President's Report | 2016-2017

Our Students Achieve

UNIVERSITY OF ONTARIO INSTITUTE OF TECHNOLOGY
OSHAWA | CANADA

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Photographs in this book feature UOIT students, faculty, and staff.

President's Message

We dedicate this report to UOIT's students, and also to the more than 12,000 UOIT graduates who are out in the world, building on what they learned here to forge successful careers and live rich, meaningful lives. But what does a dedication to our students really mean?

Our dedication begins with who we attract. UOIT fundamentally embraces social inclusion, diversity, and the provision of new opportunities for people who have historically faced barriers to university education. Social justice is not just a subject for research and scholarship, but a core element in everything we do.

We provide opportunities for students for whom university might not have been an automatic choice. College-to-university degree pathways are built into our programs. More than half of our students are the first in their family to attend university. They come from culturally diverse backgrounds, including many indigenous communities.

We provide the great people who join our programs each year with an experience-rich, career-ready education. We build skills and knowledge, and we also work to foster self-assurance and professionalism.

Our students build professional bonds with their teachers that endure long after graduation. We connect students with experiential learning opportunities: About 85% of our graduates had outside-the-classroom placement, including capstone projects, internships, research partnerships and co-ops. These placements are made possible through our faculty and staff who have working relationships with hundreds of private and public sector organizations.

We measure success in many ways: Our graduates get jobs, garner noticeably better-than-average salaries, enter prestigious graduate schools, start their own businesses, and volunteer in disproportionately large numbers. We take pride in their leadership as employees, entrepreneurs, and as engaged citizens.

So, it is not just this report that is dedicated to our students. Our faculty and staff, our labs and libraries, our sports teams and our academic, business and student life support services—all are focused on the success of our students as well.

TIM McTIERNAN, PhD
PRESIDENT AND VICE-CHANCELLOR
UNIVERSITY OF ONTARIO INSTITUTE OF TECHNOLOGY

UOIT at a Glance

Since its founding in 2003, UOIT has earned a reputation as a forward-looking, technologically oriented, cosmopolitan university.

Located in Oshawa, Ontario, our seven faculties comprise 46 undergraduate programs and 30 graduate programs, with a combined total of almost 10,000 current students. We also share multiple diploma-to-degree pathways with Ontario colleges.

In addition to our focus on building academic partnerships with industry, government and not-for-profit organizations, we also offer students the opportunity to work in many unique and groundbreaking research laboratories. We are among the top 50 Canadian institutions in terms of research funding, which is particularly unusual for such a young institution.

Our Automotive Centre of Excellence (ACE) is home to a climate-variable wind tunnel and other research facilities unlike anything at a traditional university. We have equally unusual facilities optimized for everything from nuclear science to gaming to forensic investigation.

We foster our students' technical skills along with subject matter knowledge and the social skills essential for personal success. We connect our students with the work world through our research, business and community, and in doing so we give them a competitive edge in a challenging job market.
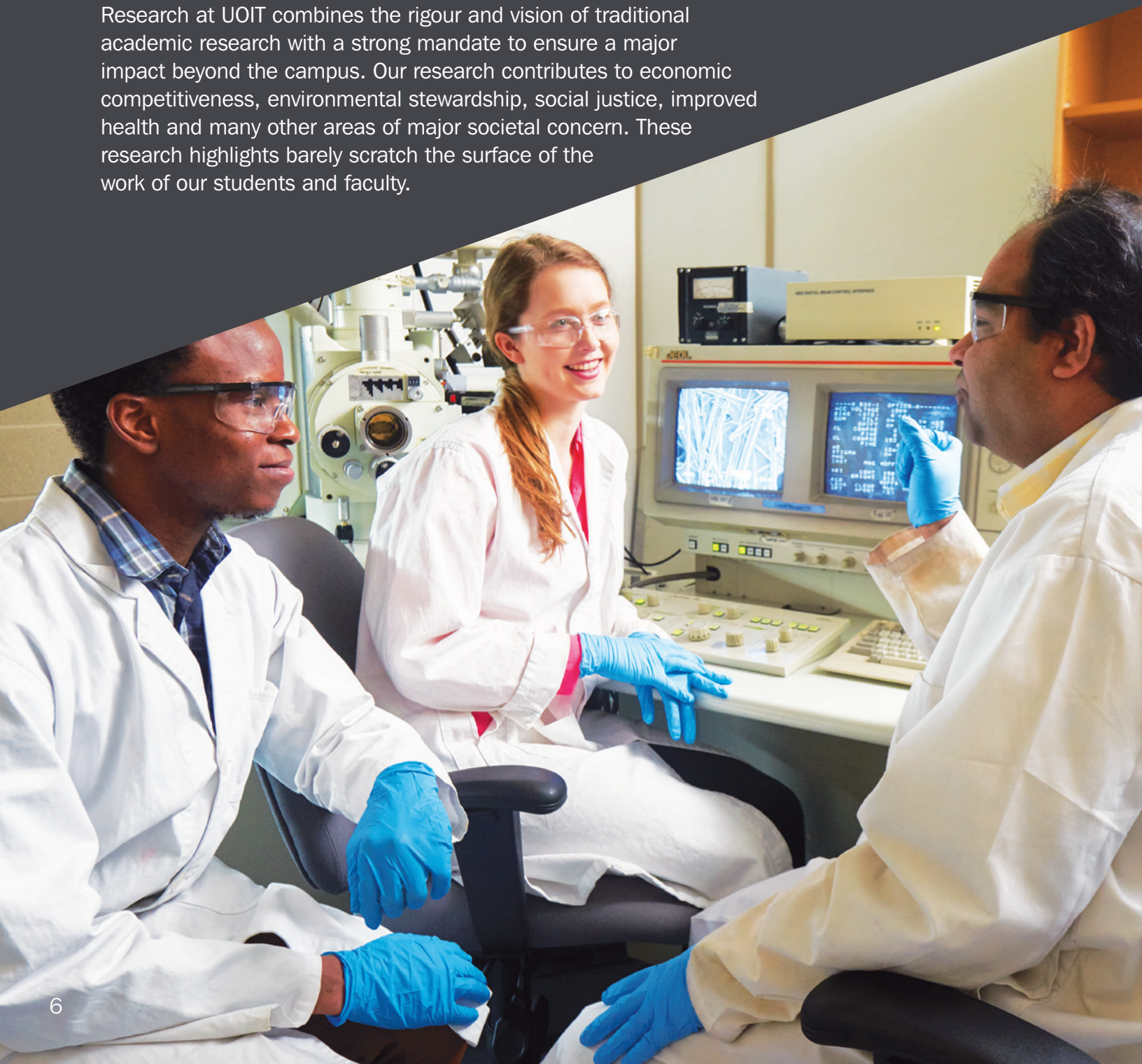
And, as this report details, we are a growing university. As much as we've accomplished thus far, we're really only just getting started on our second decade.

STUDENT & FACULTY RESEARCH

Research at UOIT combines the rigour and vision of traditional academic research with a strong mandate to ensure a major impact beyond the campus. Our research contributes to economic competitiveness, environmental stewardship, social justice, improved health and many other areas of major societal concern. These research highlights barely scratch the surface of the work of our students and faculty.

Game on for workplace safety

Two UOIT assistant professors and their graduate student, Cameron Chodan, want to enhance workplace safety training with computer games. While occupational health and safety might seem more like dull and dreary duty than Call of Duty, Drs. Karthik Sankaranarayanan and Pejman Mirza-Babaei believe gamification could make a big difference to managers.

"Every employer needs to pass safety certifications, but it can be a very boring and monotonous process," says Dr. Sankaranarayanan. "Turning these certifications into games can not only make knowledge acquisition more effective, but also make it fun."

And what's entertaining for employers is also valuable experience for student game makers.

"We currently have a graduate student working on game designs and prototypes," says Dr. Mirza-Babaei.

"We're also planning to hire undergraduate students to work on user interfaces. Students not only apply their knowledge, but also get to see the product development cycle all the way from concept to commercialization."

" This project has opened my eyes to the vast realm of research," says Cameron Chodan, a graduate student who has been working on the user interface. "I have learned so much about how research, discussion and teamwork can turn a curiosity-driven idea into a product. "

Already in the prototype stage, the team of students and faculty expect to release the finished app in Spring 2016.

Students improve mobile technology

to increase accessibility

Students and professors in UOIT's Faculty of Education's Educational Informatics Lab explore how mobile technology can assist people with Autism Spectrum Disorder (ASD) to interact with their environment.

Under the supervision of Dr. Francois Desjardins, grad student April Stauffer conducted research on what sort of user interface characteristics can best meet the needs of children with ASD using the "Augmentative Communication" App Proloquo2Go. Finding the best interface settings for each individual can help educators to empower these individuals by improving their ability to communicate with others.

Under the supervision of Dr. Roland van Oostveen, grad student Jessica Clarkson explored how an "augmented reality" app can help people with ASD navigate Toronto's public transit system. Augmented reality layers information and computer graphics over a real-life, real-time camera feed. Clarkson's research showcased how such technology can improve accessibility for people with ASD and help those individuals find better ways to realize their full potential.

April Stauffer

Jessica Clarkson

Students get a "dose" of learning

from space scientist

In the harsh vacuum of outer space, radiation can present an invisible danger to astronauts working aboard the International Space Station (ISS).

Dr. Rachid Machrafi, Associate Professor, Faculty of Energy Systems and Nuclear Science, is a member of the Canadian research team that uses highly sensitive "dosimeters", from Bubble Technology Industries, to measure the radiation astronauts are exposed to during ISS missions.

Working in partnership with the Russian and Canadian Space Agencies, the Institute of Biomedical Problems, and Bubble Technology itself, Dr. Machrafi and his students have collected data that will help inform future missions, possibly to the Moon or Mars.

"This work supports future human space exploration, but I hope it will also enhance scientific knowledge and public knowledge about the general health risks of radiation," said Dr. Machrafi. "This research might also lead to improved treatments for diseases such as cancer."

Dr. Machrafi's work has already earned him the gratitude of current astronauts, many of whom have carried his radiation detectors on their person as they've gone about their work on the station. UOIT will be a member of the research partnership until 2020.

> "Working on this project has been an amazing experience. I have been in the field of physics and radiation science for a few short years, but doing research that contributes to space exploration is a dream of mine. Our research team has already had a chance to present some of our results to top scientists, including members of the European Space Agency and NASA, at a conference in Germany this year. This project represents a change in my outlook, from student to scientist."
>
> – **ALEX MILLER,** PhD STUDENT, FESNS

Students defeat electricians' arc enemy

Industrial electricians rely daily on protective equipment to shield themselves from arc flashes, which occur when a build-up of electrical energy shoots a searing, potentially fatal blast of heat, light and sound through the air.

UOIT graduate student Makenzi Mitchell recently led a team of undergraduates in a capstone project aimed at developing better data about arc-flash risks.

"Analysis for alternating current [AC] systems have led to widely followed standards for protective equipment," says Mitchell. "But the hazards associated with direct current [DC] circuits—such as battery systems—hadn't been fully tested."

He says electricians working with DC systems might be wearing unnecessary and obtrusive safety equipment that actually increases their overall risk of injury.

"Effective work safety policies require good data," said Makenzi Mitchell. "We want electricians to be properly prepared every time they go out on a job."

Students designed and built equipment to test the arc-flash risks associated with DC systems. They worked with the Institute of Electrical and Electronics Engineers, The National Fire Protection Association, Hydro One, and UOIT's Automotive Centre of Excellence (ACE) to develop tools designed to test the risk from electrical arcs on 125-volt DC battery systems, which are used in many Hydro One substations across Ontario.

Mitchell plans to use these tools to carry out extensive testing and analysis for his Master's thesis.

The students' initial work has already influenced Hydro One's internal safety standards, and they hope that it will also inform revisions to the guidelines issued by the Canadian Standards Association.

Student research team: Makenzi Mitchell, Kevin Schoenmaker, Ahmad Farokh Ghafari, Tanvir Mudhar, and Vamsi Pathipati.

Students and researchers examine link among jobs, health and quality of life

Researchers from two UOIT faculties, along with graduate student Brian Yongsoo Park, are collaborating on a project examining the correlation between job prospects and quality of life in the university's surrounding community of Oshawa, Ontario.

The Community Quality of Life in Oshawa project examines employment, health and quality-of-life issues faced by local residents.

The project was announced at a forum hosted by the Faculty of Health Sciences and the Faculty of Social Science and Humanities in conjunction with UNIFOR Local 222 and the United Way.

This research project ties in with Dr. Toba Bryant's investigations into the social determinants of health and builds on Dr. Scott Aquanno's expertise in economic and social policy research. The project will further knowledge on the connection between innovation and economic growth, while advancing understanding of the complex health impacts of non-standard employment and joblessness both locally and more generally.

" The opportunity to work with faculty members, staff and regional social services—to better understand and improve the lives of people, by identifying and creating solutions—has been a wonderful experience. "

– **BRIAN YONGSOO PARK**,
  4TH YEAR MEDICAL
  LABORATORY SCIENCES,
  FACULTY OF HEALTH SCIENCES

Students and researchers work together

on a global health problem

They are the most abundant multicellular organisms on the planet. But in many parts of the world, they are a major problem.

Scientists call them nematodes. Commonly known as roundworms, nematodes are typically microscopic organisms that live in soil and water. They play a key role in breaking down organic matter.

But not all nematodes are beneficial: Many forms are parasitic, and they pose a serious threat to human health and domestic animals. Parasitic nematodes can cause infections in a wide range of human organs, including the intestines, lungs and lymphatic tissue. Children are particularly vulnerable.

Human parasitic infections are prevalent in developing countries, in regions where there is substandard sanitation and water quality, and poor access to health care. The impact on the economic output of affected nations is enormous.

That's why UOIT students and faculty are teaming up to explore the development of new anti-parasitic drugs known as nematicides.

"Being part of this research has allowed me to gain extremely valuable laboratory skills and vital insight into the possibilities of a research-oriented career," said Sebastien Robert, a fourth-year Bachelor of Science student. "It was truly the most demanding, yet rewarding work of my undergraduate degree. I would do it all over again with absolutely no hesitation."

"Our research efforts have provided an incredible opportunity for UOIT undergraduate students to apply their knowledge and academic skills toward solving a serious international problem," said Dr. Forrester. "The Faculty of Science is proud to share such hands-on learning experiences with students because it means they will be fully prepared to excel in the workplace and also be future research leaders."

Students and researchers examine

the protection of private data

UOIT researcher Jonathan Obar has spent years studying how well Canadian Internet service providers protect their customers' private data. That work culminated in a major report published this past year. The news is not good.

Obar, his co-author and their student researchers examined the data-privacy transparency of 43 large and small providers of Internet and mobile services.

They evaluated factors such as compliance with Canadian privacy law; location of data storage and processing; and disclosure of personal data to security agencies and other third parties.

Results show that while some carriers have made notable improvements since their first study two years ago, most have a long way to go. The team reported that Internet and mobile providers must do more to help Canadians protect their personal data in a world where big data plays an ever-increasing role in determining who gets to cross the border, who gets stopped by the police, who gets into university, who gets a loan, and who gets a job.

> " This is a great project for engaging students in privacy research. Students learn the value of public scholarship through involvement with our ongoing evaluations of Canadian ISPs, and also realize the benefits of digital policy literacy linked to the study of some of the contentious privacy challenges of our time. "
>
> – **JONATHAN OBAR**, ASSISTANT PROFESSOR, FACULTY OF SOCIAL SCIENCE AND HUMANITIES

Years of student work
compressed in three minutes

Telling the story of a research project can be as important as performing the research itself. Graduate students who learn to do both have the chance to see their ideas and insights resonate far beyond the confines of their lab or office.

That's the principle behind the annual Three-Minute Thesis contest, where entrants must communicate their biggest ideas in just 180 seconds.

UOIT's recent champion was Applied Bioscience PhD candidate Michael Williams-Bell. Williams-Bell studies "exertional heat stress factors that can affect decision making by firefighters." But that's not how he talked about his work for the competition.

"Imagine this. You've just been hired as a firefighter. You've been assigned your first task, to go into your neighbour's house, and locate their entire family," he said in his presentation. "Now let's take this simple task and turn it into a house fire."

Using physiological testing conducted with actual firefighters in the climatic test facility at UOIT's Automotive Centre of Excellence (ACE), Williams-Bell was able to rigorously assess the effects of smoke, stress and physical exertion, and also to determine temperatures at which cognitive function begins to be impaired.

Williams-Bell's research can help fire services develop policies and practices that will keep firefighters safer.

STUDENT LIFE AT UOIT

Mark Twain counselled to never let your schooling interfere with your education. At UOIT, students can move beyond lectures and essays to discover and develop their potential. Industry partnerships develop professional skills and networks. Athletics offer discipline, teamwork and physical fitness. Community activities help build a sense of citizenship and social justice. These values stay with students long after they've moved on to new chapters of their lives.

Students follow
a different kind of tax policy: "paying it forward"

When it comes to completing a tax return, philanthropy can be about more than tallying charitable donation slips. Case in point, more than two dozen UOIT students set aside many hours of personal time in March to provide free tax return services.

"We saw this as an important way to contribute to the community. It also lets students apply what they've learned," said David Belcastro, Tax Clinic Co-ordinator. "We were particularly effective in helping to ensure clients claimed deductions that are common for students, such as tuition and book credits, interest on student loans and public transit costs."

The students were part of the UOIT Accounting Association, and offered their services through the Community Volunteer Income Tax Program. Through such programs, students build real-world skills, while also developing a stronger sense of community and generosity.

Soldier scholars

UOIT is committed to those who answer the call of service, and support those who balance their academics with military service.

Analytical and critical thinking skills come bundled with every university degree. They are also the tools needed for those who choose a career in the Canadian Armed Forces Reserves.

On top of their academic studies, UOIT students Kyle Huether, Harnoor Batra and Monique Bueno are Troop Leaders in the Ontario Regiment (Royal Canadian Armoured Corps). They dedicate one night a week and one weekend a month to improve their leadership skills.

The trio work in the area of reconnaissance. Reconnaissance soldiers must be intuitive, quick thinking, physically fit, and purposeful in their actions. They operate independently for extended periods of time, moving ahead of main forces to gather information. For such high-stakes operations, critical thinking and practical leadership determine success. As a result of their training and education, Huether, Batra and Bueno have become "soldier scholars" who inspire a special type of pride from their university.

A mental health blog
run by students

On the UOIT Student Mental Health blog, students share their experiences living with conditions ranging from depression to autism spectrum disorder. While the blog offers practical information about dealing with mental health issues, it also provides a personal authenticity that makes it highly relatable.

"While I have been diagnosed with more than one mental health disorder, I find that most of the time I am only 'hit' one at a time by them," one student wrote.

The blog provides a place where students who grapple with mental health issues can see themselves in other people's writing, and feel less alone. Students who find community through the blog also find links to the university's mental health-related resources, including in-person and telephone support.

Additionally, UOIT's Student Mental Health Services helps students learn how to better manage the pressures of student life. With an emphasis on proactive, integrated support, there are a variety of programs and resources in place to promote positive health, well-being and resilience among students, while also learning about mental health, stigma and coping strategies. These are provided through workshops, discussion groups, blogs, information booths and awareness-raising activities, primarily organized by students for students. In addition, students can receive short-term counselling and therapy services from certified mental health professionals through Student Mental Health Services, with support provided through the Student Lifeline, a dedicated email and phone service. Training and resources are also provided to students, staff and faculty across the campus on how to recognize and respond to emerging student mental health concerns, as well as more specialized training in mental health first aid, and suicide intervention.

Inspiring future science students:

UOIT PhD candidate Jesse Allan

"From the time I was about 10 years old, I remember telling my family, 'I want to be a doctor'," said Jesse Allan, a UOIT Materials Science PhD candidate. "Little did I know that I would actually see that dream come true, or that it would happen so close to home."

An Indigenous student who grew up in Oshawa, Allan belongs to the Chippewas of Rama First Nation on the eastern shore of Lake Couchiching.

"Rama is a very proud community. They have been a huge supporter of my education over the years," Allan said. "I am grateful for my community's help throughout my university journey."

Jesse's research revolves around examining membrane materials for fuel-cell based breath-alcohol sensors. Over the past two years he's been sharing his science knowledge with elementary and high school students in Oshawa through a unique partnership between the Durham District School Board's Aboriginal Education Department and the UOIT-Baagwating Indigenous Student Centre.

"It is so much fun to answer their questions and see them learn. Maybe something as simple as watching a cool experiment at this age will inspire some of them to pursue studies in science and technology down the road."

> You never know when that spark for learning will be ignited.
>
> – **JESSE ALLAN**,
> PhD CANDIDATE, FACULTY OF
> SCIENCE, MATERIALS SCIENCE

Mathematics student covers all the angles

as soccer rookie of the year

Soft-spoken off the field, and fierce when she's competing, freshman Katherine Koehler-Grassau was Ontario University Athletics' (OUA) east region 2015 soccer rookie of the year.

In her freshman season, the applied and industrial mathematics major led the Ridgebacks to the OUA final four, demonstrating an awe-inspiring capacity to shut down some of the top strikers across Ontario.

The team won their first OUA medal after beating the Laurier Golden Hawks in the bronze medal game, and earned a spot in its first national championship.

Not only was Koehler-Grassau named rookie of the year, but she was also named an OUA first team all-star and UOIT's overall freshman athlete of the year.

Katherine Koehler-Grassau

So many goals, so little time

Award-winning university athletes need strength, endurance and coordination. It's also a big help to develop all-star time-management skills.

"It is not easy being a student athlete," says Erik Petrovic, celebrated midfielder for the UOIT Ridgeback soccer team. "With practices, games and classes every day it is hard to find time to study."

Petrovic, who is currently pursuing a commerce degree, learned how staying organized could help him excel on and off the field. This past year, he has received awards from both Ontario University Athletics, and the Canadian Interuniversity Sport association. He excels academically, winning awards for his studies as well as his scoring on the field.

In addition to time management, Petrovic says his success has always depended on the support of the UOIT community—his teammates, professors and other students.

With regards to other aspects of university life, he says it took him a little while to figure out how to tap into UOIT's resources. He counsels other students not to be shy about asking for help. He knows from experience that they'll find all the support they need.

"Our professors and student advisors do everything they can to make sure we're successful academically and athletically," he says. "The school offers free tutoring sessions, and student advisors are always there to help. Make sure you know all the resources available to you."

Erik Petrovic

" UOIT has a great athletic centre and coaches that get our performance to the highest level," he says. "But most important, we have a great team with lots of talent. "

UOIT athletics makes history

While the women's soccer team won UOIT's first-ever OUA medal, many other teams also made history.

The women's field lacrosse team made history by making the Final Four for the first time in that team's history. Although they were the hosts of the championship, they lost their bronze medal match to the University of Toronto Varsity Blues.

After winning five straight matches to end the regular season, the men's soccer team had a few firsts of their own. They played in their first playoff game, advancing to the OUA quarterfinals with a win over the Carleton Ravens.

The UOIT men's curling team also enjoyed their best showing since the program's debut. In round-robin play at the OUA championships, the team advanced to the crossover quarterfinal for the first time. Although they lost the game, the quartet of athletes will return next season with more experience and goals to go even further.

On the golf course, James Krantz, a third-year mechanical engineering student, finished 10th at the OUA championship hosted by UOIT. His top-ten finish was the best performance by a Ridgeback at the championship in the four-year history of the program.

UOIT students show off
financial trading skills at international competition

Demonstrating some key tools of the trade, six UOIT students placed in the top half at a recent Rotman International Trading Competition.

The competition brought together 50 student teams from 46 universities around the world. The two-day event involved six financial models and cases to trade. Success required applied logic and quick decision-making.

"The continued excellent performance of UOIT students in this competition is testimony to our strong training in financial databases," said Dr. Chinmay Jain, Assistant Professor in UOIT's Faculty of Business and Information Technology. "These competitions not only give students exposure to compete with other business schools, they also help build our brand as a top business school. Our team fared better than some of the top-ranked universities. This boosts our students' confidence and proves our rigorous training will help them excel and lead in the financial industry after they graduate."

The competition also gives UOIT students opportunities to network, and to build and demonstrate their skills to industry.

National ProStaff

IFTech (Inventing Future Technology Inc.)

Turnkey Aquaponics Solutions

UOIT students and alumni capture entrepreneurial awards at Ignite Competition

Four groups of UOIT students and graduates have been recognized by Spark Innovation Centre for their innovative ideas and successful creation of new business enterprises. The awards were part of the Ignite Competition, which recognizes and funds young entrepreneurs to turn their business plans into start-up companies.

Most recently, UOIT alumnus Brodie Stanfield, co-founder of Inventing Future Technology Inc. ("IFTech") received the Young Entrepreneur Award of $25,000 plus ongoing advisory and business support services, as well as free office space at Spark Centre's head office in Oshawa. Brodie is earning a reputation as an innovator in wearable technology and a leader of the next generation of immersive gaming. IFTech's first product is ARAIG (As Real As It Gets), a high-tech, multi-sensory gaming suit. The ARAIG gaming suit provides a new and unique immersive experience through multi-sensory feedback. Whether it is for gaming, training, virtual reality, augmented awareness or another market entirely, ARAIG can deliver the most cutting-edge technology to its users.

Ignite also presented a $25,000 General Entrepreneur prize to Tiko 3D, an Oshawa-based company that has created an affordable and easy-to-use 3D printer. Tiko 3D is the creation of fourth-year UOIT Mechanical Engineering students Matt Gajkowski and Michael Zhang.

"Winning Ignite was a huge door opener," said Gajkowski. "The $25,000 allowed us to keep pushing the limits of what's possible while refining what we've already made. Even more valuable is the ongoing support from UOIT and the Spark Centre and their team of start-up experts."

National ProStaff also won $25,000 in the Young Entrepreneur category. This social commerce platform has become the premier fishing website and app for anglers across Canada. The company was formed by UOIT alumni who were all part of the university's first-ever graduating class from the Faculty of Business and Information Technology: Dan Miguel, Brandon Wetzel, and Chris Lazarte.

Turnkey Aquaponics Solutions, co-founded by Energy Systems Engineering students Michael Veneziano and Timothy Sarvendran, took a $5,000 Student Entrepreneur Award. The company's aquaponics system mixes aquaculture (fish farming) with hydroponics (growing plants in water). The fish eat the plants, while the plants feed off fish waste. The innovative design allows for reduced water and energy consumption as well as year-round growing.

UOIT students and faculty team up

for international nuclear engineering awards
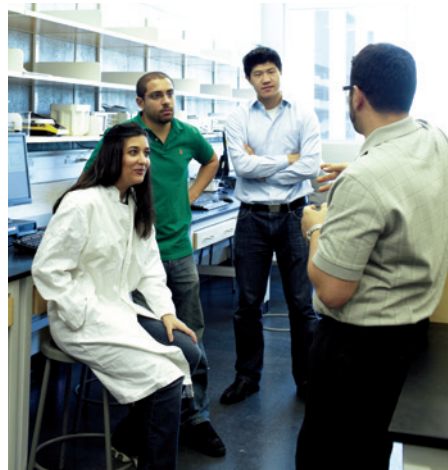
For the second time in just four years, UOIT faculty were awarded the Akiyama Medal at the International Conference on Nuclear Engineering (ICONE). This year, the award-winning research dealt with how to create more accurate models of heat-transfer for "supercritical" carbon dioxide. Supercritical materials have a combination of high temperature and high pressure that cause them to behave both like a gas and a liquid.

The paper was the only entry in the Student Track category to be nominated for the Akiyama Medal—an international award presented by the Japan Society of Mechanical Engineers. The paper spanned two UOIT faculties: Energy Systems and Nuclear Science (FESNS) and the Faculty of Science (FS).

The co-authors of the Akiyama Medal-winning paper are: Gupta Sahil, Master of Applied Science (MASc) student, FESNS; Surendan Prabu, fourth-year Nuclear Engineering student; Dr. Igor Pioro, professor, FESNS, and ICONE 2012 conference chair; Donald McGillivray, MASc student, FS; and Dr. Liliana Trevani, assistant professor, FS.

UOIT students and faculty collected two other awards in the ICONE Student Track competition:

Best Paper: Adam Lipchitz, Nafisah Khan, Dr. Glenn Harvel, professor, FESNS and Dr. Rachid Machrafi, professor, FESNS.

Best Poster: Wargha Peiman, Tiberiu Preda, Jeffrey Samuel, Dr. Pioro and Dr. Harvel.

ICONE is the premier global conference for addressing the needs of the nuclear industry. It brings together the leading technical professionals who design, build, operate, overhaul and maintain power plants, or perform power plant and equipment research and development. The focus of ICONE is on the technical state-of-the-art and the current status of nuclear power around the world.

A university that is

"the only one of its kind."

" Whether it's powering a city or helping people in remote communities, we can provide clean, sustainable energy. "

"I've been at UOIT since the day it opened," said recent graduate Adam Lipchitz. "When I picked it, it hadn't even opened yet. It was this shiny new thing, and interesting to me because it was the only one of its kind."

When he was growing up, Lipchitz was already interested in sustainable energy and power. He says UOIT's emphasis on technology-enhanced education, and its unique studies in nuclear power sealed the deal for him. Over the next eleven years, Lipchitz grew up with the university, completing Bachelor's, Master's and PhD programs in the Faculty of Energy Systems and Nuclear Science.

During his undergrad, he also met the woman who would become his wife.

"I met her in a marketing class, which was probably the best reason for choosing a management option," he said. Though, he acknowledged, the professional and academic benefits were pretty good as well.

"There was so much opportunity at UOIT—things I would not have been able to do anywhere else. I was the graduate student representative on Faculty Council. I served on the Board of Governors. It's been really good," he said.

Now that he's finally moved from student to alumnus, Lipchitz plans to find full-time work in the private sector and a part-time teaching position at a university. This would allow him to continue to build his mix of academic vision and job-market savvy.

◢ Adam Lipchitz

Adding inspiration to injury

As an anchor at The Sports Network's flagship program, Kate Beirness has clearly made it to the top of Canadian sports broadcasting.

It wasn't a straight path for Beirness, though. A lifelong athlete, she always intended to play intercollegiate basketball.

Although a knee injury sidelined her dreams of playing basketball, she found success in UOIT's Bachelor of Commerce program.

While at UOIT, she announced at varsity games and found she had a knack for broadcasting that ultimately won her an internship at Rogers Sportsnet.

After she graduated in 2008, offer followed offer, and in less than a year, Kate was at the top of her game.

Recently Kate signed on with sports clothing and accessories supplier Under Armour as a brand ambassador, an opportunity normally open only to celebrity athletes. Her path wasn't straightforward, but her approach was.

"Get as much work experience as possible. Be open, willing to adapt and take risks," she advises. "When you work at something you love, it never feels like work."

> " I spent as much time at Rogers TV as I did at UOIT. My profs were so incredibly helpful. They had this level of understanding—they knew what I was going for. "
>
> ▸ Kate Beirness

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UOIT alumnus conquers
the dragons on CBC's Next Gen Den

Bilbo Baggins has nothing on Spencer Turbitt when it comes to negotiating with dragons! The Class of 2015 marketing grad received funding for his pharmaceutical software start-up after successfully pitching his business on the CBC show, Next Gen Den.

On Next Gen Den, Canadian entrepreneurs under the age of 40 present business concepts and products to a panel of Canadian business moguls in hopes of convincing them to invest.

When Turbitt and his business partner appeared before Next Gen Den judges, they garnered a $60,000 investment in their two-year-old company, iApotheca Healthcare, which creates tracking software for pharmacies and nursing homes, helping to streamline processes and reduce errors in drug administration.

▸ Spencer Turbitt

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The student becomes the teacher

> " Our small classes and a growing campus encouraged collaboration. Because of that, I built friendships that will last a lifetime. "
>
> – **KYLE CARDINALE**,
> CLASS OF 2004

Kyle Cardinale always wanted to be a teacher. He now lives his dream as a full-time computer science and math teacher at a private school in Toronto where he focuses on technology-enhanced learning.

Cardinale graduated from UOIT in 2004 with Bachelors of Science and Education. He stays in touch with his fellow UOIT alumni—collaborating with fellow students was Kyle's favourite aspect of his degree.

Collaboration and life-long learning continue to be important to him. Prior to his current job, Kyle was a computer science and math teacher at a preparatory college for four years. As the lead computer science teacher, he instructed students in grades 10, 11 and 12 in Lego Robotics, Java, GameSalad and leading-edge programming. With a team of colleagues, Kyle created an entirely new program for the college—Communications Technology. He also taught math at several grade levels, including the Advanced Functions course, while also heading the school's Robotics Club and coaching the swimming and softball teams.

> " My experiences at UOIT crystallized for me one of the best things about being a teacher; you never have to stop learning and growing. "
>
> – **KYLE CARDINALE**,
> CLASS OF 2004

STUDENT ENTREPRENEURSHIP

Great research leads to great innovation. Our university drives innovation by supporting students to make an impact today and in their futures. Brilliant Entrepreneurship is a thread that runs through the university, weaving an entrepreneurial mindset into students and aspiring entrepreneurs at our university, while incorporating innovation into UOIT as a whole.

ENTREPRENEURSHIP FUND

Firefly

Through funding and industry guidance, the Firefly Entrepreneurship Fund assists in all aspects of the early development of these student-based ventures.

SURGERY**SIM** VR

Coqui 3D

Developing 3D solutions such as SurgerySimVR, a surgical simulation rehearsal platform that combines augmented reality, haptics and big data. The product aims to drastically reduce the number of deaths caused by medical error each year.

STUDENTS

Benjamin Sainsbury, PhD student, Computer Science, Faculty of Business and Information Technology

henlen
| SMART WATCHES |

henlen watches

An interchangeable smart watch that allows for a smart component to be swappable throughout various designs and styles of watches. Henlen Watches is on track to launch a kickstarter campaign this winter.

STUDENTS

Kyle George, second-year student, Mechanical Engineering, Faculty of Engineering and Applied Science
Gregory Barnes, second-year student, Electrical Engineering, Faculty of Engineering and Applied Science

Tiko 3D

Mechanical Engineering students Matt Gajkowski and Michael Zhang's Tiko 3D created an affordable and easy-to-use 3D printer that will enable students and entrepreneurs to develop the products and technologies of tomorrow.

STUDENTS

Matt Gajkowski, fourth-year student, Mechanical Engineering, Faculty of Engineering and Applied Science

Michael Zhang, fourth-year student, Mechanical Engineering, Faculty of Engineering and Applied Science

Turnkey Aquaponics Solutions

Addressing the economic feasibility of environmentally controlled agriculture by designing, manufacturing and selling innovative engineering solutions. Turnkey Aquaponics specializes in aquaponics, a form of agriculture that combines hydroponics, growing of plants in water, and aquaculture, fish farming, into a symbiotic self-contained system.

STUDENTS

Michael Veneziano, fourth-year student, Energy Systems Engineering, Faculty of Energy Systems and Nuclear Science

Timothy Sarvendran, fourth-year student, Nuclear Engineering, Faculty of Energy Systems and Nuclear Science

iAPOTHECA

A pharmaceutical software company specializing in the design and implementation of powerful custom business applications intended to streamline pharmaceutical operations, increase profits and improve the business process from start to finish. Their unique and intuitive pharmaceutical software suite was developed specifically to assist pharmacies throughout Canada enhance performance and profits through the use of powerful and dynamic technological pharmacy solutions.

STUDENTS

Spencer Turbitt, class of 2015, Marketing, Faculty of Business and Information Technology

UOIT'S FUTURE

UOIT's unique and technology-rich learning environment challenges students to push the boundaries of innovation and discovery and prepares graduates to excel in the global, knowledge-driven economy of the 21st century. The support of our donors and partners remains critical in ensuring that this work continues. At UOIT, the possibilities are endless.

Be part of our journey

UOIT's donors and partners open up a world of possibilities for our students.

Scholarships and bursaries remove financial barriers to education. Ambitious capital projects create new spaces for collaboration, innovation and discovery. Industry partnerships mix academic excellence with real-life learning. Cultivating entrepreneurship allows our students to create businesses and products that grow our economy.

You can be one of the people who generates these opportunities. Join us on this journey. Together we can help new generations meet the world career-ready and with vision and dreams. After all, our students aren't just getting ready for what's coming—they're creating it.

Students power our university

You can see it every day on campus. In laboratories, classrooms and common rooms, students devour information, build new talents, and set ever-higher goals for themselves. You can see it in the way they excel, and the way they give back to the local community.

You can also see it in our alumni. UOIT is now well into its second decade. Waves of graduates have fanned out across the world. Our students go on to start businesses. They invent things. They engage as citizens and activists. They make communities stronger, and new generations smarter. They solve crimes and care for the ill. They have a sense of social justice and personal responsibility. They understand the power of technology and its limitations.

While we created this report to highlight some of the ways our university works to inspire and empower our students, we also intend it to be a tribute to those thousands of young minds who have chosen to enrol. Thanks to all of you, our pride grows with each passing year.

Please join us on our exciting journey.

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