creating Global Citizens, which Duodu helped to found.

The group partnered with a Tanzanian organization to provide microfinancing loans to 10 local women to begin a beekeeping business. The interest-free loans of \$150 will provide each woman and her family with two straw beehives, from which they can harvest honey to sell.

MEDICINAL CHEMISTRY O MAKE A DIFFERENCE

The profits from the honey will go towards repaying the loan and contributing to a farming co-operative fund. The women keep half of the profits for themselves, says Duodu.

"What's amazing about the microloan project is that women can get skills and work to make their own income," she says. "This is the first time our group is doing something like this, and I think it's going to have a tremendous impact, not just on the women and their families, but on their community."

Not all of the learning will be on the Tanzanian side, Duodu says. "In our organization, we all come from marginalized communities in Toronto. We heard about the issues and struggles people are having and comparing that to what we experience here."

Duodu says the opportunity provides a different perspective. "I think as a graduate student I get caught up in the now and the local," she says. "Every time I travel I can get a deeper perspective on what is going on at a global level. When I bring that back to my work, it brings things into perspective for me." LANNA CRUCEFIX

MED SCHOOL MENTORS

PROGRAM MATCHES PEEL STUDENTS WITH MEDICAL STUDENTS

anting to help people in need is the essence of being a doctor. So for the students of the Mississauga Academy of Medicine (MAM), starting a community outreach program within the first year of the academy made perfect sense.

The Saturday Program at Mississauga (SPM) is a student-led initiative that matches struggling high school students with undergraduate, graduate and medical student mentors for one-on-one tutoring and interactive learning workshops.

The eight-week program led to some astonishing results for the mentees including better grades (up to 30 percent higher), improved language skills, and a greater desire to pursue post-secondary education.

"The students benefited not only academically but also on a personal and social level," says Joanne Jiang, a second-year medical student and co-director of SPM. "As the weeks progressed, we noticed that students became more confident communicating openly with their tutors and with each other. This is important, as it demonstrated to us that they were becoming more confident, and thus more willing to take control of their education."

Jiang runs the program with classmates Lisa Liang and Tara He. They established a partnership with the Peel District School Board and worked with guidance counsellors to identify students in need of additional academic and social support. They also recruited students within MAM and other programs at UTM to tutor the participants in math, science and English and lead workshops on critical life skills.

"From the tutors' perspective, being involved with SPM really helped them with their public speaking and leadership skills and it's a great thing to add to their résumés for grad school," says Liang, who occasionally filled in for tutors and led some of the workshops. "Whenever you teach other students, you learn a lot about different learning styles. It was just really rewarding to see some of these kids at the end of the year. A lot of them are very bright—they just needed a little bit of extra encouragement."

This year, the co-directors are aiming to make even more of an impact by expanding the program from 40 to 60 students, bringing more volunteer tutors on board, and adding the YMCA of Mississauga to its list of partner schools. **CAROLYN WONG**



Chris Kowalczuk had been into football and fitness since high school, but when he started at U of T Mississauga in 2003 his priority was academics. Study hard, become a teacher: that was his plan. Then his plan changed.

Kowalczuk, who now plays for the Canadian Football League's Winnipeg Blue Bombers, spent his first two years on campus concentrating on his double major in history and geography, but he always felt like something was missing. "I always had the drive to get back to playing football," says Kowalczuk. "But I was concerned about being able to juggle it with my school work. I didn't want to be in a position where I was compromising my studies."

Prior to the construction of the Recreation, Athletics and Wellness Centre (RAWC), Kowalczuk spent five days a week working out in U of T Mississauga's Fit Stop and Olympic weightlifting room. One day, he started chatting with some of the other bulky football-sized guys around the facility, some of whom turned out to be Varsity Blues players and some who were Toronto Argonauts, who have been practicing and training at U of T Mississauga for years.

"They told me they all found ways to balance athletics with academics and that, if my heart was still in it, I should try out for the varsity team. They said, 'You don't want to go through life looking back on things you could have done and didn't do.' I took that philosophy to heart and that's really what got me to where I am today," says Kowalczuk.

When Kowalczuk made the varsity team in his third year at U of T Mississauga, he not only maintained his grades, he improved them, a feat he attributes to rising to the challenge of a more demanding workload. While he believes he has always had a strong work ethic, he says it got even stronger when he intensified his training regime because it forced him to manage his study time more efficiently. It also helped that he had the support of the varsity coaching staff and a U of T Mississauga faculty Kowalczuk says Ron member. Buliung of the geography department was one of his favourite professors because he was always very enthusiastic material about the he taught.

"I also seemed to run into him all the time outside of class. I'd see him at the gym, in the halls, in Spigel Hall and he knew I played football so he'd always ask about the team and how we were doing," says Kowalczuk. "Having one of your professors rooting for you is so encouraging."

Kowalczuk, who always had the size to play professional football, never considered it a career option until he saw how drastically his skills were improving with the Varsity Blues and he credits part of this drastic improvement to the opening of the RAWC in 2006.

"Having these great new facilities was an inspiration to train harder and to get better. There were eight to ten of us on the team who worked out together every day at the RAWC. It was really a place we all wanted to be: it had everything we needed to succeed," says Kowalczuk, who, because of his knowledge of the facilities and equipment, started becoming the person younger players on the team approached when they had training questions.

But even now, as a professional athlete, Kowalczuk keeps up on geography—he brought one of his old U of T Mississauga textbooks with him to read during downtime—and he still has thoughts about becoming a teacher when his playing days are over. So it is no surprise that he relishes opportunities to volunteer his time in the community, particularly during February's I Love to Read Month in Manitoba, when he makes appearances at local elementary schools.

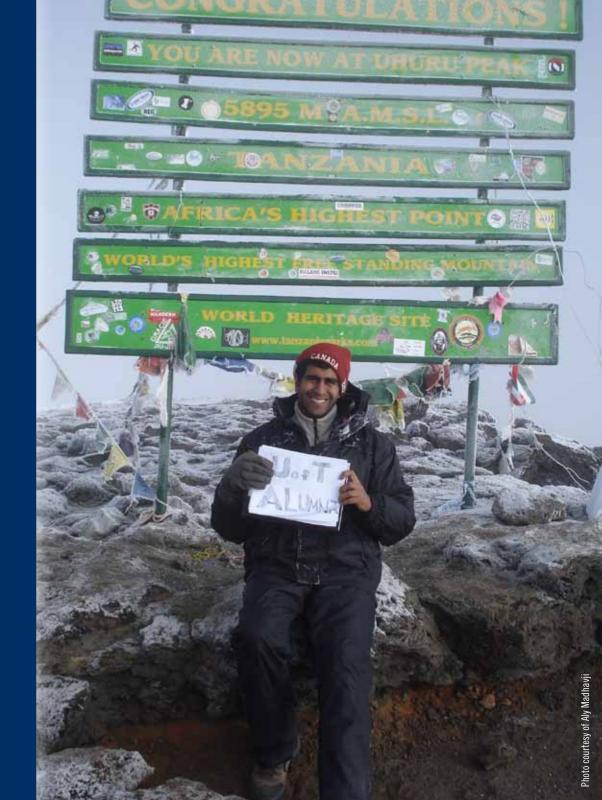
"I get to go in there and read to these kids for a while. It's very rewarding. I talk to them about the importance of reading, how it should be something you enjoy," says Kowalczuk. "When you make reading a priority, when you focus on your education, you never know what opportunities might present themselves. I'm living proof of that." ADAM GILES

PEAK OF SUCCESS

A ly Madhavji, 22, graduated from the University of Toronto Mississauga last June with a Bachelor of Commerce and a month later headed to East Africa where his parents were born. For weeks, he had been preparing for the tortuous and sometimes dangerous climb up Kilimanjaro—the highest free-standing mountain in the world at 5,895 metres.

He wasn't quite prepared for what he experienced on Kilimanjaro. "About 15 minutes from the peak there was a clear sky and the sun was shining," Madhavji said. "All of a sudden it got really cloudy and there were 100 miles per hour winds. It was tough to walk. Your jaw freezes, your eyelids start to freeze." Luckily he had eight layers of clothing on top and seven on the bottom.

Madhavji was a member of the U of T governing council while a student and a Cressy Award winner for fundraising for the Food Bank and Student Refugee Program at UTM. He is now a financial services analyst with PricewaterhouseCoopers. ALAN CHRISTIE



PARTNER WITH PASSION



Nick Kuryluk has one word of advice for university administrators wanting to grow a world-class institution: partnerships.

"When it comes to adapting to a rapidly changing environment, partnerships between a university and its community remain critically

ALUMNUS PROVIDES LEADERSHIP AT CRUCIAL STAGE IN INSTITUTION'S HISTORY

important," says Amgen Canada Inc.'s director of strategy and program management. He should know.

Since graduating from U of T Mississauga in 1989 and joining Amgen two years later, Kuryluk has played an important role in nurturing the symbiotic relationship among the university, the city and the global biotechnology company. He is a member of U of T Mississauga's Boundless campaign cabinet and Principal's Advisory Council, and Kuryluk was a part of the public affairs and philanthropy team at Amgen that approved the firm's latest investment at U of T this fall: a \$425,000 donation to UTM's Institute for Management and Innovation.

"I am a passionate believer in U of T Mississauga and the impact its teaching and research mission has on our community," he explains. "And I was absolutely thrilled to discover my colleagues at Amgen felt the same." Amgen's latest gift builds on an earlier donation—spearheaded by Kuryluk—to create the Amgen Canada Inc. Smart Classroom in the Hazel McCallion Academic Learning Centre.

But Kuryluk's volunteerism to his alma mater extends beyond the trees on the Mississauga campus. This fall, as a member of Governing Council's Elections Committee, he helped develop recommendations on election guidelines for the newly approved tri-campus governance model. The model, which takes effect July 1, 2013, establishes representative campus councils at U of T's western and eastern campuses, giving both U of T Mississauga and U of T Scarborough stronger voices and a more efficient process of decision-making.

"There was a lot at stake in developing these recommendations," explains Kuryluk, "from how the council seats were structured to how the process will work in electing people to various seats from across all campuses. There's no doubt—the new governance model will transform how this university operates."

Kuryluk feels honoured and grateful that he has been able to play a role at this "inflection point" in the history of the Mississauga campus and University of Toronto.

"I constantly remind myself how lucky I am to be doing something that challenges me, where I can learn and contribute and provide value. Nothing is more fulfilling than being surrounded by a world-class institution with great people." **CHRISTINE WARD**



ALL THE WORLD'S

oulpepper Theatre Company is a Canadian institution, with some of the best modern actors in the country. But Qasim Khan and Paolo Santalucia really knew they were somewhere incredible when the company trucked in bags of dirt for them to play in.

"Two hundred bags of dirt," clarifies Santalucia. "Every night we had to water it and cover it with peat moss to keep it fresh." The dirt was used in the production, Dirt, that capped Soulpepper Academy, the year-long paid training program Soulpepper offers to young actors. Khan (UTM 2008) and Santalucia (UTM 2011) were two of the eight actors in the 2011/2012 Academy. Both are graduates of the joint University of Toronto Mississauga and Sheridan College Theatre and Drama Studies program.

Now Soulpepper actors playing in Arthur Miller's The Crucible and The Royal Comedians, by Russian playwright Mikhail Bulgakov, the two liken their time in the Soulpepper Academy to an intense apprenticeship.

"We were able to work with actors who are very experienced and extremely skilled," says Khan. "It's on-the-job training. With acting, you can only learn so much in the classroom. The rest has to come from experience."

S A (DIRTY) STAGE

Santalucia agrees, saying that the Academy members were integrated into the company from the beginning. "The actors of the company were deeply invested in our training. There was a real sense of community."

Soulpepper is known for its interpretations of modern classics. For Santalucia, the critical analysis that is part of the UTM program is something he appreciates now that he's in the professional world.

"You need a good foundation in a play's history to open your ideas," he says, noting that both Miller and Bulgakov were victims of an age of censorship and oppressive politics. "In the Academy, we often discussed plays' significance in history. I realized I was lucky to have gone through a program that gave me the tools to engage with artistic work in this way."

The two actors have a heavy schedule of rehearsals: six days a week, eight hours a day, as well as playing every night. Both say it's well worth the effort.

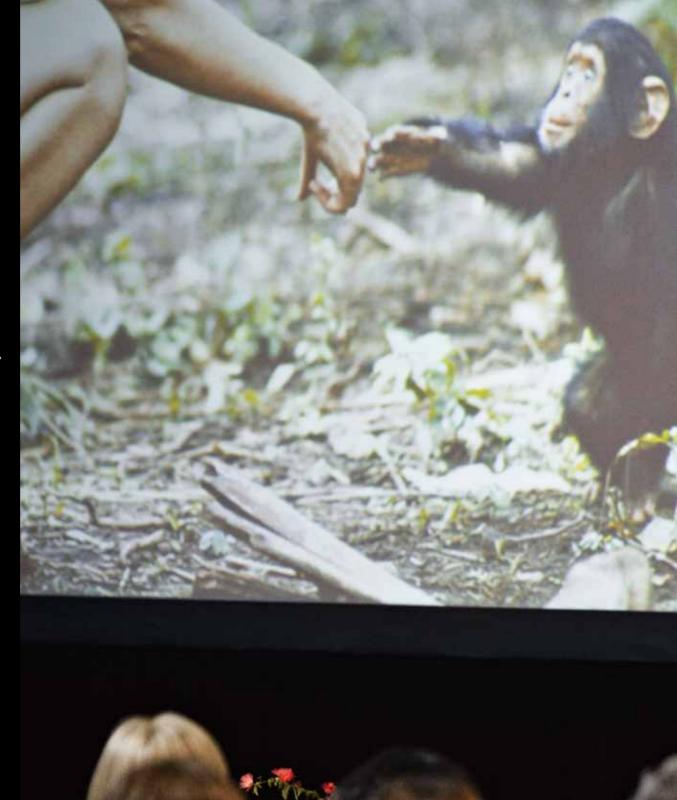
"It's beautiful, every night, to see actors from all different walks of life coming together to tell a story that really impacts people," says Khan. "We hear the audience's reaction at the end of the show during the curtain call. It's great because it means they've heard the story." LANNA CRUCEFIX



SWEET JANE

PRIMATOLOGIST SAYS
TIME REMAINS TO
PROTECT THE PLANET

STORY BY **ANDREW WESTOLL** PHOTOGRAPHY BY **MATTHEW LITEPLO**





Thanks to Goodall and her many colleagues, we have learned that chimpanzees use tools, eat meat, make war, exhibit culture and use creativity to solve problems. We know the mother-child bond is as important in chimp society as it is in the human world, that chimps are self-aware, possess at least a rudimentary understanding of another's desires and feelings, and display emotions and empathy towards one another.

We have quite literally come to know the chimpanzee through Goodall's eyes. And while the view has been a transformative one—leading us to reconsider our place within the animal kingdom—an aspiring science student in 2012 might be forgiven for wondering, perhaps with a measure of dejection: After more than

fifty years studying chimpanzees, what could possibly be left to discover?

This September, Goodall—now a Dame of the British Empire and UN Messenger of Peace—visited the University of Toronto Mississauga to deliver the annual Snider Lecture to an audience of more than 1,100 students, staff and faculty. The day before her talk, I had the chance to ask her this very question when I interviewed her at her hotel in downtown Toronto. Why should young people today get excited about chimpanzee research? Her response surprised me.

"Because we're only just beginning!" Goodall said. "At Gombe, we're taking advantage of new technologies to find out things that were not possible in my day.

Just by collecting fecal samples we can do DNA analysis and figure out who the fathers are. We're doing hormone analysis so we can see the effect of a female's cycle on her behaviour. We're using GIS, GPS and satellite imagery, which means we finally have really good maps, not only of the chimps of Gombe but of the chimps across the rest of their range."

The list goes on. Researchers at Gombe are now using sophisticated computer technology to correlate chimpanzee movement with the location of fruiting trees, habitat change over seasons and years and the effect of fire on the ecosystem. Meanwhile, more than fifty years of life history data on the Gombe chimps is being stored in the archives at Duke University. The scientific potential of such a vast amount

of observational data is immeasurable, a Kids need to have the freedom to be differgoldmine for a young researcher who yearns ent. They need to come up with their own to put his or her own stamp on chimp science. theories. Maybe they're completely wrong, "The number of different scientific but we need to guide them so they can find out for themselves." disciplines involved has always been huge. Goodall attributes much of her success in Sociology, psychology, anthropology, those early years at Gombe to having been ethology, primatology. And now, with our use of new technologies, so many more an outsider to academia and formalized disciplines are getting involved." Nowadays, scientific inquiry. This allowed her to avoid, it is entirely conceivable that a computer as she puts it, being "bullied by science." science student or an electrical engineering She was free to think for herself, and one of major could end up working on chimpanzee those thoughts—that chimps have personalities, minds and feelings—resulted in an studies. The key to getting young people hooked oeuvre of scientific discoveries that the late on the scientific process, says Goodall, is to evolutionary biologist Stephen Jay Gould highlight the experiential side of things. considered "one of the great achievements "The hands-on aspect, the learning-byof twentieth-century scholarship." yourself aspect, the opportunity to ask your But surely one can be a scientist and resist conventional thinking. After all, isn't own questions and find your own solutions.

the goal of science to keep knowledge moving forward?

"It goes right back to the way you teach children," says Goodall, "the way you give them freedom to have their own thoughts. If you allow them that freedom when they're ten, eleven, twelve, then by the time they get into a lab, they're going to have that behind them. And when they come up with an idea that is a bit different, they're going to have the courage to say it."

The message of Goodall's Snider lecture was one of hope. "Without hope," she says, "what is the point of bothering?" She locates her optimism for the future in four places: in our impressive brains, in the indomitable human spirit, in the resilience of the natural world and, most importantly, in young people.

Goodall hasn't been in one place for more than three weeks since October, 1986 – she travels, on average, three hundred days of the year – and she knows better than most the extent of the challenges we face as a species. But everywhere she's been, she's also met countless young volunteers who are working to make their world a better place. The Jane Goodall Institute's Roots and Shoots program, founded in 1991, provides young people with the tools and encouragement they need to pursue projects that improve the quality of life for people and animals. The program now boasts more than 16,000 active groups in over 130 countries.

Goodall's impact on the way our culture views animals has been so wide-reaching that it is impossible to quantify. But a recent national poll conducted on behalf of the Jane Goodall Institute of Canada offers a clue. The poll found almost 66% of Canadians would support legislation that requires companies to use computer-

generated imagery instead of live chimpanzees in film, television and advertising (better add CGI technicians to that list of chimp-focused disciplines). The same poll found nearly 70% of respondents would change a purchasing decision if they felt it would help protect habitat for chimpanzees (with impeccable timing, JGI just launched an ethically sourced Jane Goodall Institute Blend of coffee).

Goodall left a powerful impression on the audience at UTM. A lineup of people waiting for her autograph still snaked through the auditorium a good hour after she'd finished speaking. And as I stood there watching the crowds of star-struck students, and wondered which of them would become the next generation of scientists, I remembered what Goodall had told me the day before, as we finished up our interview. Six simple words, a fitting phrase to live by. "There's a lot still to learn."

When Jane Goodall first began pioneering research into the behaviour of chimpanzees in Tanzania in 1960, the forest in the area was lush and unthreatened, and chimpanzees were the But over the next five decades, the stresses of increasing human populations, poverty and civil unrest have forced our closest animal relatives to the brink of extinction. We are facing but for many other wild species and ultimately for the planet and for human beings.

The Jane Goodall Institute (JGI) is a global non-profit organisation that supports wildlife research, education and conservation. Its primary goal is to ensure the survival of great ape por calls "community-centred conservation" activities that work with local communities to help them live more sustainably. It runs significant projects in Uganda and the Democratic Rehealthcare and alternative income generation while also protecting forest habitats. And it provides support to two chimpanzee sanctuaries that are home to more than 200 survivors of Canada, it empowers and inspires youth to become more committed, active citizens through its global Roots & Shoots program.

JGI Canada is based in Toronto through a partnership with the School for Environment at the University of Toronto. The partnership includes collaborations on teaching and resear conservation programs in Africa, and opportunities for U of T students to contribute to JGI's programs around the world. Moving forward there is still much to do to ensure the survival wild. Visit JaneGoodall.ca today to find out how you can help.



A WHODUNIT FOR KNOW-IT-ALLS

CLUES, EVIDENCE, UNSOLVED MYSTERY CHALLENGE AMATEUR SLEUTHS DURING TAPING OF *DISCOVERY*'S REALITY SHOW

n a humid spring morning, 15 television production vehicles roll down Outer Circle Road and stop at the north end of the U of T Mississauga campus. Crew for Discovery's *Canada's Greatest Know-It-All* stretch yellow police tape around the forensic science crime scene house and barricade the entrance to Principal's Road.

The show's host, actor Daniel Fathers, leans into a camera to film his pre-roll sequence and describe today's challenge: in teams, contestants will investigate a mock crime scene, search the house and its grounds for evidence, and form a theory on the disappearance of Alicia Fernandez, a fictitious 35-year-old professor from the anthropology department.

Canada's Greatest Know-It-All, billed as 'competition-reality', pits Canada's most inventive minds in head-scratching challenges designed to test their brains, ingenuity and game-playing savvy.

Creator and executive producer, Brad Brough, sifted through thousands

of YouTube applications to select 10 know-it-alls for season two. "We cast the show like a poker hand," Brough says. "We fill slots with archetypes and see where it goes. We give these self-professed know-it-alls the opportunity to get off the barstool, get off the couch, get out of the living room and prove it."

When Brough envisioned a challenge combining a 'Holmesian' mystery and modern crime scene investigation, he called UTM.

Team Blue—Owen, Abe, Carla and Andrew—arrives in a blacked-out minivan. Fathers and guest judge, Professor Tracy Rogers, director of the forensic science program, brief them in front of the crime scene house. "Once you cross the police tape, everything you do, everything you say, everything you think is important," Rogers says. "In the real world of forensics, you don't get a second chance."

Equipped with fingerprint powder, an alternate light source, a chemical kit,

a camera, tweezers and a magnifying glass, Team Blue ducks under the tape.

"Follow her," Brough tells a cameraman, when Carla discovers evidence hidden beneath a parked car. From inside a mobile video trailer, Brough and his staff track the know-it-alls' movements across a bank of video monitors. "He missed it," Brough says, when Abe shines his light source into a closet but overlooks a glowing blood spatter.

Ninety minutes later, Team Blue emerges with tagged evidence bags, photos and a theory; but no murder weapon and even worse, no body. Inside the mobile unit, the challenge coordinator shakes his head. "They ignored evidence inside the house," he says, "and outside, Andrew walked right past the burial site."

Each one of the program's eight episodes contains three challenges. While the first two are team-based, the final is a no-holds-barred individual contest where two of the weakest players (as identified by their team-mates) try to

POLICE LINE DO NOT CROSS

outwit, outplay and outlast each other; the loser is eliminated from the show.

Team Blue films their post-challenge interviews out on Principal's Road. Their handler moves them into a private tent when Team Orange—Ben, Doug, Laura, Scott and Beth—arrives on-set.

Laura, a recent U of T graduate with an Honours BSc in physics and biology, hopes to stay in the game for as long as possible. "My team sees me as a threat," she admits, referring to her second-place finish on CBC's Canada's Smartest Person in March 2012, "but I tell them, 'Come on man, I'm 23 years old, I've never been married, I don't have kids, I don't even own a car. Do you really want to pick on a little girl?"

Brough believes that despite her youth and lack of real-world experience, Laura has a shot to win *Canada's Greatest Know-It-All*. "Laura is smart,

strategic and very competitive. She's an on-line gamer, so she understands character-based challenges," he says.

Team Orange delegates tasks and enters the crime scene house as a unit, cataloguing evidence and brainstorming ideas as they move from room to room. Laura finds the name of a potential suspect on an open laptop and sketches a timeline to recreate how the crime may have unfolded. Armed with key pieces of evidence and a hunch, the team sweeps the backyard and discovers the fresh grave of Alicia Fernandez.

Cameras rolling, Rogers faces the know-it-alls. "More than once, Team Blue was at the point of making a significant observation, but was side-tracked by a teammate for another issue," Rogers says. "Team Orange organized well and found the burial site. However, both teams overlooked the murder weapon—a hammer, hidden

in the toilet tank."

The know-it-alls return to a Mississauga hotel where they are sequestered for the month of filming. Although the season's 24 challenges have been painstakingly orchestrated and are kept top secret, Brough says the know-it-alls are determined to prepare for the challenges that lie ahead.

"Their only free time is when we drop them off at the hotel at night until we pick them up the next morning, so they sit in a room together and do online research, conspiring to beat us at our own games. But what else would you expect from them? It's awesome—because they're know-it-alls."

KIM WRIGHT

Canada's Greatest Know-It-All airs Mondays at 10 p.m. ET/PT on Discovery.

BOUNDLESS POTENTIAL

U OF T MISSISSAUGA LAUNCHES CAMPAIGN TO TRANSFORM CAMPUS INTO HUB OF GLOBAL INNOVATION



of T Mississauga is on the cusp of major change. Forty-five years after the first students walked through the front doors of the North Building, the campus faces a pivotal point in its history.

"We have accomplished the unimaginable since our founding 1967." Vice-President in says and Principal Deep Saini. "Our enrolment has grown to more than 12,500 students, our physical space embraces numerous awardwinning buildings including an academy of medicine, and our student body reflects the ethnic and cultural diversity of our great country. Now we are ready to harness the excellence of our students, faculty and staff to take our next leap forward as a global innovation leader."

The theme of innovation resounded strongly throughout the launch last year of the campus' most ambitious fundraising campaign to date: the Boundless Campaign for the University of Toronto Mississauga. Saini, Mississauga Mayor Hazel McCallion and other dignitaries unveiled plans that will transform the campus into a global hub of scholarship and pioneering discoveries along with its goal to raise

\$60 million over five years. U of T Mississauga will play an integral role in U of T's \$2 billion Boundless campaign, the largest in Canadian history.

INSTITUTE FOR MANAGEMENT AND INNOVATION

The cornerstone of the campaign is the Institute for Management and Innovation (IMI). "Managing the single most innovation is important factor for economic growth in the 21st century," notes Professor Ulrich Krull, vice-principal research and special initiatives. "Canada's competitive advantage and ability to address large social issues will depend on our capacity to invent, innovate and transform new ideas into practical solutions. We require an intellectual centre where new-economy companies can draw on the ideas and the managers who are themselves innovators."

IMI will do just that. Styled as a "new school for strategic management and business education," it will produce leaders with the capacity to invent and innovate, and the management training to ensure success in the global marketplace. Students will study management, accounting,

biotechnology, innovation strategy and sustainability. And they will work with government and industry partners to apply this knowledge to the sectors that are driving today's growth.

FACULTY SUPPORT

The Campaign for the University of Toronto Mississauga will also support research excellence that extends one's knowledge of the world and paves the way for practical solutions to complex problems. "Exceptional universities require exceptional faculty who are committed to new ways of thinking, teaching and conducting research," says Saini. "By adding new scholars to our ranks, we bolster our research capacity, provide leadership in new fields and attract top graduate students from around the world."

Medicinal chemist Patrick Gunning, who is head of the largest medicinal chemistry group in Canada, is one such researcher leading his field in a new direction. He and his team are working on the development of a treatment to inhibit tumour growth and reduce cancer cell reproduction. "We're working on chemotherapy that has fewer side effects. Ultimately,

we hope to make the chemo tough on cancer, but easier on patients." His interdisciplinary team, with students in biology, medicine, biophysics and computer science, helps students develop the skills to tackle complex problems, work collaboratively and think fluidly across boundaries.

Psychologist and parenting researcher Alison Fleming, another scientist who believes strongly in the value of crossdiscipline teamwork, studies the role of different brain mechanisms, the influence of early experiences, and how genetic, hormonal and sensory factors affect mothering in animals and humans. "I am primarily interested in why mothers want to mother," she notes. As part of the interdisciplinary Fraser Mustard Institute for Human Development, she and her team investigate questions such as what experiences and exposures are most important to early life development, and which genes in which environment affect lifelong health and well-being.

STUDENT PROGRAMS

U of T Mississauga offers students the best of both worlds—the academic strength of the University of Toronto coupled with a unique and collegial learning environment on campus. Students today need to learn in places that nurture collaboration, creativity and innovation, Saini says. "Evidence shows that students who participate in extra-curricular activities learn more, achieve higher grades and are more engaged with their peers and faculty members."

CLICK HERE TO VIEW THE BOUNDLESS LAUNCH PHOTO GALLERY

The campaign will support student programs that position first-year undergraduates for success. Three such programs—utmONE, rezONE and genONE—feature small-group experiences and mentoring. Through workshops and seminars, upper-year mentors guide first-year students through basic survival skills such as learning to take notes and write tests effectively. Students also take courses in leadership development, health and wellness and community service.

CENTRE FOR SOUTH ASIAN CIVILIZATIONS

The Campaign for the University of Toronto Mississauga will foster international fluency and leadership skills in students, Saini says, and build cross-cultural understanding and global perspectives into courses and programs. "As our world becomes more interconnected, we find language, culture and community engagement an increasingly important part of our daily lives. We need to harness this diversity and create more opportunities for our students, both in and outside the classroom. The Centre for South Asian Civilizations will help us do that." (To learn more about the Centre, please see page 28.)

The next five years offer an opportunity for the University of Toronto Mississauga to carve out its niche as an innovation leader locally, regionally, nationally and internationally, Saini notes. "This is a watershed point in our campus' history. We've come a long way but we're primed and ready to do more. We're ready to make a difference."

JANE STIRLING

CONNECTING CULTURES

NEW CENTRE EMBRACES DIVERSITY, FOSTERS GLOBAL FLUENCY

Fresh off a transatlantic flight, Shafique Virani is running on too little sleep and lots of adrenalin. But he's full of energy about the reasons why U of T Mississauga must launch a Centre for South Asian Civilizations. "We need to understand each other," Virani says pointedly. The chair of the Department of Historical Studies and one of the world's most renowned scholars in Islamic studies has on his mind last summer's tragedy at the Sikh Temple of Wisconsin that left six

Sikhs dead and three others injured after a gunman with ties to a white supremacist group opened fire.

"Attacks like that aren't a clash of culture; they're a clash of ignorance. When we don't understand the other, the other scares us."

Virani wants to help put a stop to the fear, myths and ignorance through a new program in South Asian studies and, ultimately, a centre of research, teaching and community engagement. His vision builds on U of T Mississauga's vibrant research and more than three dozen courses in South Asian studies, as well as the campus' strong South Asian student presence reflected by organizations like the Hindu Student Council and the Pakistan Youth Alliance. The Centre for South Asian Civilizations will help raise awareness about South Asian culture, language,



Photo Jackie Atlas

history and politics, and create synergies between the University and the local South Asian community, while helping to connect students to one of the world's most dynamic economic and cultural powers.

"In this globalized world, education doesn't end with a regular baccalaureate degree," says Emmanuel Nikiema, acting chair of the Department of Language Studies, which is a lead partner in the initiative with the Departments of Historical Studies and Political Science. "If you want to make a difference to your community, your workplace, you need to have your finger on the pulse of what's going on in the rest of the world."

The Centre for South Asian Civilizations is a key part of the Campaign for the University of Toronto Mississauga. Investments will help launch the centre and establish more student exchanges and interdisciplinary research in South Asian studies involving disciplines such as religion, computer programming and language studies. The Centre will also support a lecture series featuring world-leading South Asian scholars, artists and public figures.

In 2012, Mississauga entrepreneur Vasu Chanchlani contributed \$2 million to the initiative. Co-founder of the Sigma Group of Companies and a founding member of the Canada India Foundation, Chanchlani says his gift came to the right place, for the right cause, at the right time. "We need a centre like this to build bridges, help tomorrow's leaders understand the issues and create an inclusive society."

Chanchlani is a strong believer in grassroots engagement as the key to understanding, which is why he's especially pleased to support the Centre for South Asian Civilizations. More than 20 per cent of Mississauga residents are of South Asian descent and the same is true for more than a third of Brampton's population. Through the activities of the centre, Virani and Nikiema hope to deepen the University's community connections to provide even more opportunities for research and learning.

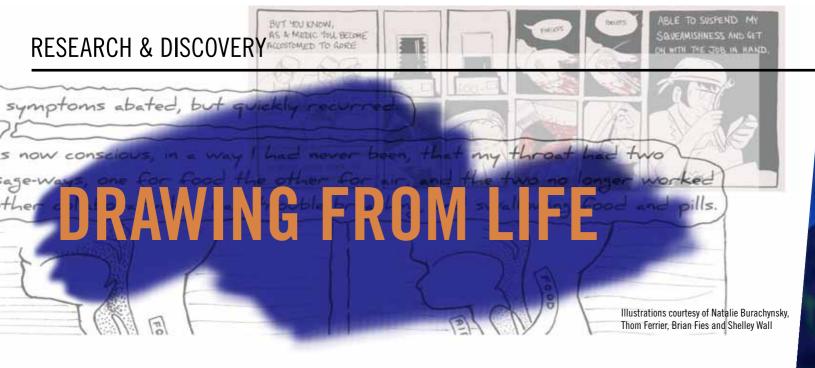
Last spring, for example, U of T Mississauga hosted a Hindi Day featuring the publisher of the Hindi Times and poetry readings by 10 local Hindi poets. Last fall, the Department of Historical Studies collaborated with South Asian community leaders to host an exhibition of the works of Nobel Prize-winning Indian poet Rabindranath Tagore.

"The University is best placed to take on this kind of educational leadership role," says Tagore exhibit organizer Minu Ganguli. "These students are our future."

Chanchlani agrees. "The only solution to mistrust and fear is education. If tomorrow's leaders understand the issues, they will have a better understanding of how to govern us."

Remembering the Sikh temple victims, Virani's aspirations for the Centre for South Asian Civilizations are even more ambitious when it opens. "As one of the most multicultural societies in the world, Canada has created an enabling environment of respect, dignity and awareness. We take this attitude for granted in Canada, but not everyone has. We have a unique opportunity to share our experiences, our research and our graduates with others around the world."

"We can help overcome ignorance and that will be an enormous accomplishment." **CHRISTINE WARD**



The comic artist perches at the high architect's desk in a bright room, sharpened pencil scratching over the page. But what comes to life on the page isn't a spandex-clad superhero. Instead, the panels contain poignant stories of chronic illness. Cancer. Mental illness. Death.

The first time Shelley Wall showed her health-care communications undergraduate students examples of graphic medicine, they couldn't understand why she was showing them comics.

"Using comics in health care is a relatively recent shift," says Wall, an assistant professor in the biomedical communications program at the University of Toronto Mississauga. "Comics are another mode of visual communication and a very accessible way to talk about complex issues."

Last summer, Wall organized Comics &

Medicine: Navigating the Margins, a conference dedicated to the use of comics in medicine. Over 130 participants, including health-care workers, artists and academics, discussed topics from the use of children's comics to promote healthy lifestyles to comics as medical memoir.

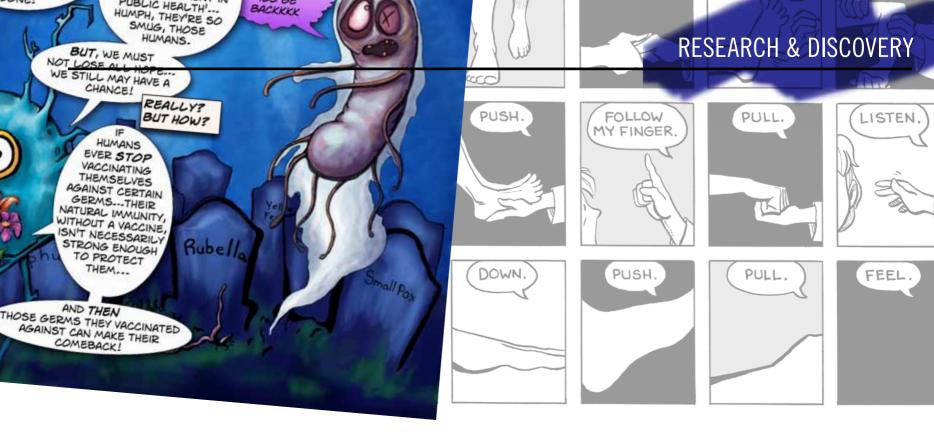
Wall describes medical comics as falling into three broad categories: education, literature and clinical training. Comics used for patient or public health education are useful because they attract attention, simplify difficult concepts and help reduce cultural and language barriers to comprehension.

"There are also people creating autobiographical works about what it's like to be a doctor or about illness," Wall says. An example of the latter is *Mom's Cancer* by Brian Fies, which tells the story of his mother's diagnosis with lung cancer. "What's

incredible about these personal works is how they create a sense of building community. When Fies published *Mom's Cancer*, people wrote to him, relieved that they weren't alone. The comics allowed people to share their experience."

These personal works can be angry, serious, irreverent, wry or simply very dark, she says, pointing out that the subject matter is often exceptionally grim. "But the format isn't intimidating and may ease the transition to thinking about these serious topics."

This focus on the uniqueness of the individual makes medical comics valuable in clinical training, Wall says. The stories often contain astute observations about the idiosyncrasies of the medical world combined with deep personal reflections. Reading about these feelings can help to create a more empathetic understanding of the



complexity of the patient and family experience in medical students and other health-care workers.

One of the most satisfying outcomes of the conference was the positive response to the chosen theme and how it encouraged inclusivity, says Wall. "We decided on the very broad theme of navigating the margins based on the idea that marginalized voices could often get heard through this alternative medium. A whole range of experiences were represented and people came from very different sides of the health-care system."

Wall, who recently completed a graphic story based on a friend's experience

with chronic illness, holds a doctorate in English literature and trained in fine art before completing a masters of science in biomedical communications. Although medical illustrators continue to work in traditional areas such as textbook illustration, visual communications have expanded in the digital age. Illustrators now also work on interactive websites and animations for researchers or in public health.

For Wall, medical comics are a way to bridge the gap between a complex body of medical and clinical knowledge and a patient's needs. A good medical illustrator knows not only the science, but considers

the psychological state of the audience, which could be distracted by fear, illness or worry. With these in mind, the artist can then sensitively convey information through not just pictures, but combinations of pictures and words.

What makes comics ideal for health-care communication is their depth, complexity and breadth, she says. "This whole other realm of visual narrative called comics can really unpick complicated situations and add another dimension to medical knowledge. Stories are a powerful way to communicate information." LANNA CRUCEFIX

FOOD FIGHT.

s "eating local" really all it's cracked up to be when it comes to reducing our environmental footprint? Professor Pierre Desrochers, of the Department of Geography, says, "No." Now, he and his wife and research partner Hiroko Shimizu have collaborated on a new book that has ruffled feathers in the food sustainability field. Professor Desrochers talks about the book in this video:



BULLETIN BOARD

ASSOCIATES OF U OF T MISSISSAUGA

NOTES

Associate Warren Grant passed away on Thursday, October 11, 2012 at the age of 91.

1980 TO 1989

NOTES

Kerri Weller (bachelor of science, 1987, AMM in Medical Illustration) has been accepted into the



15th International Botanical Art Exhibition hosted by the American Society of Botanical Artists & Horticultural Society of New York, for her painting, Parrot Tulips, Tulipa x hybrida, 2012 © Kerri Weller (8T7), Oil on board, 13"x 18").

1990 TO 1999

NOTES

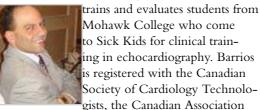
Sven Spengemann (bachelor of science, 1990) who

recently completed his tour as Senior Constitutional Officer for the United Nations in Baghdad, Iraq, made an attempt to summit Mount Logan to raise funds for UNICEF Canada. Although severe weather forced the team to turn back before



reaching the summit, the attempt has raised more than \$8,000 in support of UNICEF. Spengemann is currently a visiting professor at the Glendon School of Public and International Affairs.

Carlos Barrios (honours bachelor of science, 1999) has been named the Echocardiography Laboratory Educator at the Hospital for Sick Children, where he trains cardiology and echocardiography fellows that come to Sick Kids for training from overseas. He also



of Registered Diagnostic Ultrasound Professionals and the American Registry of Diagnostic Medical Sonographers.

2000 TO PRESENT

NOTES

Mirium Avadisian (honours bachelor of science, 2009) received the prestigious 1989 Ecole Polytechnique Commemorative Award from the Canadian Federation of University Women. Avadisian, who is currently pursuing her PhD in chemistry at U of T Mississauga, was the sole U of T candidate and the ultimate winner

of the prize, which commemorates the 14 women murdered at Montréal's École Polytechnique and bestows \$7,000 to recognize important doctoral-level studies relevant to women.



Paul Kelly (master of science in biomedical communications, 2011) has won the BioImage 2012 Award of Excellence in Graphic Media for his medial illustration, "Malaria", which depicts the life cycle of the malaria parasite *Plasmodium falciparum*.

Omar Abdulhadi (honours bachelor of arts, 2012) was honoured with a Governor General's Academic

Medal (Silver) in recognition of his outstanding achievements in his history and commerce studies. Described as "one of the finest stu-



dents I have taught at U of T in the last ten years" by one professor, Abdulhadi averaged A+ in his courses.

Lord Dufferin, Canada's third Governor General after Confederation, created the Academic Medals in 1873 to encourage academic excellence across the nation. Over the years, they have become the most prestigious award that students in Canadian schools can receive.



Share your news with fellow alumni—pass on your notes to:

news.utm@utoronto.ca

MARK YOUR CALENDAR

MARCH BREAK OPEN HOUSE MARCH 11–15

CGAO EVENT MARCH 22

Featuring David Chilton of "The Wealthy Barber" fame. Registration form at www.utm.utoronto.ca

MINI-MED SCHOOL APRIL 19 TO MAY 17

Become a more-informed patient and a better caregiver. Every Thursday evening, dynamic speakers will explore current issues in health science and answer questions. For more information and to register, visit www.learn. utoronto.ca or phone 416-978-2400.

CANADIAN PERSPECTIVES LECTURES APRIL 25 TO MAY 23

Presented by the Associates of U of T Mississauga, this Thursday-morning lecture series offers a historical perspective on current issues, and introduces new ideas and technologies that shape lives. To register, visit www.utm.utoronto.ca/alumni/events

BACKPACK TO BRIEFCASE APRIL 27

Listen to a panel of U of T Mississauga alumni experts who can help young alumni make a seamless transition from university to the workforce. They will share their views on career paths and offer insights on ways to succeed after graduation. An alumni services fair will precede the panel discussion, showcasing services that are available to alumni upon graduation. To register, visit www.utm.utoronto.ca/alumni/events

ALUMNI ASSOCIATION ANNUAL GENERAL MEETING APRIL 30

All alumni are invited to attend the UTMAA annual general meeting and listen to keynote speaker Professor Pierre Desrochers. To register, visit www.utm.utoronto.ca/alumni/events

CONTINUING EDUCATION MAY 2012

The U of T School of Continuing Studies' spring courses begin at U of T Mississauga. For more information and to register, phone 416-978-2400 or visit www.learn.utoronto.ca.

U OF T MISSISSAUGA GOLF CLASSIC MAY 8

The 2013 U of T Mississauga Golf Classic will be held at Lionhead Golf and Country Club in Brampton, ON. To register, visit www.utm. utoronto.ca/alumni/events

ASTRONOMY LECTURE IUNE 7

Listen to world-renowned Canadian astronomer David Levy and join him for a tour of the heavens.

DOORS OPEN SEPTEMBER 28

This campus event will showcase the architecture of the newest campus buildings.

RUN FOR THE CURE OCTOBER 6

Save the date to participate in Mississauga's Canadian Breast Cancer Foundation CIBC Run for the Cure, starting and ending on the U of T Mississauga campus.

VISIT THE NEW ONLINE EVENTS CALENDAR AT WWW. UTM.UTORONTO.CA/ EVENTS

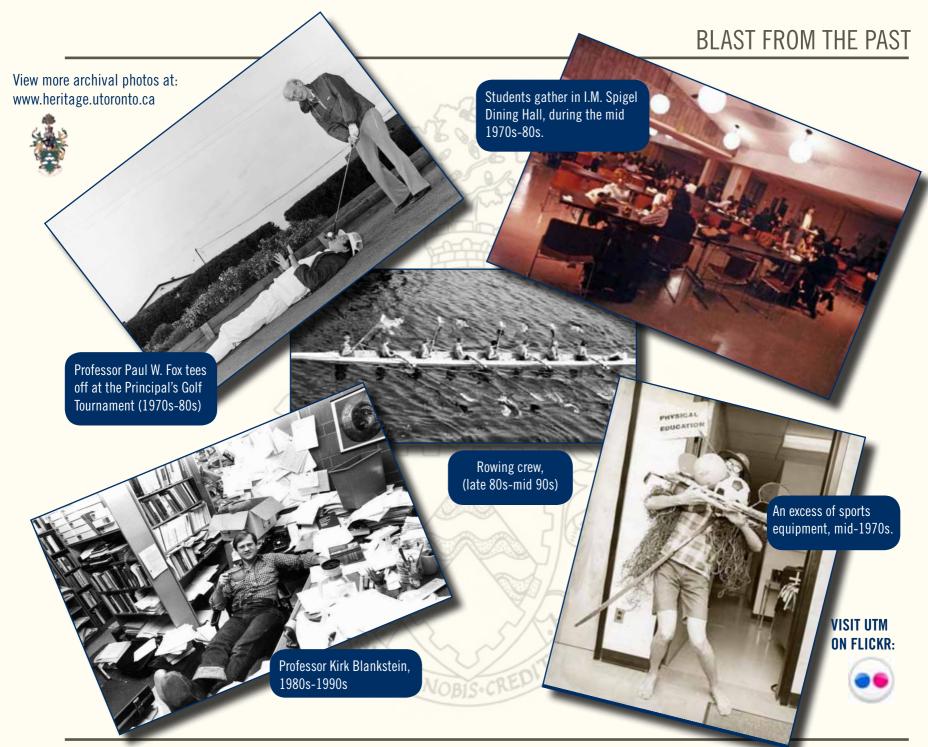
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"There is much more that unites human beings than divides them."

> Terrence Donnelly HEALTH CARE CHAMPION



Desmond Parker '76 FORMER DIPLOMAT

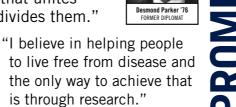
is through research."

about breaking down barriers." developing countries is



Prof. Ulrich Krull '79,'80,'83 Creative Chemist

Our students are immersed in a rich







share our planet, we can build a

Prof. John Tuzo Wilson '30

"I enjoy, and always have enjoyed, disturbing scientists."

CURIOSITY

"Advances in education are the key to our success as a nation."



In a globalized world, cities will play an even greater role in advancing prosperity."





ideas is critical to seeing who we are."



If we want to flourish, we need a solid base of educated people."



The Boundless campaign for the University of Toronto Mississauga will channel the limitless potential of our community to advance education, prosperity and social innovation in Mississauga and throughout an increasingly borderless world. You can be part of it.