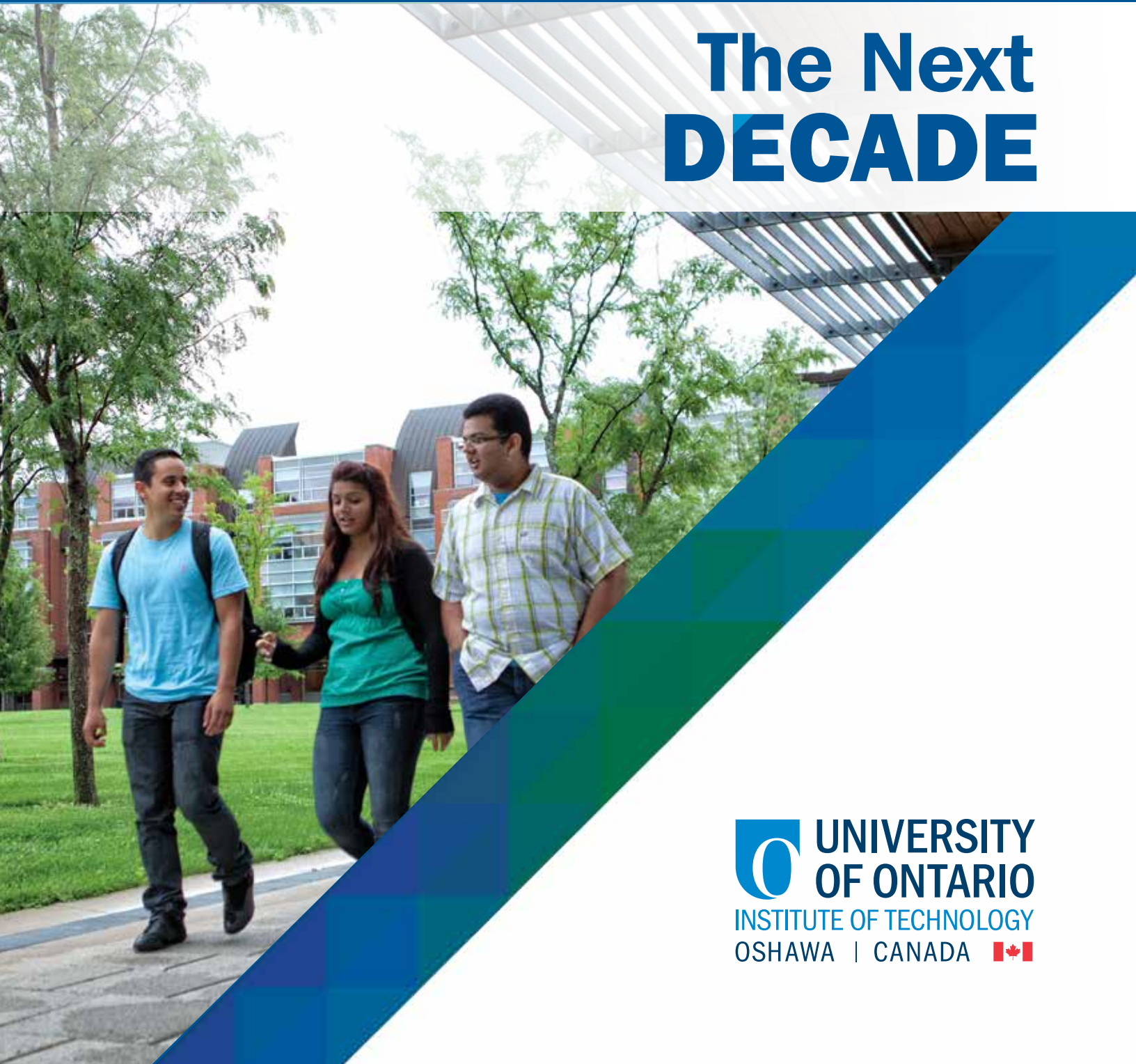


President's Report | 2014

# The Next DECADE



 **UNIVERSITY  
OF ONTARIO**  
INSTITUTE OF TECHNOLOGY  
OSHAWA | CANADA 

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Photographs in this book feature UOIT students, faculty, and staff. Visit [uoit.ca/OurStory](http://uoit.ca/OurStory) to learn more.

# President's MESSAGE



In my work, I interact daily with faculty, students and staff who unfailingly impress me with their energy, creativity and vision. The University of Ontario Institute of Technology is ten years old, and it shows—as an institution, we carry on the hallowed traditions of academic excellence, but we also infuse them with the dynamism that comes only from being a young university.

I am proud of the impact we are making through our commitment to innovative science, technology, and scholarship. We drive ambitious research, foster cultural and community engagement, and graduate new generations of citizen leaders.

We are a future-minded university in Ontario's industrial heartland. We contribute to Durham Region and Northumberland County by building smart communities, driving innovation in advanced manufacturing, and accelerating sustainable energy-system options.

After 10 short years, our track record has been established, but our legacy is just beginning. I invite you to be a part of the evolving UOIT story and join us in our commitment to continue building a brilliant future.

Tim McTiernan Ph.D.  
President and Vice-Chancellor  
University of Ontario Institute of Technology

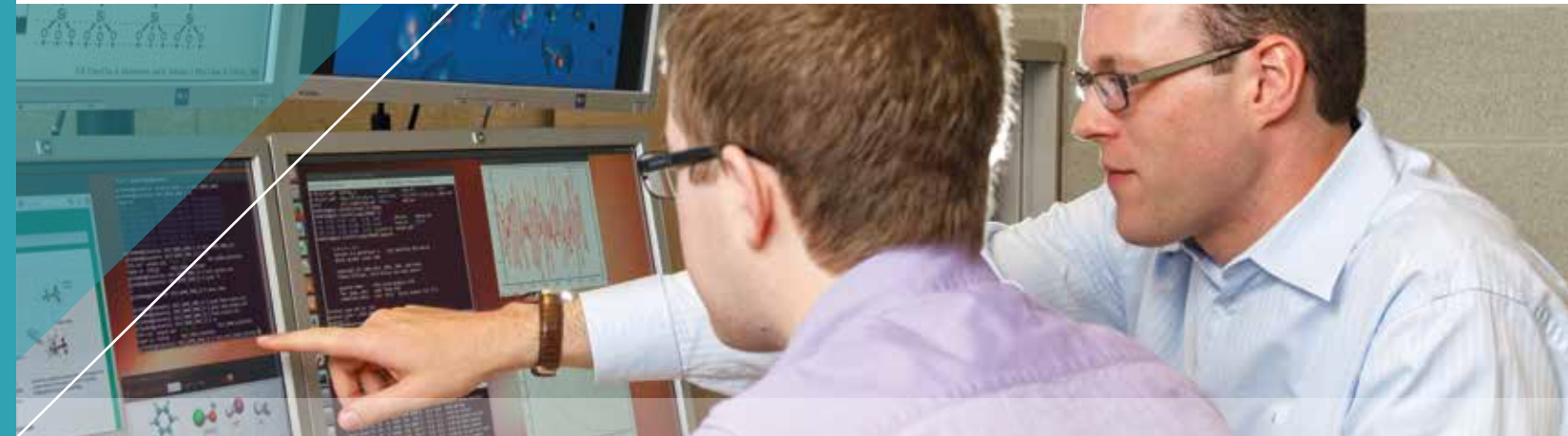
# Making a POSITIVE IMPACT



“ UOIT would still be my first choice if I had to do it all again. ”

— ALICIA ROSSI  
BSc FORENSIC SCIENCE, 2013

Our story is one of extraordinary growth and achievement.



AT THE START OF ITS SECOND DECADE, THE UNIVERSITY OF ONTARIO INSTITUTE OF TECHNOLOGY (UOIT) has already become one of Ontario's most innovative universities. Our story of extraordinary growth and notable achievements results from our ambitious quest for excellence and innovation and the creativity, diligence, and integrity of our faculty, students, and staff.

As researchers, we push the boundaries of innovation. As educators, we provide students with the rigorous knowledge and practical skills that are needed for the careers of today and tomorrow.

In our first ten years, more than 9,800 undergraduate and graduate students joined our community, and we garnered nearly \$80 million in research funds. We forged strong relationships with Durham College, Trent University, and many other post-secondary institutions in Ontario and around the world. We also formed dynamic local and global partnerships with community, industry, and all levels of government.

## OUR FIRST 10 YEARS:

**9,800**

UNDERGRADUATE & GRADUATE STUDENTS

**\$80 MILLION**  
IN RESEARCH FUNDS





# 76

UNDERGRADUATE AND GRADUATE PROGRAMS, MANY ORIENTED TOWARD SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS

# 30%

OF INCOMING UNDERGRADUATES HAVE POST-SECONDARY EXPERIENCE

## Pathways to career success

UOIT offers 76 programs through the Office of Graduate Studies and seven undergraduate faculties:

- ▶ Business and Information Technology
- ▶ Education
- ▶ Energy Systems and Nuclear Science
- ▶ Engineering and Applied Science
- ▶ Health Sciences
- ▶ Science
- ▶ Social Science and Humanities

Our research-intensive programs are content-rich, technology-enabled, career-focused, and market-oriented. They provide clear pathways for two-year college graduates to complete university degrees.

Many UOIT degree programs offer credit transfer opportunities that allow simple transitions for many Ontario college graduates to a more advanced level of study. We are working to develop similar partnerships with every Ontario college. Currently, about 30% of UOIT's undergraduate class have previous post-secondary experience. Many of these students have taken advantage of such transfer protocols to advance their academic careers and to graduate with skills employers seek.

## Continuing contributions

Over the next decade, UOIT will continue to pursue new initiatives to transform and broaden learning opportunities inside and outside the classroom.

We have identified priorities that will guide UOIT's contributions to the economy—regionally, nationally, and internationally—through high-quality, accessible, and sustainable education. We continue to address global changes in the world of work by aligning our programs and curricula to the needs of employers, industries, and public sector organizations.

# Priority OBJECTIVES

# 1

**Implement flexible academic models** that provide outcome-based learning to prepare graduates for the evolving 21st-century workplace.

# 2

**Drive productivity, innovation, and research** through strengthened partnerships with other post-secondary institutions, particularly Durham College and Trent University.

# 3

**Boost UOIT's physical and IT infrastructure**, as well as its research capacity, to support academic program development and to grow our partnerships with industry and community organizations.

**10-FOLD INCREASE IN ENROLMENT**

SEPTEMBER 2003 ▶ **947 STUDENTS**



SEPTEMBER 2013 ▶ **ALMOST 10,000 STUDENTS**



# Addressing public policy CHALLENGES



UOIT's faculty and students create knowledge that changes the world.

**RESEARCH AT UOIT CONTRIBUTES TO THE ADVANCEMENT OF SOCIETY** by driving better understanding of social processes, scientific discoveries, and technological innovation. In their push to create new knowledge, UOIT researchers also address key public policy issues.

## Emerging public policy challenges

1

The resurgence of **advanced manufacturing** in Ontario, Canada, and North America.

2

The evolution of **smart communities** that are socially inclusive, innovative, digitally enabled, economically and culturally robust, locally focused, and globally connected.

3

The development of **citizen leaders** and student ambassadors who become future innovators, entrepreneurs, and change agents.

4

The development of **sustainable energy** production, distribution systems, and smart energy use.

Individually, as well as through national and international partnerships, UOIT's faculty and student researchers help ensure policymakers in these key areas benefit from the very latest data, models, and insights.

# Reviving advanced MANUFACTURING



## Improved health and safety

**DR. DAN ZHANG**, Canada Research Chair in Robotics and Automation and Professor, Faculty of Engineering and Applied Science



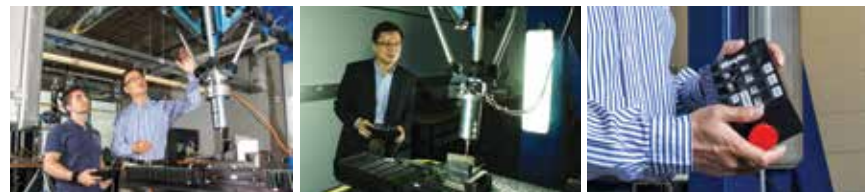
Dr. Dan Zhang

Independently movable limbs, lightning-fast contextual adaptation, and wearable exoskeletons are just three robotics advances that Dan Zhang is taking from the realm of science fiction and introducing to manufacturers. His research also affects people working in areas as diverse as physical rehabilitation and underground rescue operations.

Dr. Zhang works on what are called “parallel robots”—machines with multiple appendages that move and react independently of one another. They are more versatile and adaptable than traditional assembly-line machines. Traditional robots are very good at doing one job quickly and consistently. But parallel robots can do more complex and context-dependent jobs—jobs such as deburring rivet holes and polishing new planes for the aerospace industry.

Using his parallel robotics research, Dr. Zhang is developing “wearable exoskeletons”—robotic suits that can be used to augment human movement, and “retrain” the bodies of people who face mobility issues due to injury or illness. These devices could help people regain the ability to walk and grasp objects. Parallel robots are capable of the sophisticated movements required to create such rehabilitation tools.

Dr. Zhang also leads a team that works on rescue robots tailored for situations such as a caved-in mine or collapsed building. Their prototypes can drill through rock and concrete, using dexterous arms to pull back loose earth and debris. These robots could allow rescues in situations that are too difficult and dangerous for human workers to venture.



## Reducing traffic injuries

**DR. MOUSTAFA EL-GINDY**, Associate Professor, Faculty of Engineering and Applied Science

Efficiency, safety, and cutting-edge technology—these are touchstone values for advanced manufacturing, as well as for the supporting network of roads and vehicles that are used to transport manufactured goods.

Dr. Moustafa El-Gindy works to ensure tires, safety systems, and other shipping-vehicle components are as advanced as any machinery in a manufacturing facility.

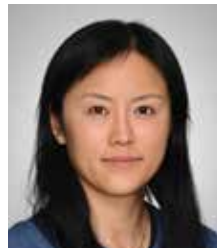
Truck tires, for instance, affect a manufacturer’s bottom line because they can affect both a vehicle’s mileage and a driver’s ability to avoid accidents. Better tires reduce costs while increasing safety. Dr. El-Gindy’s research has led to many new types of tire, each optimized for different road materials and conditions, weather patterns and other variables. This gives manufacturers greater flexibility to ship their goods wherever they are in demand.

Dr. El-Gindy also studies collisions between large commercial vehicles and smaller vehicles in order to help develop new vehicle safety features. His work has led to advances in everything from guards that prevent a car from sliding underneath a truck, to improved airbag materials and design.

Of course, when it comes to road safety, human performance matters at least as much as mechanical performance. That’s why Dr. El-Gindy also collaborates with the Ontario Ministry of Transportation. Through this partnership, he has developed a simulator that replicates the controls and gearshifts of many commercial vehicles, as well as a wide range of weather and road conditions. His research team uses this simulator to evaluate and mitigate human factors like fatigue and judgment error that can lead to a collision.

**LEARN MORE:** [uoit.ca/OurStory](http://uoit.ca/OurStory) 

# Developing SUSTAINABLE ENERGY



## Connect with green technology

**DR. MIN DONG**, Early Researcher Award Recipient and Assistant Professor, Faculty of Engineering and Applied Science

Dr. Min Dong researches how to reduce energy consumption within the wireless technology sector. Her work involves developing new protocols and transmission systems that demand less power from mobile devices and cell networks.

Much of her work involves using machine algorithms to optimize power allocation among multiple antennas—constantly adapting to provide reliable service precisely where and when it is needed.

By coordinating the design of individual devices, cell towers, relays and other components of a cell network, she is working to make the entire system more efficient.

While her research is affecting mobile networks around the world, it is particularly important in Ontario, which is a global leader in developing green technology solutions.



## Transportation, energy and sustainable cities

**DANIEL HOORNWEG**, Jeffrey S. Boyce Research Chair, Faculty of Energy Systems and Nuclear Science

Daniel Hoornweg is passionate about cities and the energy that powers them. His research takes place at the nexus of two major strategic areas: automotive manufacturing and sustainable cities. In particular, Hoornweg investigates how natural gas can help reduce energy consumption and harmful emissions in urban areas. His interests include engine design optimization, energy distribution systems, urban form, and infrastructure development. One major focus of his work involves the potential for natural-gas powered vehicles to reduce greenhouse gas emissions, lower fuel costs, improve fuel efficiency, and offer better reliability in inclement weather.

Hoornweg strives to inform public policy and to help develop urban energy systems that are clean, safe, and sustainable. As Ontario's Chief Safety and Risk Officer, Hoornweg also helps develop safety standards and regulations to improve fueling infrastructure and policies.

**LEARN MORE:** [uoit.ca/OurStory](http://uoit.ca/OurStory)



# Evolving smart COMMUNITIES



## Shifting reality

**DR. ISABEL PEDERSEN**, Canada Research Chair in Digital Life, Media and Culture and Associate Professor, Faculty of Social Science and Humanities

Sometimes it appears that our personal devices are on an inexorable march from portable to handheld to wearable to implanted. Dr. Isabel Pedersen studies the history and the future of such technologies, and offers critical analysis that challenges that sense of inevitability. Far from resisting technological advances, Dr. Pedersen's research is aimed at helping people best benefit from the accelerating evolution of computing technology.

She is the author of *Ready to Wear: A Rhetoric of Wearable Computers and Reality-Shifting Media* (Parlor Press, 2013) which, like so much of her research, speaks to a desire to ensure that everyday people remain in control of their technology, and are neither coerced nor unknowingly socialized into embracing devices they do not necessarily want or need.

With foresight and critical analysis, she believes we can best ensure that new technologies celebrate and enhance human life, and minimize the likelihood of people feeling dehumanized or diminished by their devices. Smart devices matter, but for Dr. Pedersen, smart individuals and smart communities matter even more.

**LEARN MORE:** [uoit.ca/OurStory](http://uoit.ca/OurStory) 



## Saving lives

**DR. CAROLYN MCGREGOR**, Canada Research Chair in Health Informatics and Professor, Faculty of Business and Information Technology

Millions of data points filter through intelligent algorithms, identifying a potentially life-threatening infection in a premature baby, a full 24 hours before the first human-detectable symptoms appear.

Fortunately for new parents and babies all over the world, the woman who developed this system is more than just a leader in innovation: She also has a strong sense of responsibility to ensure her breakthroughs find their way into practice as quickly as possible.

Dr. Carolyn McGregor's system, first piloted at Toronto's SickKids Hospital, is now in use in hospitals in the United States and China. Dr. McGregor is at the forefront of efforts to implement it elsewhere.

Though her method is revolutionary, the premise is straightforward: Infant monitors generate more data about heart rates, oxygenation and other vital signs than even a team of medical professionals can process on their own. Using systems akin to those employed by data miners in the business world, Dr. McGregor was able to create computer-assisted diagnostic tools that help caregivers intervene more quickly.

Her work has other benefits as well, allowing doctors to conduct monitoring and analysis from a distance. Dr. McGregor's work has big implications for countries with large rural populations, allowing a single hospital to monitor patients in disparate areas. Patients can thereby receive uncompromised care and attention, without the expense and inconvenience of traveling to the hospital. In fact, her remote data collection can extend even farther: Dr. McGregor also consults with researchers at the Canadian Space Agency on the potential for using her system for remote monitoring of astronauts.



# Creating CITIZEN LEADERS

## A place for future generations

### UOIT-BAAGWATING INDIGENOUS CENTRE

Indigenous university students can face challenges that go well beyond their course load: They must balance familial and cultural traditions with university life. They expect Indigenous voices to be part of their education. And they must often deal with a legacy of marginalization and racism that can still reverberate, even within a community that today embraces and celebrates diversity.

In partnership with the Baagwating Community Association (BCA), and the Mississaugas of Scugog Island, the university recently opened a new facility: The UOIT-Baagwating Indigenous Centre was named to reflect BCA's instrumental financial support of more than \$450,000.

"Our backing for this centre goes beyond money," said BCA Chair Gary Edgar. "UOIT's commitment to supporting Indigenous students makes this feel like a true partnership. This centre will improve many students' lives, and build stronger bonds among the region's diverse communities."

The centre provides a welcoming space where Indigenous students work and socialize with faculty, staff, and peers from a wide range of backgrounds. The facility offers everything from assistance with bursary and grant applications, to spaces for traditional meals and ceremonies.

The centre reflects the university's strong commitment to helping self-identified Indigenous students find a harmonious balance between culture, familial expectations, and the pressures of school.



## President's Award of Excellence in Student Leadership

**CHRISTINE DABROWSKI**, Past Rotaract President, Concurrent Bachelor of Science (Honours)/Bachelor of Education program, beginning her practicum placement in the Durham Catholic School Board



Leadership. Creativity. Responsibility. Generosity. Every quality one might seek in a new generation of engaged citizens is abundant in UOIT's student community. The President's Award cultivates such attributes by honouring and celebrating exceptional UOIT students who give their time and energy to clubs, organizations and extra-curricular activities. This award is a pleasure and an honour to oversee. The process of evaluating nominees and selecting recipients always reinforces my pride in our students.

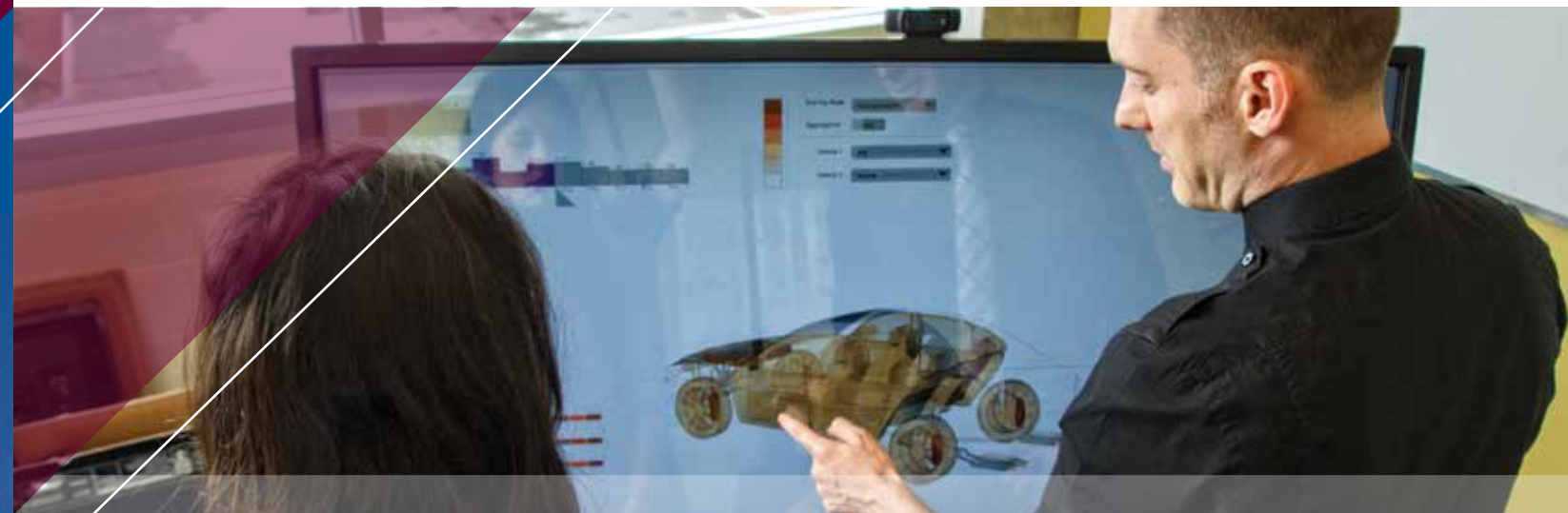
Few students could be more deserving of the award than Christine Dabrowski, who received the Undergraduate President's Award of Excellence in Student Leadership in 2013. Dabrowski, who is enrolled in the Education Faculty's teacher preparation program, boasts a commendable record.

As President of Rotaract, a Rotary-sponsored, university-based, service club, she championed humanitarian initiatives, professional development programs, and volunteerism.

She also planned events aimed at celebrating graduating students' accomplishments; raising awareness of UOIT's philanthropic efforts; and coordinating a well-received orientation week for UOIT's incoming science students. Dabrowski also co-founded a fundraising club that supports research into the causes and treatments of cystic fibrosis.

# Ambition and ACHIEVEMENTS

UOIT students graduate into an already familiar job environment.



**86%**

**OF THOSE EMPLOYED FULL  
TIME WITHIN SIX MONTHS  
OF GRADUATION HAD JOBS  
IN THEIR FIELD OF STUDY**

**THE UOIT EXPERIENCE TRANSLATES INTO JOBS.** Recent surveys found that within six months of graduation, of UOIT grads who were working full time, 86% were in positions related to their field—10% higher than the Ontario average. This percentage increased to 92% within two years of graduation. In addition, UOIT students typically earn a higher income than their peers.

UOIT's foundation in science and technology inspires both discovery-based and applied research. We provide a large and growing range of career-relevant undergraduate and graduate programs, and provide seamless pathways from colleges to our university. We ensure our graduates have the skills to thrive and lead—on the shop floor and in the boardroom.

**10%**

**HIGHER THAN AVERAGE  
ACROSS ONTARIO**

# Proud ACHIEVEMENTS

## The brightest nurses



The Collaborative Bachelor of Science in Nursing program produces graduates who are committed to excellence, innovation, safety, and competence. Thanks to its emphasis on state-of-the-art practices, leading-edge technologies, and practical know-how, this program positions new nurses to excel on the job from day one.

Aspiring graduates must pass a test known as the Canadian Registered Nurse (RN) Examination in order to qualify as an RN. UOIT's recent scores are among the highest in all of Canada. In September 2013 (the most recent year for which data are available), 98% of UOIT-Durham College Collaborative Bachelor of Science in Nursing students, 100% of Registered Practical Nursing students, and 92% of UOIT-Durham College-Georgian College Collaborative Nursing Program students passed the exam.

## All aboard the Grey Cup train!



| Rohan Karamandi

Cisco Systems hired Networking and Information Technology Security graduate Rohan Karamandi to work on a promotional event for the Canadian Football League's 100th Grey Cup Game. Karamandi helped convert a VIA Rail train into a moving, technology-rich museum of CFL history. The train toured Canada for 70 days, stopping in more than 150 locations. Karamandi travelled on the train, managing the IT infrastructure that made this event such a success.

**LEARN MORE:** [uoit.ca/OurStory](http://uoit.ca/OurStory)



## Needle-free vaccines

Former UOIT student, Rameez Virji is the President and Founder of Big Tree World, an award-winning software company. He is also Vice President of Science and Technology at Medicine for a Better Tomorrow, an organization that researches solutions for the physical, medical, and economic impact of seasonal influenza. Medicine for a Better Tomorrow has developed a safe, cost-effective, and non-invasive alternative for patients who have resistance to hypodermic needles—a vaccine in a unique capsule form. The patented invention has the potential to replace needles as the delivery method for other compounds such as insulin.



| Rameez Virji

## Women and computing

Brittany Kondo, a Computer Science graduate, was a finalist for the Google Anita Borg Memorial Scholarship, which is aimed at encouraging women to excel in computing and technology. Kondo was invited to Google's Mountain View, California headquarters to accept her award, joining other female post-secondary students from around the world. Brittany has since returned to UOIT to pursue a master's degree in Computer Science.



| Brittany Kondo

“ I was drawn to UOIT because of the university's commitment to technology and innovation and I am hoping to collaborate on research with faculty in the coming years. ”

– **RAMEEZ VIRJI**  
FORMER UOIT STUDENT, FACULTY OF SCIENCE



## Networking 101

UOIT students participate in the Cisco NetRiders competition—an annual nation-wide competition that uses web 2.0 technologies to create networking skills. The competition tests students on specific knowledge drawn from the Certified Cisco Network Associate curriculum, which is taught in the first year of the Bachelor of Information Technology. It gives students an opportunity to put their knowledge to use, and allows them to test themselves against similar students across the continent.



## Study abroad

UOIT places great value on providing opportunities to study abroad, which offer students invaluable life experiences in other countries and cultures. UOIT currently offers such opportunities at 34 institutions in more than two dozen countries, including recent additions and expansions in Brazil, Ireland, Italy, Singapore, and China.

These partnerships take many forms. Through the program, UOIT business students complete eight-week placements with companies in Hong Kong, Germany, Spain and elsewhere. They have the chance both to pick up new tricks of the trade from other educational systems, and also to get more comfortable in the international settings that might soon constitute their standard working milieu.

Other agreements give students a chance to do advanced research projects in computer science, engineering and many additional fields, as well as to build skills and contact networks all over the world. Students who participate in such opportunities become both more engaged and more marketable—they are on their way to becoming a new generation of thought leaders.

**IN A  
DECADE**

## WE HAVE CREATED

**46**

UNDERGRADUATE  
PROGRAMS

**30**

GRADUATE  
PROGRAMS



**2011**

GRADUATED OUR FIRST  
ENGINEERING PhDs

**2013**

GRADUATED OUR  
FIRST SCIENCE PhDs

## UOIT'S GLOBAL CONNECTIONS



**48**

Past and current memoranda  
of understanding with  
schools around the world.

**34**

Institutions across the  
globe offer opportunities  
for UOIT students.

**20**

Countries with academic  
partnerships.

Through collaborations around the world, UOIT cultivates a vibrant learning environment for students. We promote social engagement, critical thinking, and rich life experiences—on campus and off, at home and abroad.

**LEARN MORE:** [uoit.ca/OurStory](http://uoit.ca/OurStory)

# Partnerships that IMPROVE SOCIETY



UOIT is committed to providing lifelong learning.

**UOIT CONTINUES TO BUILD STRATEGIC ACADEMIC, PUBLIC, AND PRIVATE SECTOR PARTNERSHIPS, AT PROVINCIAL, NATIONAL, AND INTERNATIONAL LEVELS.** These relationships are created around the university's core strengths in academics, experiential learning, student success, research, and innovation. We partner with organizations such as General Electric, General Motors Canada, Hydro One, IBM Canada, and Ontario Power Generation.

## Partners in continuous education

Job markets, technologies, communities and individuals all change more rapidly than ever before. That's why UOIT places such a strong emphasis on lifelong learning. Working with industry partners, we constantly adapt, providing learners with continual upgrades to their skills, knowledge and experience.

UOIT's industry partners include:



“ We understand the benefits—from a personal, professional, and societal perspective—of greater involvement of women in science, technology, and engineering. ”

— **CARMINE MARCELLO**  
PRESIDENT AND CHIEF EXECUTIVE OFFICER, HYDRO ONE



# Research RESOURCES

Using a major infusion from the Natural Sciences and Engineering Research Council of Canada Discovery Grants, UOIT has created a strategic agenda to fund research in five key areas: energy systems, engineering, information technology, nuclear science, and general science. This agenda plays both to UOIT's strengths, and to the most pressing needs of Ontario, Canada and the world.

The university is also using funds from the Federal Economic Development Agency for Southern Ontario for new projects and collaborations with 11 companies from the region. These funds are meant to accelerate the process of taking new products to market. Researchers from the Faculties of Business and Information Technology; Energy Systems and Nuclear Science; Engineering and Applied Science; and Science will complete these projects. This program partners UOIT researchers with small and medium-sized businesses to conduct applied research, technology development, engineering design, product testing, and certification. Such grants generate jobs, growth, and prosperity, and help keep Canada economically competitive.

**LEARN MORE:** [uoit.ca/OurStory](http://uoit.ca/OurStory) 



## Hydro One women

Hydro One works with students at UOIT and several other Ontario universities to encourage women to pursue science, technology, engineering, and mathematics (STEM) degrees. The Hydro One Women in Engineering University Partnership program involves an awareness campaign, mentoring and networking opportunities. It also creates support networks for female engineers entering the workforce. Currently only 10% of Ontario electrical engineers are women. This program seeks to increase the number of women who are pursuing a STEM-based degree.

## Lean thinking

UOIT's Management Development Centre has partnered with Ireland's Leading Edge Group to offer Canada's first full suite of academically certified Lean Thinking programs. These online and instructor-led programs focus on optimizing resources to deliver improved productivity, and eliminate wasteful activities in core processes. Lean Thinking focuses on creating customer value at every step. The partnership with Leading Edge Group enables UOIT to offer business leaders a knowledge base and set of skills that many industries increasingly seek.



## Partnership in action

Ontario Power Generation (OPG) relies on UOIT's continuing education training to meet its strong commitment to on-the-job preparedness. Nuclear trainers from OPG attend annual workshops to build technical skills and share knowledge with colleagues. Both partners benefit from this long-standing collaboration: OPG provides scholarships and special equipment to enhance students' learning while UOIT produces highly proficient graduates in engineering, maintenance, and operations. Many graduates take positions at OPG's nuclear generating stations, providing the crown corporation with a valuable return on their learning investment.



Tom Mitchell

“ UOIT graduates are well prepared to move very quickly into the mainstream of our work. ”

— **TOM MITCHELL**  
PRESIDENT AND CHIEF EXECUTIVE OFFICER, ONTARIO POWER GENERATION

# AHEAD of the curve



Extracurricular activities invigorate academic education.

EDUCATION AT UOIT INVOLVES MORE THAN JUST COURSEWORK: We offer a wide range of extracurricular activities that allow students to build skills and prepare for future careers. Such activities complement academic work, provide social interaction, and increase students' readiness for real-world competitive challenges. UOIT's success in the arena, on the court, and in the field puts our students ahead of the curve, and helps them grow as citizen leaders.

## Sports and sportsmanship

Varsity sports at UOIT include rowing, curling, tennis, golf, hockey, soccer, lacrosse, and dance. We have 13 teams, 230 athletes, and 52 coaching staff. Our expanding varsity athletic programs are a tremendous and ever-growing source of pride, energy, and student involvement.

The 2013/2014 year was stellar across the board for UOIT athletes, with superstars like rower Nik Vantfoort and hockey player Jill Morillo dominating their respective sports. Vantfoort claimed a gold and a silver medal at the Canada Summer Games, while Morillo hit a record-breaking career total of more than 100 points.



**LEARN MORE:** [uoit.ca/OurStory](http://uoit.ca/OurStory) 



# Women's sports BOOMING

2014 marked the second year that both the men's and women's hockey teams at UOIT made the provincial playoffs. These twin successes are a great source of pride for the university, and a confirmation that we're creating opportunities for all of our students to enjoy the benefits of school spirit, athleticism, and healthy competition.

And it's not just hockey – in a wide range of varsity sports, we offer training, investing and coaching for men and women who play to win. In fact, it's fair to say that women's sports in particular are booming at UOIT, on the court, the ice, the pitch and in the water.

The UOIT women's soccer team claimed the Campus Cup, and then carried that momentum into the regular season, securing a home playoff berth for the first time in school history.

Sankavy Premakumar, a first-year Commerce major and rising tennis star, advanced to the flight four semi-finals of the Ontario University Athletics Championship.

The women's rowing team continues to post record-breaking times on the water, and snag medals at top-level competitions across the province.

Women's teams in lacrosse, hockey and soccer also continue to have strong showings in inter-university competition.



## Athletics, academics and advocacy



| Jill Morillo

No student could better personify excellence in women's sports than nuclear engineering student Jill Morillo. During her five-year career with the UOIT women's hockey program, Morillo earned a number of awards for excellence in athletics and academics. Upon graduation, she continues to be recognized for her accomplishments as she was named to the Capital One College Division Academic All-America® women's at-large team, as selected by the College Sports Information Directors of America.

One of our most decorated student athletes, Morillo received the 2012 CIS Marion Hilliard Award, celebrating athletics, academics and community involvement, as well as the 2011 James-Baun Cup, which honours commitment, dedication, perseverance, academic responsibility, leadership and teammate skills. She is also a two-time winner of the UOIT athlete of the year award (2014 and 2012).

A well-rounded champion, Morillo also works in local communities to get more women into both science and sports, making her an inspiring role model as well as an outstanding athlete.

“ Being a varsity student athlete provided me with the opportunity to represent my university, and to develop valuable skills, such as leadership and teamwork. ”

– **CHRISTIE ATTWOOD**

BSc HEALTH SCIENCE (KINESIOLOGY), ALUMNI RELATIONS AND ADVANCEMENT ASSOCIATE





Faculty, staff and students are invested in the local community.



**FACULTY, STAFF AND STUDENTS WORK WITH UOIT PARTNERS TO ADDRESS IMPORTANT SOCIETAL AND SCIENTIFIC CHALLENGES.** We are dedicated to generating local pride and creating advocates and ambassadors for UOIT. While our pledge is to contribute to the quality of life in Durham Region and Northumberland County, we also take pride in the impact our researchers and students make all around the world.

# GIVING BACK



## Earth Day Oshawa



Our faculty make it a point of pride to build ties to our local communities, adding a research twist to many popular holidays, festivals and other events. For instance, UOIT professor and ecologist Dr. Andrea Kirkwood, gets involved with local Earth Day activities. Her Earth Day nature walk took community members along the Oshawa Creek, where she outlined local environmental stresses as well as the value and methods of protecting such waterways.

This type of faculty outreach brings science to the residents of Durham Region and Northumberland County, while building local support for UOIT.

## Campus food drive



Annually, UOIT teams up with Durham College to stock shelves at our campus food bank and provide a festive dinner for students in need. Last holiday season, staff, faculty, and students raised over \$15,000, and we hope to keep building on that in years to come.

We are proud that UOIT students also demonstrate their commitment to reducing hunger year-round. In partnership with Durham College, students run a Campus Food Centre that is dedicated to ensuring that financial constraints don't get in the way of healthy eating. Student volunteers tend a garden, organize food drives, and provide information about food banks and other services for any students who need it.

## Durham Region Abilities Centre



Some 60% of UOIT's faculty and staff volunteer with charities. They also serve on executive boards of not-for-profit organizations. One such organization is the Abilities Centre in Durham Region. The Abilities Centre has a mandate to support barrier-free navigation and physical access along with inclusive programs. The 125,000 square foot, state-of-the-art facility delivers sports, arts, music, and life skills opportunities for people of all ages and abilities.

At UOIT, we encourage and take pride in the many faculty, staff, and students who volunteer their time and team research projects at the Abilities Centre and other facilities in our community.



## Mentorship in Zambia

UOIT's Teachers for Teachers in Africa Committee raises funds to help schools in two rural Zambian villages. These schools have a high number of orphans as well as vulnerable and high-risk children. The money we raise goes to school supplies, teachers' salaries, and building maintenance. The organization also provides children with agricultural tools and seeds, as well as farm animals such as goats and cows. Village children learn how to farm, which provides them with opportunities to succeed that would not otherwise be available to them.

UOIT Bachelor of Education students also gain important experience through this project. Teacher candidates gain experience with international teaching methods and explore child development in developing countries. Teacher candidates trade best practices, ideas, strategies, and experiences with teachers in Africa.

The committee is exploring the possibility of offering student practicums in Zambia and creating scholarship funds. Local teachers in Zambia have requested support in teaching English and math, which happen to be key areas of focus at UOIT's Faculty of Education.

## Helping children with special needs



UOIT faculty and students often find surprising ways to connect their research to community involvement. For instance, a team from UOIT's Faculty of Health Sciences participated in the Scotiabank Toronto Waterfront Marathon 5-kilometre walk to raise money for the Grandview Children's Centre (GCC) in Oshawa, Ontario. Collectively, they raised more than \$1,200 for GCC, which provides therapy services to children and youth with special needs in Durham Region.

One of the participants was Dr. Meghann Lloyd, an Assistant Professor at UOIT and a Research Associate at GCC. Dr. Lloyd and her students research motor behaviour and physical activity for children with disabilities. The group works very closely with GCC in all aspects of their research.

"Our team was very excited to participate in this event and support Grandview Children's Centre, which does so much for children and youth with special needs in our community," said Dr. Lloyd. "This was a tangible way for our research team to help GCC continue to deliver high-quality care and services."

# LEADERSHIP honours



We are proud of the people who contribute to the university's story.

**UOIT OFFERS SEVEN FIELDS OF STUDY** including Business and Information Technology, Education, Science, Health Sciences, Energy Systems and Nuclear Science, Engineering and Applied Science, and Social Science and Humanities. Our success comes directly from our remarkable professors in these disciplines.

We are proud of the people who contribute to the university's story, and are always pleased to recognize and reward their exceptional achievements.

Each year, UOIT presents internal Excellence Awards to researchers, teaching assistants, faculty, and staff to acknowledge exemplary performance.

Here are just a few of the major honours from external bodies recently garnered by our faculty:

- ▶ Dr. Pierre Côté was appointed to the Research Council for the World Federation of Chiropractic;
- ▶ Dr. Igor Pioro was inducted into the Engineering Institute of Canada; and
- ▶ Dr. Rachid Machrafi was honoured for his research in radiation safety on the International Space Station.

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# Technology ADVANCEMENTS

Students can access papers, videos, data and a wealth of other materials anywhere, anytime and on any device.

## **Innovative tools for innovative thinking**

When people mention technology-enhanced university education, it usually conjures images of laptops and Wi-Fi, digital library services, cloud-based teaching materials and similar consumer technologies. UOIT employs the latest and best of such tools to broaden and deepen students' learning. But that is only the beginning of our technology story: As part of their studies, UOIT students have access to laboratories and facilities with unique, cutting-edge equipment that you won't find at your local Best Buy.

## **Technology-enriched learning environment**

We prepare our students for the 21st-century workplace by exposing them to high-quality research, hands-on learning, and access to current business and industry tools. Our strategy for technological evolution and adoption is to evaluate each new advance in terms of how it will enhance students' education, research capacity and post-university marketability.

UOIT's award-winning technology-enriched learning environment supports mobile computing and technology-enriched software. All students at UOIT receive a laptop loaded with custom software to support their learning and undergraduate research activities. They can access university services and course materials wirelessly in all classrooms and common areas.

UOIT continually builds its tech infrastructure, embracing tablets and mobile devices, streaming media services, internet-based video conferencing, online collaboration and whatever the next tool might be that can enhance research and education.





## Digital library and cloud services

UOIT's three libraries provide an extensive array of print and digital information resources to support learning and research. As a technology-rich university, the library system offers 24/7 access to 550,000 e-books, 75,000 e-journals, and more than 12,000 streaming videos. Wireless connections, specialized training sessions, and one-on-one consultations are available in each library.

All course materials are hosted in our growing cloud-based delivery system, which advances undergraduate and graduate learning and research. This means students can access papers, videos, data and a wealth of other materials anywhere, anytime, and on any device they choose.

## Learning anywhere, anytime

UOIT offers more than 1,300 courses each year, a significant proportion of which involve coursework completed partially or completely online. We are committed to increasing our online curriculum every year, so as to provide students with more options and flexibility. UOIT already offers completely online degrees, including the Bachelor of Arts in Adult Education, Master of Education, and the Bachelor of Allied Health Science.



## Faculty and student learning strategies

UOIT offers extensive faculty support, through our Teaching and Learning Centre, which provides an intensive orientation prior to the start of classes, mentorship throughout the first year of teaching, and monthly luncheons to discuss challenges and trade experiences. The Centre provides instructional consultation, technological solutions, and software support for traditional and online courses.

UOIT also has multimedia support for students including innovative tools such as NOOL, a website that assists students with math, writing and study skills via online tutorials and media-rich resources.

## Beyond consumer technology

UOIT offers students access to high-tech environments that go well beyond the mainstream to the cutting edge of research and industry. From crime solving to alternative power sources, and from lifelike mannequins for nursing simulations to one of the most advanced automotive research facilities in the country, UOIT offers students access to many advanced technologies that give them highly marketable skills and knowledge.



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Our students gain technological expertise and connections to those who require those skills.

### Crime Scene House



Officially known as a Forensic Science and Decomposition facility, this training area gives students hands-on training that can assist not only with crime scene investigations, but also with search-and-recovery operations.

There are only five such facilities in the world, and UOIT's is the only one outside of the United States. The training offered here is highly valued in medical and legal communities, and thanks to our partnerships with law enforcement and search-and-rescue organizations around the world, our students gain both technological expertise, and connections to those who require those skills.

### Educational Informatics Laboratory



Technology provides access to knowledge. But technology can also change the very nature of knowledge. Through the Educational Informatics Laboratory, a cross-disciplinary group of UOIT researchers collaborate on a project that studies how digital technology is affecting education and dissemination of information, and applies what they learn to teaching practices.

Their vision is to shift education from content-centred, teacher-driven designs to process-centred, learner-driven approaches. Students and faculty find this evolving model thought-provoking and empowering, leading to new theories, practices, structures and processes of knowledge creation, preservation and transmission.



### Clean Energy Research Laboratory



Hydrogen is often touted as a potential clean energy source for vehicles and power grids alike. UOIT's Clean Energy Research Laboratory is home to a multi-million dollar lab where hydrogen fuel is produced by splitting water molecules. The unique laboratory offers students access to equipment that pushes the cutting edge, and lets them gain expertise with a technology that is driving potential alternative energy sources.



The lab has established partnerships with Atomic Energy of Canada Limited and the Argonne National Laboratory in Illinois, which means that in addition to technological training, students also participate in world-leading research and acquire valuable industry skills.



### Nuclear Simulation Laboratory

Our Nuclear Engineering program features the most extensive nuclear power plant computer simulation of any engineering program in Ontario. The Nuclear Simulation Lab trains students using a state-of-the-art computer and display system to realistically replicate nuclear power plant operations. Students receive instruction on a virtual Candu 9 simulator and learn how to use Ontario Power Generation's only off-site full-scope virtual simulator. The faculty also has capabilities to develop software for advanced reactor designs within the lab.

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# Ready for the NEXT DECADE



UOIT is ready for a prosperous second decade.

## Future investments

As one of Ontario's newest universities, we face unique challenges and opportunities. To reach our goals, we rely on support from many sources, including individuals, families, foundations, associations, unions, service clubs, governments, and corporations who work with us every step of the way. These groups and individuals do more than provide financial support—they also become partners with the university, investing in, and benefitting from, the dynamic, ambitious research and education that are at the heart of everything we do. This gives us great confidence in where we're going, not only over the next decade, but also for many decades to come.



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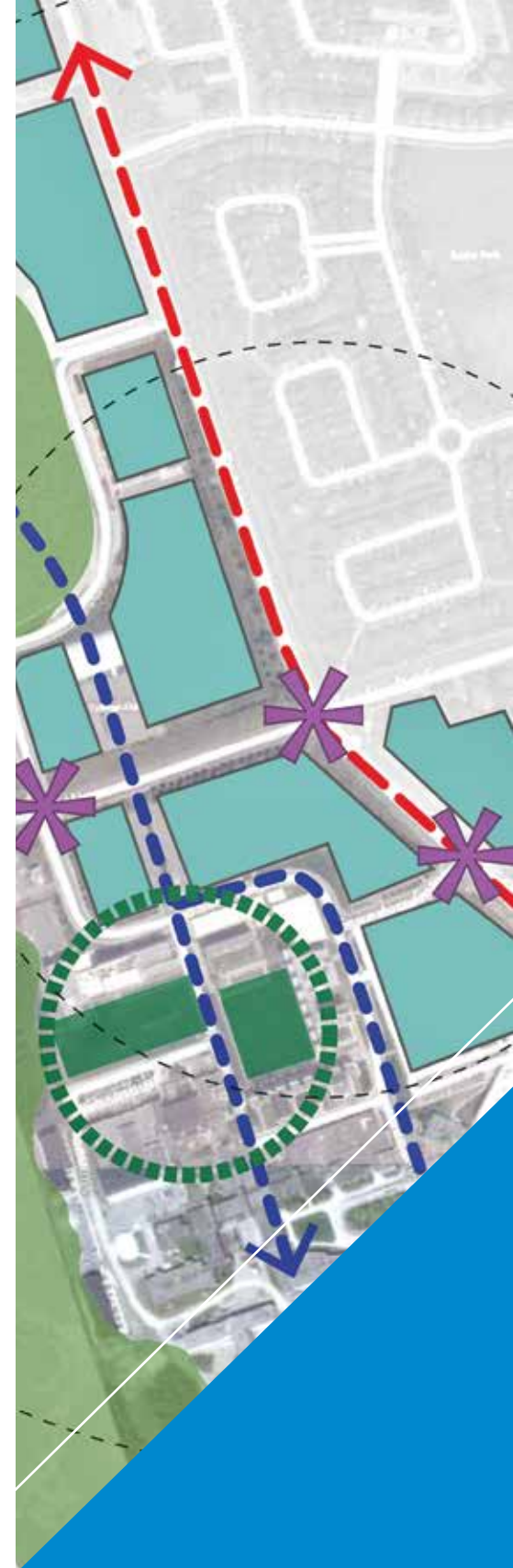


# Campus MASTER PLAN

**UOIT'S CONFIDENCE IN ITS FUTURE IS BASED ON PLANNING AND FORESIGHT.** Our Campus Master Plan incorporates partnerships with Durham College, Trent University, a variety of other institutions, as well as industry partners. We will develop Innovation Park, the Centre for Applied Research, Innovation and Entrepreneurship, the Student Innovation and Learning Centre, and a Health Sciences Centre. The future UOIT will continue to support technology, business, government, and community partnerships.

Our planning horizon looks ahead 20 years and meets evolving academic, student, and industry needs. We are looking forward to land use and infrastructure development for the north location and the adjacent 190-acre planned expansion on Windfields Farm. This, along with the current downtown location, will firmly establish UOIT's position as an active living-learning centre where the educational experience is interconnected with industry, research, entrepreneurs, civil society, and the local community.

**LEARN MORE:** [uoit.ca/OurStory](https://uoit.ca/OurStory) 





# Alumni ASSOCIATION

UOIT NOW HAS MORE THAN 8,200 ALUMNI. We are making strides and building alumni relations for the future.

The Alumni Association inspires UOIT's past graduates to feel connected through programs and services designed to promote the spirit of life-long success and alma mater pride.

The Alumni Mentorship Program assists students and young graduates through academic and professional transitions. Professional relationships between students and mentees create networking opportunities and support career choices.

## 2013 Alumni Association award winners



### Alumni Association Humanitarian Award

| Jaclyn San Antonio, Faculty of Social Science and Humanities, 2007



### Up-and-Coming Award

| Veronica Cole, Faculty of Business and Information Technology in Game Development and Entrepreneurship, 2012



# Student LIFE



WE OFFER NEW WAYS FOR STUDENTS TO BUILD ON THEIR ACADEMIC EXPERIENCES by providing meaningful, high-quality programs, services, and resources that are educational activities grounded in research and outcomes-based practice.



To achieve the overall goal of student success—academic achievement, attainment of individual goals, involvement and integration in the university community—UOIT's Student Life team focuses on three interconnected themes: engagement, development, and support.

The Student Learning Centre provides students with tutorial and academic assistance of the highest calibre including peer, group, online, and specialist subject support.



The scope of the Student Life office was broadened to provide greater capacity for the integration of academic and non-academic activities, and to create easier and more flexible access to a full range of student services. The Student Life office includes the Student Learning Centre, Student Experience Centre, Career Centre, and Student Accessibility Services.

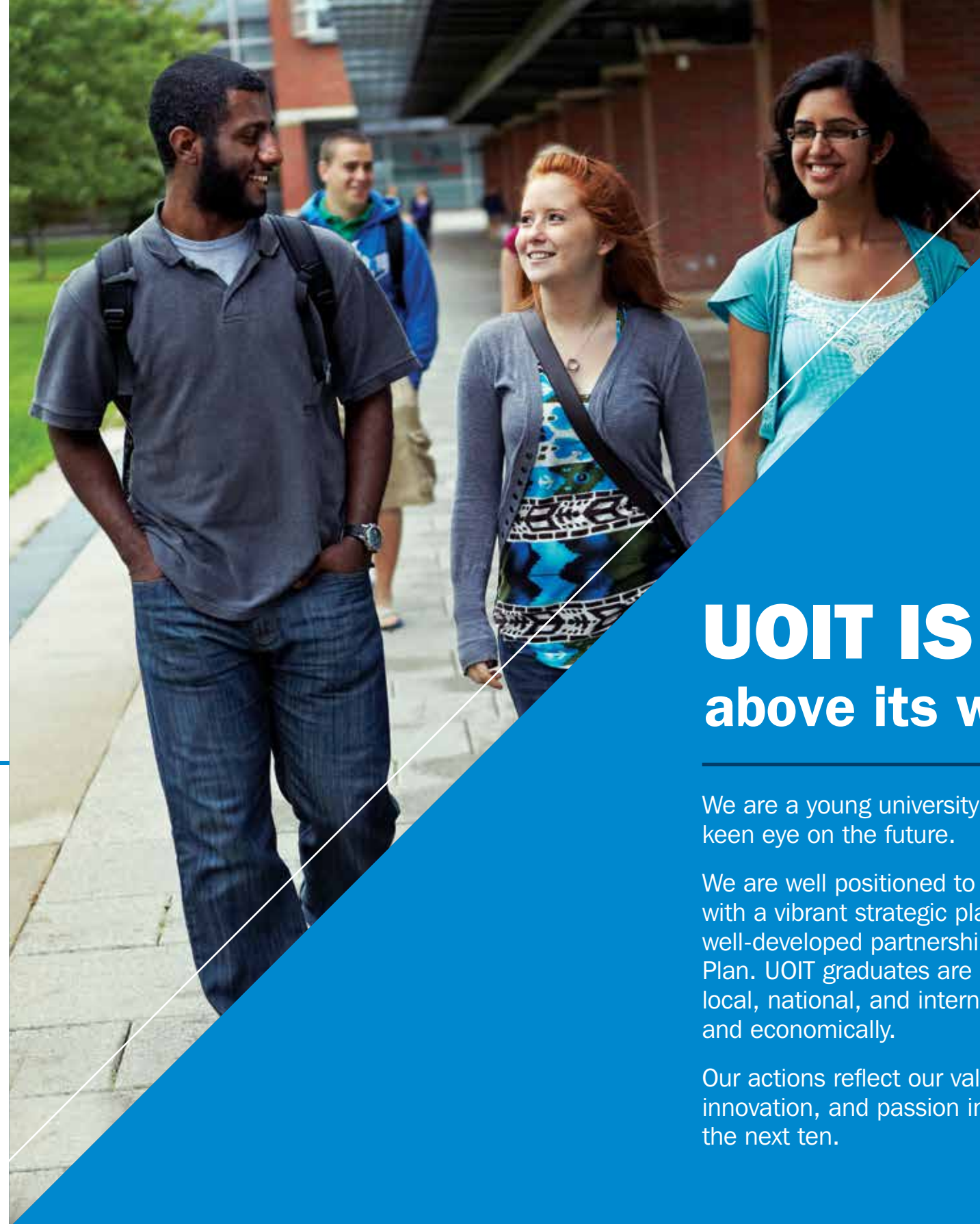


“ At UOIT, everything is new, everything is fresh, and everything is possible. ”

– THE HONOURABLE PERRIN BEATTY,  
UOIT CHANCELLOR

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## UOIT IS PUNCHING above its weight

We are a young university with many accomplishments and a keen eye on the future.

We are well positioned to begin a prosperous second decade with a vibrant strategic plan, a solid international reputation, well-developed partnerships, and an evolving Campus Master Plan. UOIT graduates are prepared to make an impact on the local, national, and international stage—socially, sustainably, and economically.

Our actions reflect our values. We are dedicated to quality, innovation, and passion in all that we do. Please join us for the next ten.

**CHALLENGE INNOVATE CONNECT**



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