

Community Focus | 2015

The Future HERE TODAY



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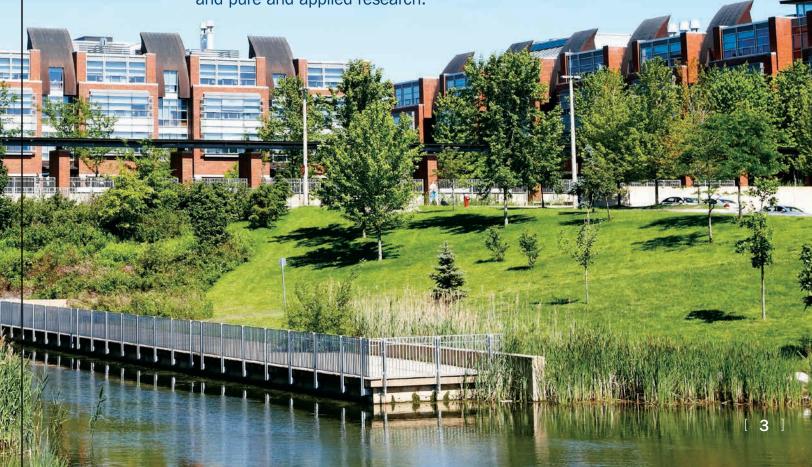
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Photographs in this book feature UOIT students, faculty, and staff. Visit uoit.ca/OurStory to learn more.





Communities must continuously innovate—become smarter—in order to adapt to a world that is rapidly changing. In order to innovate, communities must draw from a solid foundation of scholarship, and pure and applied research.





that has always driven us

UOIT produces graduates prepared to excel in 21st-century workplaces. They also leave here ready to make significant contributions to society.

- DR. BRENT LEWIS

DEAN, FACULTY OF ENERGY SYSTEMS AND NUCLEAR SCIENCE

Canada's fastest growing university

The University of Ontario Institute of Technology (UOIT) is one of the youngest and fastest growing universities in Canada. From the start, we integrated our campus and curriculum into the fabric of Durham Region, as well as into many other communities around the world. We believe creative infrastructures builds smarter communities. We focus on innovation and strive to educate students through a combination of research, hands-on learning and intensive community involvement.

UOIT's emphasis on undergraduate research sets it apart, as does its focus on internships, entrepreneurialism and on-the-job placements.

We take pride in our modern curricula, high-tech facilities and green campus.

UOIT is a leader in energy performance and carbon control. From a Borehole Thermal Energy Storage System to the green roofs on many of its buildings, UOIT fully embraces environmental stewardship and energy conservation.

We are equally proud of how our students put their knowledge to work—they become thought leaders, industry partners, volunteers and entrepreneurs, sharing their expertise well beyond the academic world.



I Campus Library









Around the corner and around the world

UOIT's focus on community begins with how it attracts students. We continue to build partnerships and agreements with many Ontario colleges creating pathways from a college diploma to a university degree. We have become a "talent magnet" that enriches Durham Region and Northumberland County economically, environmentally and socially.

Our professors, who have world-leading expertise and a drive for collaboration, build globe-spanning partnerships that further enhance the region. In ten short years, UOIT has established 48 memoranda of understanding with 34 institutions in more than 20 countries, from the Chinese University of Hong Kong to France's Université de Bretagne-Sud.



Active approach to the future

As a bustling research institute, UOIT students and faculty are fully engaged in academic activities that directly affect society. In particular, our programs in Science, Technology, Engineering and Mathematics (STEM) engage students in collaborative learning projects that address real-world problems in a variety of sectors including business, social services and education.

Our programs blend research, mentoring, skills development and business partnerships. Graduates leave UOIT well equipped to excel in new job markets and contribute to the economic success of the evolving communities that await them.



ONTARIO Power Generation



Through a partnership with Ontario Power Generation (OPG), nearly 200 employees in the nuclear power industry have participated in professional development sessions at UOIT—improving their skills and increasing their technical knowledge. This annual training also emphasizes opportunities for OPG's team to pursue graduate studies.

In 2014, OPG hired graduating students from nine universities with UOIT securing 30% of the permanent engineering trainee positions.



LEADERSHIP EDUCATION

that realizes students' full potential



Education in a digital world means learning to build your own adventure, so you can help others build theirs. A good toolkit for critical, informed and ethical path-breaking helps a lot—and that's what we give our students.

 DR. SUZANNE DE CASTELL DEAN. FACULTY OF EDUCATION



Creating leaders

A distinctive combination of teaching and research defines the UOIT learning experience. At UOIT, students realize their personal and professional potential.

UOIT provides state-of-the-art research facilities, award-winning faculty members and world-changing research. But that is just the start. We also lead by example, offering a welcoming and supportive environment, where people develop both as scholars and as citizens.

UOIT's close ties to its growing number of alumni, and its reputation for accomplished grads, mean that many students may find jobs and other opportunities even before they graduate.

Locally and globally

Every year, students from all over the world choose UOIT. We currently have almost 700 international students from over 50 countries in our undergraduate and graduate programs.

This diverse, international student body enriches our campus—cultural mixes often lead to the most productive collaborations and the most innovative ideas. International students also help ensure that the education we offer here has an impact in countries and communities around the globe.

As we continue to develop new undergraduate and graduate programs, we ensure that our students have the confidence, knowledge and skills to lead, whether it's in the next town or on the other side of the world.

76

UNDERGRADUATE AND GRADUATE DEGREE PROGRAMS 19

COUNTRIES FROM WHICH WE HAVE FACULTY MEMBERS **700**

INTERNATIONAL STUDENTS FROM OVER 50 COUNTRIES



All-star **SCIENTISTS**

Dr. Rupinder Brar's eyes are trained on planets orbiting alien suns, but his feet are firmly rooted in the Durham Region community.

Dr. Brar, a senior astrophysics lecturer at UOIT, has a talent and a passion for giving accessible public talks about complex scientific subjects. He sees a natural connection between studying the cosmos and enriching the local community.

"There are huge connections between astrophysics and public life," Dr. Brar says. "Astronomy is a great gateway science: Young people get interested in astronomy, which often leads them to careers in science, math, engineering, and technology."

Community involvement is a pleasure for him, but he also sees it as his responsibility.

"I firmly believe that the work we do as academics needs to be shared as widely as possible," he says of his talks, which can cover climate change, spinoff technologies from space research, and other real-life subjects. "One of the things I like most about UOIT is our footprint in Durham Region."

LEARN MORE: uoit.ca/OurStory

The **EDUCATORS**



I Hon. Stephen Harper, Vernon Kee. class of 2006

Vernon Kee embodies UOIT's values of technology, community and real-world learning.

Kee, a UOIT Faculty of Education alumnus, heads the Enriched Science, Math and Robotics program at John Polanyi Collegiate Institute in Toronto.

In 2013, he won the Prime Minister's Award for Teaching Excellence, in recognition of how he cultivates innovation, experimentation and teamwork in the classroom.

"UOIT's focus on enhancing learning through technology greatly influenced the way I teach," he said. "To this day, I am inspired."

Awards aside, Kee says the most important endorsements he gets come from his students.

"My kids don't skip this class," he said. "Class starts at 9:00. They show up at 8:00. They're also here at lunch, having fun, learning and making friends."

Kee also supervises eight school clubs, coaches four sports teams and manages numerous school websites and blogs.

Outside of the classroom, Kee created a program called Cyberpals, through which students assist seniors in navigating the Internet, and he organizes annual missions to one of Nicaragua's poorest communities, to help build a school and train teachers.

"I don't think about the hours," he said. "I just do it because I love it."

PARTNERS AND COLLABORATORS

that build skills and strengthen society

Working within a local organization, I feel that I am making a difference and learning so much more than I would at a multi-national.

AMY BREEDON

PRACTICUM STUDENT AT THE WHITBY-BASED MARKETING FIRM, SPREAD YOUR WORD (SUBSEQUENTLY HIRED)







Working hand-in-hand with industry

We share our expertise with start-up companies and provide entrepreneurs with tools they need to build their businesses. We foster existing partnerships and build new ones in emerging technology clusters.

Experiential learning is a founding principle of UOIT's approach, embraced by all seven of the university's faculties. Through team projects, students put skills into practice by providing no-cost consulting to corporations with real-life projects. These organizations range from small, not-for-profit groups to large, multinational companies.

UOIT's strong partnerships contribute to Ontario and Canada's socio-economic development. Our partnerships create increased research and employment opportunities and help increase global competitiveness.

UOIT researchers place a premium on environmental sustainability and social responsibility. In fact, our research excels particularly in renewable energy sources: UOIT is a leader in developing the means to harness energy from the sun, plants, water and other eco-friendly sources.

LEARN MORE: uoit.ca/OurStory



ALMOST

84%

OF STUDENTS WHO GRADUATED IN JUNE 2014 PARTICIPATED IN EXPERIENTIAL LEARNING OPPORTUNITIES AT UOIT.

THESE STUDENTS PARTICIPATED IN

OVER

2,700

DIFFERENT PLACEMENTS

Experiential Learning Placements by Location (2013–2014)

Location	Placements
Durham	1,424
GTA	952
Rest of Ontario	308
Rest of Canada	26
International	17
Total	2,727

UOIT has partnered with almost 320 organizations, locally and internationally, to secure practical hands-on learning opportunities for our students.

Industry and community partnerships lead to employment opportunities for students.

We also fight injustice

The Faculty of Social Science and Humanities' programs (Criminology, Communication, Community Development and Policy Studies, Forensic Psychology and Legal Studies) have some of the best professors and researchers in Canada. They work with our students on research that fights crime, prejudice and discrimination.

UOIT is proud to apply intense academic rigour, research and problem solving to real-world issues like human rights.



UOIT students have had internships and placements with organizations such as:







Bell Canada	Maple Leaf Foods Inc.
BMO Nesbitt Burns	McGraw-Hill
Canada Revenue Agency	Ontario Power Generation
Canadian Environmental Law Association	Ontario Securities Commission
Canadian Mental Health Association	Ontario Shores Centre for Mental Health Sciences
Children's Aid Society	RBC Dominion Securities
CIBC	Research in Motion
Cisco Systems, Inc.	Royal Bank of Canada
Coldwell Banker Commercial	ShawCor Ltd.
Enbridge Gas Distribution Inc.	State Street Corporation
IBM Canada	TD Bank Group
KPMG	Teva Canada
Kraft Canada	Toronto PanAm Games
Lakeridge Health	Toronto Transit Commission
Loblaws Stores	Ubisoft
Mackie Moving Systems	Vanbots Construction

The hidden VICTIMS OF CRIME



They're sometimes called "the hidden victims of crime". They are spouses and children of people who have been imprisoned, who must grapple with emotional and economic chaos, often with little in the way of community support.

There are tens of thousands of such families across Canada, and they have recently gained a new champion: Aisha Francis. In 2013, Francis had a demanding full-time job, but had begun devoting her spare time and energy to creating a not-for-profit organization called Project: Restore Families Impacted By Incarceration, or FIBI for short.

"The families of those who are incarcerated often aren't thought about," she says. "FIBI offers counselling, workshops, advocacy and other support for these families."

Establishing a not-for-profit is no small task, and Francis says she struggled at first to get FIBI off the ground. Then two UOIT students, both from the Faculty of Social Science and Humanities, did practicums at the fledgling FIBI. Nadia Parker (Legal Studies) and Nicole Sellers (Criminology and Justice), assisted with research, grant applications, and other work to build the organization.

"It was amazing," says Francis. "They put a fire under me. I had been chugging along, but I was always asking, 'Can this be legitimate?' 'Is this real?' When they came on board I felt accountable to them, and to UOIT."

With the organization better established, Francis was able to devote herself to FIBI full time. FIBI's relationship to UOIT will continue—Francis has already found two new UOIT practicum students that joined her in Fall 2014.

COMMUNITY INVESTMENTS

that offer social and economic enrichment

The Faculty of Social Science and Humanities educates and conducts research in disciplines which have a profound impact locally, around the world and on the career readiness of our students.

- DR. NAWAL AMMAR

DEAN, FACULTY OF SOCIAL SCIENCE AND HUMANITIES





Economic and social development in our community

UOIT contributes to economic and community progress through research in advanced manufacturing, sustainable energy, smart communities, social justice, digital communication and the development of citizen leaders.

We are responsible for creating and sustaining more than 3,800 jobs in Ontario, in everything from university operations to construction. And that's just the start.

UOIT also makes major contributions to the local community, including investments in our home city of Oshawa.

- ▶ We supported the revitalization of the downtown core by extending our suburban campus into urban Oshawa beginning in August 2008.
- We transformed Victoria Street into an urban gathering space.
- We expanded Regent Theatre's role as a cultural venue, which is now home to Ontario Philharmonic concerts as well as other cultural and educational events.
- We are carefully planning UOIT's expansion into Windfields Farm property while maintaining the legacy of E.P. Taylor and Northern Dancer.

Faculty, students and staff are engaged in the local community. Professors and students present their research findings at various community forums including McLaughlin Gallery, Ontario Shores, and the Regional Municipality of Durham. High school and grade school students participate in robotics competitions, Social Science and Humanities day visits and summer camps at UOIT, bringing children and families to our campus.



UOIT strives to be a leader among North American universities in sustainable design.



Sustainable sites

Building our first campus from the ground up on pristine green fields provided UOIT with a tremendous opportunity and inspiration. All new structures respect the environment and feature green technologies. For example, UOIT boasts one of the largest geothermal systems in Canada which heats and cools many of our buildings.

We also revitalized existing structures in the heart of downtown Oshawa and are cultivating a sustainability plan for both campus locations. The goal is to create energy efficient buildings, develop lush, yet low-maintenance landscaping, phase out all incandescent lighting, reduce wastewater, and minimize light pollution.

UOIT'S NORTH CAMPUS LOCATION HAS:

6,700+ students studying full time

500+ part-time students

136 core faculty members

1,500+ beds available in on-campus residences

600 study spaces in our award-winning library

UOIT'S DOWNTOWN CAMPUS LOCATION HAS:

2,250 students studying full time

200 part-time students

500 full-time students from the north location who take courses downtown

51 core faculty members

88 administrators who relocated from the north location



Automotive Centre OF EXCELLENCE



The Automotive Centre of Excellence (ACE) is an exceptional facility that is home to a very sophisticated one-of-a-kind climatic wind tunnel. As a result, ACE generates interest from people representing a broad range of sectors, including all automotive sectors and manufacturers, aerospace, transit, national defense, green energy, competitive athletes and the movie industry. Clients like the fact that they can perform their scientific research and engineering development using a \$100-million tool that is truly independent, highly secure and operated by a team of top-notch engineers and technicians. ACE is a place where industry can work independently or collaborate with world class experts on scientific research and engineering development projects.

The provincial and federal governments, together with General Motors Canada and UOIT, collectively contributed to the realization of the enterprise, which is wholly owned and operated by UOIT. More than a financial partnership, ACE shows what can be achieved when companies, governments, universities, and the local community collaborate to build truly ambitious research facilities.

LEARN MORE: uoit.ca/OurStory

REAL-WORLD INNOVATION

that builds smart, successful communities

Our business and community partnerships provide researchers with real-world experience. At UOIT, we transform ideas into solutions that benefit society as a whole.

DR. MICHAEL OWEN VICE-PRESIDENT RESEARCH, INNOVATION AND INTERNATIONAL

More than 95% of students are employed within two years of graduating.

Technology-enriched learning

At UOIT, technology-enriched learning meshes seamlessly with practical skills development.

The Energy Systems and Nuclear Science Research Centre allows scholars to work on geothermal, hydraulic, natural gas, nuclear, solar and wind energy technologies. Our Crime Scene House can replicate any domestic crime scene, allowing students to develop highly practical crime-solving skills. The university's 30,000-litre wet lab facilitates advanced aquatic toxicology research such as testing the sensitivity of fish to pollutants.

In our Clean Energy Research Laboratory, we capture oxygen and hydrogen created by splitting water molecules. Our nursing lab offers life-like mannequins that can interact with students. All of our labs are designed to foster education and research that links the university with the everyday lives of people living in the community.

LEARN MORE: uoit.ca/OurStory







Teaching and research connections

UOIT builds as many connections as possible between its research and education programs and the broader community. Our campus provides students with an inspiring physical environment where they study key areas such as community and social wellness, sustainable energy, applied bioscience, automotive materials and manufacturing, and information technology and communication. The knowledge they gain here goes everywhere.

Our faculty and students have built computer games that help train surgeons in advanced, complex procedures; they assist police in developing improved methods to determine the degree of decay of a body inside a vehicle; they provide authoritative measurement of the impact of toxins in the environment and on local communities. In these and many other ways, UOIT contributes to healthier, safer, more prosperous communities.

Learning by making and breaking rules

Canada's growing gaming industry is already the third largest in the world, with more than 16,000 employees and an economic impact greater than \$1.7 billion each year. Students at UOIT lead in this industry, thanks to their experience in our advanced gaming and virtual reality laboratory.

But our computer training is not all fun and games: UOIT also happens to be home to The Hacker Lab, a high-tech facility that prepares students for careers in detecting and protecting against cybercrime.

With our college partners across Ontario, UOIT also offers the opportunity to progress from apprenticeship to PhD.



Clean energy

The Clean Energy Research Laboratory has a mission both to develop environmental technologies and also to move them from the laboratory towards commercial and industrial application.

Our facilities are used by many businesses in Durham Region and Northumberland County for research and product development. We believe such partnerships are a resource and a keystone for improved energy sustainability and a stronger economy for our community.



Waste-wise

Students in the Faculty of Business and Information Technology developed a game called "Sort 'Em Up" for the Regional Municipality of Durham's website. The game, which teaches children ages 8 to 12 how to sort various waste objects around the home, won the Ontario Municipal Waste Association's 2012 Bronze Promotion and Education Award.

A CULTURE OF VOLUNTEERISM

that touches local and global communities

It was thrilling to get out from behind a school desk and play a crucial role in the community. I felt incredibly humbled to have an impact on others' day-to-day lives.

- COURTNEY HUTSON

PRACTICUM STUDENT AT CENTRAL EAST CORRECTIONAL CENTRE (SUBSEQUENTLY HIRED)





Helping here and abroad

UOIT is a bridge between our region and the world. Our faculty, staff and student volunteers provide vital services to communities and champion progress in the non-profit sector. They raise funds for causes ranging from breast cancer research to disaster relief assistance; they help local families in need; they mentor Girl Guides and Boy Scouts; and they teach in Africa and deliver aid to people in Honduras.

Students in the Faculty of Education and the Faculty of Social Science and Humanities participate in practicums to gain frontline experience in social services, arts and culture, community development, education and human rights.

UOIT has more than 200 affiliation agreements with a wide variety of community partners across Ontario.

We create 150 custom-built placements every academic year, involving approximately 15,000 hours of direct volunteer fieldwork. In addition to gaining work skills, students cultivate networks and business relationships. In fact, after their projects are completed, many students carry on with the same organizations as volunteers or employees.

The economic impact of volunteerism every year is \$2.9 million in Durham Region and Northumberland County. The community impact is immeasurable.

We are proud the spirit of service to our community—near and far—is alive and well at UOIT within our students, faculty and staff.

LEARN MORE: uoit.ca/OurStory



UOIT students change the world around them through student clubs, organizations, and societies.

Soup Kitchens AND SHELTERS

Close to home and farther afield, UOIT works to build a better world. The Student Association hosts an annual community cleanup project, and also encourages students to volunteer in their community. Volunteers work in food banks and soup kitchens like St. Vincent's, which provide low-cost meals for less fortunate people.

Students help at the Denise House, a safe and protected 24-hour crisis prevention site for abused women and their children. Students are also engaged in global activities focused on improving health in developing countries.

Volunteers participate in:

- ▶ Recreational and social clubs
- ▶ Social service organizations
- ▶ Religious organizations
- ▶ Health organizations
- ▶ Educational and research organizations

Research AND MOBILITY



I Dr. Meghann Lloyd

Dr. Meghann Lloyd researches how physical activity affects motor development in infants and young children, including those with physical disabilities. In partnership with Durham Region's Grandview Children's Centre, Dr. Lloyd helps provide valuable resources for exceptional children.

"Dr. Lloyd has addressed many of the needs and issues affecting children with special needs in Durham Region, particularly Autism Spectrum Disorder and Cerebral Palsy," says Grandview Executive Director Lorraine Sunstrum-Mann. "Her partnership has had a huge impact on our key services. We make changes based on research that is done directly in our centre, with our own 'kids'."

Students in the Faculty of Health Sciences assist Dr. Lloyd by conducting research and evaluating therapy programs at the Centre, including results from summer camps where occupational therapists practise new techniques. Dr. Lloyd works with the Centre to translate her research into new and more effective motor development programs for children.

Sunstrum-Mann says she expects the relationship between Grandview and Dr. Lloyd to continue for many years with many more projects.



We make changes based on research that is done directly in our centre, with our own 'kids'.

LORRAINE SUNSTRUM-MANN
 EXECUTIVE DIRECTOR, GRANDVIEW CHILDREN'S CENTRE



AN ONGOING COMMITMENT that connects us to our community

We always wanted to be entrepreneurs. The inspiration for our company came from the awesome Capstone Project UOIT assigns to fourth-year students. We learned how to manage a real-life project and realized the business opportunities available to us. ***

- MOHIT SHARMA AND SUMITH RAGUNATHAN
FORMER UOIT STUDENTS AND FOUNDERS OF PROVOKE AERO



I Pickering City Hall

We are the university of the future—here today.

Bringing the world to Oshawa and **Oshawa to the world**

Our legacy has just begun. We bring the world to Oshawa, Durham Region, Northumberland County, Ontario and Canada—with international students, professors from around the globe, academic conferences, sporting events, research projects and diverse partnerships with local and transnational companies.

Part of your community

It is a privilege and honour to be part of the Durham Region and Northumberland County community. We are proud of the contributions we make and our social and economic impact.

We're committed to a strong and sustained relationship with the community that will catapult us all into a bright future. We gain value through this relationship, and we will continue to work to give value as well.

LEARN MORE: uoit.ca/OurStory

Turning training INTO PRACTICE







"UOIT students are part of support groups, help facilitate our Lesbian, Gay, Bisexual, Transgender, Questioning drop-in programs, raise funds, and contribute to anger management programs," says Andrea Craning, the club's Director of Youth Justice. "They are also involved with our programs for youth who get in trouble with the law."



Young people convicted of minor offences can be diverted out of the criminal justice system, and instead face alternative sanctions. Consequences range from restitution and repayment, to assignments requiring self-reflection and education.

UOIT practicum students put their training to work, developing assignments for young people charged with everything from breaking and entering to online bullying.

"Our last couple of students designed an assignment all around social networks, bullying and extortion," Craning says. "Now if we get relevant cases, part of the consequences would be to give them this assignment."

UOIT's support of BGC goes beyond the practicum placements. Staff at the university also organize an annual fundraiser.

"Every year the university does a 5k run around the campus and all the proceeds go to our organization," Craning says. "It gets bigger and better every year. The university has given us this fundraising event, and we are forever grateful."

UOIT produces graduates who are career-ready and able to use technology in creative ways.

Empowering OPPORTUNITIES



UOIT encourages and supports students as they drive innovation in Durham Region and Northumberland County, and as they create their own businesses and jobs. Students and alumni continue to form new companies, taking creative products to the market.

Provoke Aero—formed by two graduates from UOIT's Networking and IT Security program—provides technology solutions for the travel industry.

The Provoke Aero team created an online booking engine that empowers travel agents to adapt to new technologies for planning and product distribution, accounting, call-centre reservations and tour operations. Using Provoke Aero's tools, tour providers can schedule travel arrangements and bundle multiple activities with secure credit card verification.

By aligning technical knowledge with business savvy, Provoke Aero has gone global, with the founders attributing their success to the skills they gained at UOIT.



UOIT owes its success to a community that extends far beyond the campus' laboratories, libraries and lecture halls. Our partnerships with entrepreneurs and public servants, with businesses and not-for-profit organizations, and with high school students and senior citizens deeply enrich our research and educational programs. They help us build ambitious new creative infrastructures that foster smarter communities.

NIVERSITY FUNTARIO CETECHNOLOGY

Our community focus has served us well over our first decade, and we will continue to invest in it over the decades to come.





UOIT and the surrounding community have common values. We're proud to be partners in building the local economy, advancing social justice issues, and positioning the region to be globally competitive.

TIM McTIERNAN, PhD
 PRESIDENT AND VICE-CHANCELLOR, UOIT

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