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Driving Waterloo forward, together.

Our most recent convocation marked a very special milestone for Waterloo: our 200,000th graduate. Our Waterloo alumni, from 145 different countries, are reshaping the world with the intellect, drive, and creativity they honed on our campuses. I'm very proud of our graduates and their ability to impact society in a positive and meaningful way.

We're a young institution, but we're also built on a set of traditions that define us today. Our founders created the University with the idea that there was a different, better way to educate the best and the brightest in Canada. The spirit of "why not?" that set us apart then continues to be infused in all that we do.

Over the past year, I've had the privilege of speaking with many of our donors as we plan for the next great chapter in Waterloo's history. The excitement and enthusiasm for what lies ahead has been significant, and I'm grateful that donors like you are helping us build one of the most innovative universities in the world. The generosity of our supporters – including the dedicated volunteer leaders on our board and councils – enables us to be where we are today.

Together, we're advancing research through groundbreaking discoveries, creating interdisciplinary programs that address society's most pressing and complex challenges, and enabling students to enrich their lives through activities on campus, in our communities, and around the world. These initiatives and others are explored in this year's report. I hope you find the stories engaging and inspiring, and that you share a sense of pride in our collective achievements.

Thank you for giving to Waterloo, and for joining us as we drive the University forward into a new and exciting future.

FERIDUN HAMDULLAHPUR President and Vice-Chancellor

2017-2018 Highlights

Scholarships \$6.9M

> **Buildings** \$16.9M



Programs \$17.8M

9,565 donors in 25 countries donated

to Waterloo in 2017-2018*







Chairs/Professorships \$0.2M

\$27.4M from individuals, including

> \$18.8 million from alumni



> \$0.4 million from faculty, staff, and retirees**



\$2.5 million from students \$5.7 million from







from corporations, foundations, and organizations

These figures represent dollars RAISED and include cash, pledges, gifts-in-kind, and other revenue promised or given May 1, 2017, to April 30, 2018. Figures exclude payments on pledges made prior to the current year. All figures are unaudited.

Figure does not include the thousands of students each year who make voluntary contributions.

Overall, the Keystone Campaign, Waterloo's family campaign, raised in excess of \$1.1 million. This figure comprises gifts from all sources, including the Board of Governors, faculty, staff, and retirees, and alumni who work for Waterloo.

Adventures of an unlikely entrepreneur

Computer science alumnus Sam Pasupalak makes leaps in artificial intelligence, and creates opportunities for others at Waterloo to achieve ambitious goals

In February 2008, while working towards his degree in computer science, Sam Pasupalak (BCS '12) found out that Bill Gates was speaking at the University of Waterloo. He had no ticket, but that didn't stop him. Carrying t-shirts and bags to appear as a volunteer, he got past security and received a pink wristband. He pulled off his first hustle to seize the one remaining seat.

After that talk, Sam felt so inspired that he decided to start his own company as soon as he graduated. He took the next step of that journey in 2010, in Professor Chrysanne Di Marco's artificial intelligence class. Sam and his future business partner, Kaheer Suleman (MMath '14), built a piece of software that allowed robots to understand natural human language commands. That prototype became the basis of their future business, which Sam named Maluuba.

The next year, at the Velocity Garage incubator, Sam and his team - which now included his best friend, James Simpson (BCS '13) - continued work on the algorithms Sam developed in Chrysanne's class.

"We were razor focused on solving the problem of language understanding," Sam says. "We didn't care if technology giants like Google or Facebook were pouring billions of dollars into developing this technology. We just wanted to be the best at any cost."

Maluuba won the Velocity Venture Fund in the fall of 2011. With \$25,000, the company developed training

data and built a prototype to show investors. They graduated from the Velocity Garage and raised \$2 million in seed funding from Samsung.

Sam and his team faced rejection as well – by hundreds of investors in their first few years. They almost went bankrupt three times, but Sam never gave up hope. He flew more than half a million miles around the globe, attending thousands of meetings, signing business deals, and raising funds for his company. The hustle paid off handsomely when Microsoft purchased Maluuba and the entire 50-person team for approximately \$200 million in 2017.

"Building Maluuba was quite the adventure," says Sam. "It required a tremendous amount of guts, determination, and perseverance. We had to believe there was light at the end of the tunnel, and if there wasn't, we had to create it ourselves."

Selling his company allowed him to give back to the University of Waterloo - the place that inspired him to be an entrepreneur. Last year, Sam donated \$500,000 to create scholarships in support of robotics and women in computer science, Velocity awards for emerging innovators and business founders, an artificial intelligence



2,265 JOBS created by Velocity companies since 2010



Did you know . .

Velocity is a leading entrepreneurship program at Waterloo, overseeing Canada's most productive startup incubator.

Sam Pasupalak speaks at a panel discussion on entrepreneurship and community building.

lab in the Cheriton School of Computer Science, and a computational rhetoric project in honour of Chrysanne Di Marco.

"I would never be where I am today if it weren't for the University of Waterloo," explains Sam. "I was surrounded by people who inspired me and pushed me out of my comfort zone. Waterloo also has an ecosystem of entrepreneurship that isn't available at other universities. These things all contributed to Maluuba and our success."

What role can alumni and donors play in Waterloo's future?

Discover Sam's answer at

uwaterloo.ca/support/report-on-giving

Environment students break new ground with Habitat for Humanity

Donor-funded internship allows planning students to work for the registered charity

It's the largest development project that Habitat for Humanity Wellington Dufferin Guelph (WDG) has ever undertaken – and Environment co-op students are helping to make it happen.

Cityview Village will consist of 28 stacked townhomes in Guelph's east end. The units will accommodate seniors and people with disabilities, as well as single-parent and dual-parent families.

Until now, Habitat WDG has focused on building single detached homes.

"This is all new ground for us," says Glenn Blight, Director of Construction. His team is small, with a steep learning curve to tackle, so they appreciate having a co-op student who will help them execute their vision.

Sheryl Kennedy (BES '76), a member of Waterloo's Board of Governors, created the internship with Habitat. It's the first of many such placements envisioned by Jean Andrey, Dean of Environment. Collectively known as the Global Citizen Internships, they form the latest of several initiatives on campus through which donors help students work with registered charities.

Sheryl's gift enables a student from Environment's planning program (which was Sheryl's own program of study) to develop their professional skills while contributing to both the charity and the community.

"In the non-profit sector, generally there isn't sufficient funding to hire students," says Sheryl. "I believe it's important to make co-op internships accessible to everyone."

Glenn and his team intend to draw on the student's expertise while providing a rich hands-on learning experience.

"The student is going to be exposed to many different attributes of the development process, whether face to face or through the movement of information," says Glenn. "I think they'll get a lot of life skills."

Recently, he and Wendy Chen (BES '14), Development Planner for Habitat for Humanity WDG, met with six candidates for the internship. Wendy, who's also a Waterloo alumnus, says it's "definitely more relaxed" sitting on the other side of the table during co-op interviews. In spite of a few nerves, the students impressed her and Glenn with their knowledge and their commitment to social issues.

"They have passion for the goal we're trying to reach – the social aspect and affordable housing," says Wendy.



"I liked them all," says Glenn. "Just listening to what they've been doing in their different placements, and seeing the smiles on their faces when they talk about their roles, it's phenomenal."

The successful candidate will begin work this fall, helping with the day-to-day challenges of the Habitat build as well as planning for the future.

"We're very happy the donor has chosen Habitat for this opportunity," says Wendy. "It's great for non-profits, who often don't have the financial means to support a student."

"Habitat and the intern will both benefit from this experience," adds Glenn. "It's great that someone is willing to donate to make that happen."



"In the non-profit sector, generally there isn't sufficient funding to hire students. I believe it's important to make co-op internships accessible to everyone."

SHERYL KENNEDY (BES '76)

"We're delighted that Sheryl has come forward with this meaningful gift. Her leadership is moving us towards our goal of creating 50 of these awards to support students from every program in the Faculty of Environment. Not only will our students gain invaluable learning opportunities through this initiative, they will also help drive our Faculty's mandate: to address sustainability challenges both here at home and around the globe."

JEAN ANDREY Dean of Environment

Out-of-the-box seminar broadens students' horizons

Global Engagement Seminar Program brings new perspectives to the world's most complex problems

Stephen Jarislowsky wants to change our country's approach to higher education.

"I feel that today's students by and large are too specialized," he says. "You have to really broaden out if you want to have great achievement in life."

So, he and his charitable organization worked with Waterloo's Faculty of Arts to create a solution: the Global Engagement Seminar Program. The new seminar became a reality last year with a gift of \$400,000 from the Jarislowsky Foundation.

"Mr. Jarislowsky was mentored by outstanding professors who exposed him to new ideas," says Executive Director Eve Beauchamp. "We wanted to create similar opportunities for students to gain new perspectives on the world."

Doug Peers, Dean of Arts, describes the seminar as an "out-of-the-box teaching model" that combines an interdisciplinary curriculum with hands-on learning experiences. Under the guidance of the program's founding director, Professor Jasmin Habib, and a distinguished visiting scholar appointed as the Jarislowsky Fellow, students examine complex global issues while drawing from a diverse range of research expertise.

This year, 18 top students from across the University delved into the topic of populism and the future of democracy. Participants met for weekly discussions with the program's first Jarislowsky Fellow, Henry Giroux, whose scholarship focuses on the rise of authoritarianism, youth culture, popular culture, and the politics of higher and public education. His articles were among the required readings for the course, which gave students the rare opportunity to engage directly with the scholar whose work they were studying.

"The discussions with Henry were great," says arts student Jillian Barlow. "Every week there was some poignant insight and charged monologue to look forward to. I really felt like an equal and like my input was useful."



"I honestly feel as though this course has brought about a paradigm shift in the way I look at the world and want to lead my life. I feel much more equipped to analyze the world around me – as Henry would say, 'interrogate' it instead of 'echoing it.'"

DON TU Engineering student "I found the seminar to be an exhilarating pedagogical experience. I was deeply impressed with the students, the organization of the course, and the importance of the issues discussed."

HENRY GIROUX

Jarislowsky Fellow

Following the class discussions, Jasmin oversaw individual and small group sessions where students worked on presentations for their end-of-term summit, "Global Populism and Democratic Futures." The students prepared exhibits, scholarly papers, and policy briefs on topics including the rise of anti-science movements and the impact of social media on democracy.

"Both Dr. Giroux and I were impressed and inspired by our students," says Jasmin, who recently received one of Waterloo's Outstanding Performance Awards for excellence in teaching and research. "Their innovatively designed exhibits started important discussions which can now be shared beyond the summit."

Videos of the summit presentations have been posted online to extend their reach and inspire new conversations.

"The school needs more courses like this, where faculties come together and explore issues that transcend faculty, campus, and geopolitical boundaries," says Sarah Lukaszczyk, an arts and environment student. "We need to be given space to explore how to be a citizen, and a globally conscious human being."

Next winter, the Faculty of Arts plans to hold two Global Engagement Seminars on the socio-cultural and political implications of artificial intelligence. The classes will be led by two Jarislowsky Fellows.

Watch the students' summit presentations at

uwaterloo.ca/global-engagement-program/summit-2018

Seminar participant Erin Tonita created artwork to promote public conversations about science. Here, she uses polarizing lenses to produce a rainbow effect that reveals details in the structure of a snowflake.



Alumni open a world of possibilities

International experience award gives students access to opportunities overseas

Considering the impact that co-op had on David and Elizabeth Kerr, one could say that the program transformed their lives.

The two Waterloo alumni met while they were waiting for interviews with prospective employers. They got to talking and the rest, as they say, is history. Now they're married with two grown children, and a growing list of rich life experiences including moves to Asia and Europe.

David (BA '85) credits the co-op program with laying the groundwork for his international career.

"I was studying economics," he explains, "but I joined IBM where I learned about technology. It exposed me to the work I do today."

After graduation, he took a full-time job with IBM, which led to leadership roles in Shanghai and Prague. He says his experiences abroad changed his life.

"At the time I thought my business skills were quite portable – and to a degree they were, but what I didn't know were some of the cultural aspects that you needed to learn in order to be effective in business in those environments." "It's interesting," adds Elizabeth (BA '87), who also went on exchange to Columbia when she was in high school. "When you go into a culture that's quite different from your own, it's empowering and humbling at the same time."

By the time their kids were teens, Elizabeth says, she and David realized that experiences were far more important to their family than things.

"I'd say that doing anything to enrich the life of a young person is a gift that you give yourself. If you have the opportunity to help, it really is a great investment."

ELIZABETH KERR (BA '87)

"We also realized that experiences cost a lot of money. Not everybody can afford it."

So, they decided to create an international experience award for students enrolled in the Faculty of Arts.

"It's not just for the students but for their families as well," Elizabeth says of the award. "It's a big deal for a student to be brave and go study abroad. And it's also brave of the guardians and parents who let them go and do their best not to worry about them."

"I agree," says David, adding, "I wish that I had gone abroad when I was younger. Getting these sorts of life experiences at an earlier age is probably more impactful." As proud alumni, David and Elizabeth were already inclined to support Waterloo students – but they were also impressed by some of the University's more recent initiatives, including the newly renamed Stratford School of Interaction Design and Business. David, now a technology consulting partner at Deloitte Canada, took members of his digital team there to coach students at the annual Business Model Design Camp. (The event was sponsored by Deloitte Digital, the Accelerator Centre, the Canadian Digital Media Network, and the Stratford School.)

"We've seen the power of what education did for us in the past, and we really like the innovation we continue to see at Waterloo and the Stratford campus," says David. "We're impressed with the programs and the students that we see coming out. It was a pretty easy decision for us to support them."

Did you know . . .

Donors can create their own international experience awards or contribute to existing funds.

Last year, 300 donors contributed to our main International Experience Awards fund. Their gifts ranged from \$5 to \$1,000.



"This funding has helped me greatly and has made it possible to be on my final co-op placement. I have been fortunate to be employed in London, UK, at an immigration law firm which works closely with asylum seekers. It is my first time in Europe, so on a personal level, it has been a significant milestone for me. My work has also fortified my desire to be a human rights lawyer and to advocate for those who need help boosting their own voices. I am incredibly grateful that I have been able to have these experiences."

ORIANA CONFENTE Recipient of the David and Elizabeth Kerr International Experience Award

Plinio Morita: Taking health informatics to a global level

The newest Graham Trust Chair is ready to push applied health informatics further into the era of artificial intelligence (AI) and machine learning – all with a view to moving healthcare into the patient's home

Plinio Morita (PhD '14) grew up in Brazil, where he says there are three options for career success: medicine, law, and engineering.

"I definitely didn't want to be a lawyer, but I was drawn equally to medicine and engineering. I knew I wanted to help people improve their health, but wasn't sure if medicine was the best way to accomplish this."

In the end, he chose engineering, which turned out to be the right choice for Plinio, who enjoys solving the discipline's complex problems. But he kept one foot firmly in the world of medicine by focusing his work on biomedicine and health informatics. James Wesley (Wes) Graham was known as the "father of computing" at Waterloo. In 2000, friends and colleagues who wished to honour Wes's memory established the J. W. Graham Information Technology Trust, with the mandate to continue advancing the discipline so dear to Wes's heart. After completing his PhD work at Waterloo, Plinio took a post-doctoral position with University Health Network (UHN) Toronto. There he spent two years developing mobile apps for patients with chronic health problems before moving to Healthcare Human Factors (a UHN partner) as Research Lead. Six months later he was recruited directly into Waterloo's newest Graham Trust Chair, making him the first early-career professor to receive the award.

Plinio is now almost two years into his chairship. He has a large number of projects on the go, including one that will use wireless sensors to detect falls. This is particularly useful for the very elderly or people with dementia, who often reject wearables like bracelets or pendants after a short time. A second phase will use the same sensors to monitor daily activities: how much time is a patient spending sitting, standing, or lying in bed.

In related research, Plinio's team is working with ecobee, Canadian developers and manufacturers of a smart thermostat. The joint project, which recently won \$25,000 in the national Healthy Behaviour Data Challenge, will explore how ecobee's data can be used to track the overall wellness of populations, including the onset and/or progression of mental health issues like social isolation, depression, or even dementia. "With the kind of infrastructure we're envisioning, all your devices will just talk to each other," he says. "So if your platform wants to use data from your temperature sensors or garage-door opener, it's seamless to go there and grab data associated with that patient."

One of the most exciting projects Plinio is working on involves a partnership with Roche Canada. It aims to build a platform to monitor real-life reactions to new drugs, pharmaceuticals, and medical technologies.

Plinio is also working with UNICEF Mongolia on the development and deployment of an air pollution monitoring platform, aimed at increasing surveillance around the impact of air pollution on child development and maternal health.

He's grateful for the generous startup grant and teaching release accompanying the Graham Trust Chair, for together they've allowed him to fast-track his career by at least two years. He also says the value of the Chair goes beyond the money.

"To be honest, the biggest impact the Trust has had on me is access to the trustees. Many of them are as legendary as Wes himself, and they've been unfailingly kind and supportive of my work. I feel very lucky."

"The Chair has jump-started my career by at least two years. I've got fantastic students in place, and they all have excellent equipment to work with and funding to start many amazing projects. These early years are the best time to invest in a researcher's career, and I couldn't be more grateful."

PLINIO PELEGRINI MORITA (PhD '14)

Director, Ubiquitous Health Technology Lab (UbiLab)

J.W. Graham Information Technology Emerging Leader Chair in Applied Health Informatics, 2017-2022

Star player shines with donor support

Scholarships and awards help a top student-athlete focus on her game

Stephanie Sluys (BASc '18) was just three years old when she formed her first memory of hockey. During a game, she broke down in tears on her way to the bench. She desperately wanted to get back on the ice and play goalie.

"I already had that urge to be in the net," she recalls. "As the years went on, I got a little more competitive and a little more serious."

Steph decided in high school that she wanted to pursue varsity hockey. Already a star athlete and a top student, she was courted with offers from multiple universities. She chose Waterloo because of its renowned kinesiology program and its emerging women's hockey team, which was positioned to grow.

"Time management was definitely crucial," she says of her student experience. "I think any varsity athlete can attest to that. The busier you are, the better, because your time is limited. You can't waste any of it."

Scholarships and awards made it easier for Steph to maintain that balance. With support from the UW Alumni Award and the RBC Athletic and Community Excellence Award, she was able to focus on her game.

"As a student-athlete you're almost expected to train throughout the summer," she explains, "so the financial support was definitely very helpful. Beyond that, the support I felt from people outside of the University was really nice.

"This past season I was supported by RBC, and they came to meet me. Just to be able to talk with the donors, to see that they were behind me, that was huge."

When asked about a highlight of her hockey career, she recalls a game that set her team on the path to excellence.

"We were playing in Guelph," she says, "and we tied it up with not a lot of time left in the game. Our captain scored a winning goal in overtime. It set off a huge winning streak that allowed us to make the playoffs. That feeling of being the underdog and accomplishing something great ... I'm smiling just talking about it."



ALL-TIME SHUTOUT LEADER for Waterloo women's hockey

Beyond Waterloo, Steph had the chance to play for the Canadian women's ice hockey team at the 2017 International University Sports Federation (FISU) Games in Kazakhstan.

"That was another incredible experience," she says. "A teammate, Rachel Marriott, and I were selected to represent Canada. We got to go to a Hockey Canada development camp, which was amazing in itself. Then we went to Kazakhstan for about two weeks and captured the silver medal there."

Steph recently graduated from Waterloo with an honours degree in kinesiology. So, what's next for this high achiever?

"I'm really excited. This fall, I'll be going to college for firefighting," she says. "I also just bought player's equipment for a position outside the net. For me, it will be hard to compete at the level I want as a goalie, so I'm going to push myself and try something new."

Did you know . . .

OUA

Recently, 21 women's hockey alumni came together to establish two athletic financial awards (AFAs).

Nearly 200 donor-funded AFAs will be given out this year.

N 77

Setting the bar for learning – and for life

Beloved high school teacher David Shepherd is remembered with a scholarship for mathematics students

David Shepherd (BMath '75) could solve math problems in the blink of an eye – so his first high school students called him Tex, as in Texas Instruments. He worked through the equations with the same ease as the calculators on their desks, but what truly set him apart was his ability to help his students when they were struggling. If one method of solving a problem didn't make sense, he would show them another, and another, until they found an approach that worked.

"There was no shame in failing," says Krysia Piorczynski, David's wife of 42 years. "David wanted to show his students that math was for everyone – that it was all around us, and it was fun."

Passionate about nurturing talent in promising young mathematicians, David also volunteered with Waterloo's Centre for Education in Mathematics and Computing (CEMC) by writing and marking problems for high school math contests. When he wasn't teaching, he was coaching athletics and organizing meets for the Ontario Federation of School Athletic Associations (OFSAA). He was finalizing sponsors for OFSAA's 2015 cross country championship when he suffered a debilitating stroke.

David was paralyzed from the neck down, and he wasn't expected to speak or eat on his own again. His friends in mathematics and athletics rallied around him and Krysia to offer any help they could.

"I was getting all kinds of emails from the CEMC," says Krysia. "Ian VanderBurgh, the director, would ask, 'Is there anything we can do as a group for David?' "

Knowing how much David valued his volunteer work, Ian said that David would continue to mark their contests.

"He practiced every day," Krysia says. "He was determined to get better, faster, because he had math to do."

Sadly, David succumbed to his health issues and passed away in 2016. His involvement with the CEMC in his final months was so meaningful to him that Krysia decided to create a special scholarship at Waterloo. She and David had been







"It all starts small. If we achieve our goal of helping one person, then we help the community, the province, the country, the world."

KRYSIA PIORCZYNSKI



donating to the Centre for years, but she wanted do something more to give back to the people who had become family to her and her husband.

Last year, she established the David Shepherd Upper-Year Scholarship in Mathematics, an award that recognizes students who stand out in both their coursework and extracurricular activities.

"David and I felt it was extremely important to support students," she says. "You look at them, and they have solutions for all the problems in the world. It's a joyful thing to see."

When talking about the award, Krysia adds that David wouldn't have named it after himself. He believed in doing good deeds for their own sake, and not for recognition. "David set the bar unconsciously," she says. "He made me want to work that much harder, be that much of a better person. That's all that he wanted of his students too. He always encouraged them to do their best."

Did you know . . .

The CEMC is Canada's largest and most recognized outreach organization promoting mathematics and computer science. It was founded in 1995, with origins dating back to the 1960s.

This is our time to lead

A final word from the Vice-President, Advancement

Every day, alumni and donors transform the University of Waterloo with their generosity. Philanthropy has a powerful impact on our campus community – not only because it provides the resources we need to flourish, but also because it signals confidence in our abilities, both present and future.

Whether you've made a first gift to a scholarship, a monthly donation to athletics, a multi-year commitment to new research, or a gift in your will to support a special program, your charitable contribution inspires us all to be bold and to reimagine the scope of our full potential.

This is our time as a university – the moment to take our place on the global stage as a leader in innovation. Building on our proud history of trailblazing, which has always been possible because of our enthusiastic community of supporters, we will expand the boundaries of research and education to solve important problems and build a better, more vibrant planet.

When we all come together, we create the change we want to see in the world. Thank you for being partners in our success. In 2017-2018,

2,630 first-time donors

1,300 monthly donors

\$4.6M towards endowments

DD bequest gifts confirmed

With gratitude and warm regards,

Joanne Shoulthe

JOANNE SHOVELLER Vice-President, Advancement



THANK YOU

Donors make a profound impact on the lives of our students. We're grateful for your continued trust and support.



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