

ONE HUNDRED AND TWENTY-FOURTH CONVOCATION

# CONVOCATION



FACULTY OF ENGINEERING Convocation Ceremony



On this day, as the University of Waterloo awards degrees and celebrates the achievements of a new generation of graduates, the members of the University and its guests share in a 900-year-old ritual called convocation.

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## Message from the Chancellor

### *Welcome graduands, family members, and friends to 2022 Spring Convocation.*

As the eleventh chancellor of the University of Waterloo, it is my honour to preside over the rite of convocation. Our University community shares in your excitement and celebrates your hard work and dedication as we mark this significant milestone.

The University of Waterloo has a tradition of developing talent for a complex future, and you are no exception. As you stand at the precipice of this complex future, you are certain to encounter many obstacles. The knowledge and skills you have earned during your time here will provide you with the tools necessary to overcome these challenges.

Our institution is renowned for its laser-focused pursuit of innovation both in pedagogy and research. It is likely what led you to Waterloo, and what drove you to success.

Today's ceremony honours your accomplishments. I encourage you to take a moment to recognize your family, friends, and members of the campus community who provided support during your time at Waterloo. Convocation is a time to reflect and celebrate, but also to look forward. As you cross the stage today rest assured that your hard work has led to your successes thus far, and that same work ethic will serve you well in your next chapter.

As a graduand, you bear the privilege and responsibility of being forever linked to the spirit and values of this distinguished institution. Wherever your life may lead, I hope you will continue to pursue shaping a better, more equitable world through your careers and community involvement.



DOMINIC BARTON Chancellor

#### "THE UNIVERSITY OF WATERLOO HAS A TRADITION OF DEVELOPING TALENT FOR A COMPLEX FUTURE, AND YOU ARE NO EXCEPTION."

## *Message from the President and Vice-Chancellor*

Congratulations to our graduating class. We are thrilled to welcome your family and friends to celebrate this momentous occasion. It is our honour to celebrate this year's convocation with you.

During your time at the University of Waterloo, you have persevered to overcome many challenges, including a pandemic. Your degree recognizes this hard-work and is a testament to the effort and dedication you put forth during your studies.

Your experience at Waterloo is more than the knowledge you gained in the classroom or the research you undertook in the lab. It is about the relationships and networks you forged on campus and online. Our institution's rich history and the success of our alumni is rooted in community. As you transition from student to alumni, I hope you will continue to stay connected with Waterloo.

The University's motto "Concordia cum veritate" means "in harmony with truth." As you begin the next chapter of your journey, I encourage you to think unconventionally. We live in a world mired in geo-political, environmental, and health challenges.

Regardless of your discipline, you have a unique opportunity to make a lasting difference in your community and in the world. Seeking out ways to pursue your passions and uncover innovations in whatever you do.

I encourage you to take what you have learned at Waterloo to help shape our world's future for the better.

As graduates, you are now a member of this institution's strong alumni community. Follow the successful footsteps of those before you, or trail blaze your own. You now have the tools to make a lasting impact on the world around you.

On behalf of the University of Waterloo, I wish you the very best in the journey ahead.

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**VIVEK GOEL** CM President and Vice-Chancellor

"AS YOU BEGIN THE NEXT CHAPTER OF YOUR JOURNEY, I ENCOURAGE YOU TO THINK UNCONVENTIONALLY."

## Message from the Alumni Council President

#### Congratulations Class of 2022!

On behalf of the University of Waterloo's Alumni Council and your fellow alumni, congratulations on the successful completion of your degree. You demonstrated hard work, dedication and resilience. We are proud of you and delighted to welcome you as the newest members of our community.

Graduation is a significant milestone for you both personally and professionally. I encourage you to celebrate your achievement and take time to appreciate the people in your life that helped you along the way – your family, friends, classmates, and teachers.

As you look ahead to the next phase of your life, I'm confident that your time at UWaterloo has prepared you well. You have the expertise, creativity and resourcefulness to tackle whatever problem you choose. Longstanding practices are changing and there is opportunity for new ideas to breakthrough.

Welcome to a network of more than 230,000 alumni, connected by their experiences at Waterloo.

Throughout your career, I encourage you to stay connected to your alumni community. There are more than 230,000 of us and we are here to support you as you work towards your goals. You can contact Waterloo alumni from anywhere in the world – through our Global Ambassadors, Alumni Chapters and online groups.

I also hope you will join me in sharing your time, knowledge and passion with the University. It is rewarding to volunteer with other talented alumni and your unique perspective can benefit future graduates more than you know.

Congratulations once again on your graduation. You have much to be proud of and a very bright future ahead of you!

*I wish you all the best.* 



Meaghan Kimball

**MEAGHAN KIMBALL** BMATH '06 President, University of Waterloo Alumni Council

"THERE ARE MORE THAN 230,000 OF US AND WE ARE HERE TO SUPPORT YOU AS YOU WORK TOWARDS YOUR GOALS."

# *Our tradition of convocation*

The ritual of convocation is a tradition that honours the roots of the University, and is, at the same time, a beginning for students who now enter a new stage in their lives. We welcome guests on this celebratory occasion and thank you for being present to share in it.

Both the symbols and the ceremony of convocation look back far beyond the beginning of the University of Waterloo, back to the centuries of university life in Western civilization which Waterloo joined six decades ago. The founders of this University were eager from the beginning to make it part of that long tradition, although they proudly asserted that they were building a new and innovative university, with close ties to industry and an emphasis on practical knowledge for building the future.

On this day, as ancient customs mix with the use of up-to-date technology and the exuberance of a new generation, Convocation connects a forward-looking university with the traditions that universities have observed as long as they have existed.

The University of Waterloo grew out of an older institution, Waterloo College. A still older one, the University of St. Jerome's College, soon became federated with it, and the College of Optometry of Ontario joined the family in 1967. Although all these institutions were newcomers compared with Oxford and Harvard and the Jagiellonian, the connection to the traditional role and style of a university remains clear.

Tradition underlies the proceedings of today's convocation, the continuity of this University with centuries of academic experience. Passion brings the proceedings to life, along with the enthusiasm with which the University recognizes new achievements and new ideas.



#### **A CALLING TOGETHER**

Students graduate at the end of a program of study, leading to a degree with a traditional name: Bachelor, Master, or Doctor. On this day, their families and friends celebrate their success and their transition from one status in life to another. Convocation has been, for the past nine hundred years, a meeting of the whole University community at which symbols are displayed, participants wear special attire to emphasize their official roles, and speakers share their wisdom and the values that the University seeks to teach. Convocation (the name comes from Latin, which was once the chief language of higher education) is a calling together of new graduates to receive the symbols of their accomplishment, and a calling together of the older members of the University to be witnesses and join in the celebration.

#### **CONNECTING WITH TRADITION**

At Waterloo's first convocation in June 1960, the guest speaker was James J. Talman of the University of Western Ontario, who told the audience a little about the history of Waterloo County and its industry. "The greatest resource we still have is the minds of the people," Talman said, "and this resource still remains to be developed to its full potential. The people of the Grand Valley clearly appreciate this fact. As we see the success with which they developed the physical resources in the past, we can only conclude that they will be just as successful in developing the intellectual resources of the future. The University of Waterloo can look forward to a brilliant and successful future."

#### THE PROCESSION

The most impressive part of the ceremony may be the procession that begins it. The graduating students will come in first, and as they fill up the main body of the hall they will give the impression that today's ceremony really is, as convocation used to be, a ceremonial meeting of the whole University community.

After the graduating students have come in, faculty members enter walking two by two, followed by University officials, all in their academic finery. Near the end of the procession, a selected faculty member will carry the mace, a traditional symbol of the University's authority.

The final party to arrive is the Chancellor's party. The Chancellor is the ceremonial head of the University of Waterloo. The Chancellor presides over Convocation ceremonies every June and October and awards all degrees, diplomas and certificates, including honorary degrees. The Chancellor addresses graduands and inspires them at these ceremonies.

#### THE MACE

This solid silver and ebony wand was given to the University in 1965 by the family of the late Stanley F. Leavine and was designed by Toronto artist Eric Aldwinckle and crafted by silversmith Harold Stacey to symbolize the University as it was at that time. It displays lions, chevrons, and the shield of the province of Ontario, from which the University holds its charter to grant degrees.

The symbolic theme of the mace is unity amid diversity, and tension in the creative intellectual process that strives to bring forth a new individual. The design of the mace interprets this theme in the idiom of the life process: from the seeds at the base of the stave the mace grows in unity and strength until it differentiates by a four-fold separation into diverse elements.



The four-fold diversity is significant because of the four faculties existing at the time the mace was presented to the University and as well of the four church-related colleges federated and affiliated with the University. These diverse elements together form a crown, and the point of the crown, while tending toward a union, do not quite touch. They remain as individuals suspended in tension and yet engaged in deep harmony. This creative process is focused not on the traditional spherical orb of static perfection but rather on an elliptical silver ovum – the egg-shaped symbol of creativity – the marvelous potential of a new individual life.

#### THE COAT OF ARMS AND MOTTO

The lions and chevrons also appear on the shield that is the University's coat of arms and that is imprinted on the graduates' diplomas. Derived from traditional heraldry, it has been used since 1961 and was registered with the Court of the Lord Lyon in 1987. The shield uses the official colours of gold, black, and white, and its symbols refer to the University's base in the cities of Kitchener and Waterloo. The unusual double chevrons were borrowed from the coat of arms of Lord Kitchener of Khartoum, and the red lions are like those on the coat of arms of the Duke of Wellington, victor at the 1815 Battle of Waterloo. The lions also reflect the tough and innovative spirit of the University's founders and builders, and the black and white in the chevron are the colours of Prussia, reflecting the Germanic background of many Waterloo County settlers. Beneath the shield appears the University's motto, Concordia cum veritate, "In harmony with truth."

#### **DEGREES AND HONORARY DEGREES**

Presentations of earned and honorary degrees, and the speeches associated with them, take up most of the time at Convocation. Undergraduate and graduate degrees are awarded in each of our six faculties: the faculties of Arts, Engineering, Environment, Health, Mathematics and Science. Also included are students who attended our colleges, St. Jerome's University, St. Paul's University College and Renison University College.

In addition to "earned" degrees awarded to students who have met the requirements through years of effort, the University of Waterloo confers "honorary" degrees to individuals who have been designated by the Senate, the University's academic governing body, as deserving special honour. They, too, receive hoods, lined with the colour of the faculty that nominated them or with specially designated colours for other kinds of achievement.

By tradition, public service is recognized with a Doctor of Laws degree even in a university that does not regularly teach law. The individuals receiving honorary degrees are introduced during the ceremony, and a brief citation is read to explain their various accomplishments deserving of recognition by a university. One of the honorands will address convocation after the degree has been given.

## Honorary Doctorates

An honorary degree (honoris causa) is the highest honour conferred by the University. Through the conferring of honorary degrees, the University of Waterloo seeks to recognize outstanding achievement, whether academic or through service to society.

#### **DIANNE SAXE**

IIB PhD



Doctor of Environmental Studies, *honoris causa* TUESDAY, JUNE 14 / AFTERNOON CEREMONY

Dr. Dianne Saxe is one of Canada's leading environmental lawyers. She has made significant contributions to Ontario as a practitioner of environmental law for over 45 years, as an influential author of several important environmental law books and articles, and, most recently, as the Environmental Commissioner of Ontario. Throughout her career, Dr. Saxe has informed Ontarians of their environmental rights and duties, and of the crucial importance of addressing environmental challenges. As the Environmental Commissioner of Ontario, she played a key role in contributing to the public life of Ontarians through extensive analysis of the government's commitments to protecting the environment and engaging the public in conversations about Ontario's sustainable future.

#### **JOHN HELLIWELL**

OC, BComm, MA, DPhil, LLD Doctor of Letters, *honoris causa* WEDNESDAY, JUNE 15 / MORNING CEREMONY

Professor John Helliwell is acclaimed for his pioneering and prolific work in macro-economic modeling, energy economics and policy, and global trade flows. He is also well-known for his contributions to the annual World Happiness Report, a United Nations publication that ranks countries according to national well-being. The Report has been influential in encouraging governments worldwide to think beyond the narrow confines of gross national product and per capita income as they develop policies and strive towards sustainable development. Helliwell's excellence has been recognized with honours that include Fellow of the Royal Society of Canada, Distinguished Fellow of the Canadian Institute for Advanced Research, and Officer of the Order of Canada.

#### CAROL LEAMAN



Doctor of Letters, *honoris causa* WEDNESDAY, JUNE 15 / EVENING CEREMONY

Carol Leaman holds a Master of Accounting Degree as well as a Bachelor of Arts Degree in Economics and Accounting from the University of Waterloo. In 2013, she received the prestigious designation as a Fellow of Chartered Professional Accountants (FCPA). As a visionary, serial entrepreneur, and community leader who personifies the Waterloo spirit of innovation, she is committed to creating work environments that foster the success of their employees. Leaman is currently the CEO of Axonify and has overseen the successful acquisition of numerous companies such as MLevel (acquired by Axonify), Fakespace (acquired by Mechdyne Corporation), RSS Solutions (acquired by Visiprise Inc.), and PostRank (acquired by Google).

#### TONY CHAN

BS, MS, PhD Doctor of Mathematics, *honoris causa* THURSDAY, JUNE 16 / MORNING CEREMONY

Professor Tony Chan is an esteemed leader in computational models and algorithms for image processing. He received his Ph.D. in Computer Science from Stanford University, followed by a Research Fellowship at Caltech. He also holds an Honorary Doctorate from the University of Strathclyde. After serving as president of The Hong Kong University of Science and Technology for nearly a decade, Chan became the third president of the King Abdullah University of Science and Technology in 2018. He is a member of the US National Academy of Engineering, and a Fellow of the Institute of Electrical and Electronics Engineers (IEEE), the American Association for the Advancement of Science (AAAS) and Society for Industrial and Applied Mathematics (SIAM). Chan was also awarded the 2020 SIAM Prize for Distinguished Service to the Profession.

#### **VIRGINIA ANN HEATH**

BSc, MSc, MDCM and

#### JOHN WILLIAM HEATH

BSc, MDCM, FRCP (C) Doctors of Science, *honoris causa* FRIDAY, JUNE 17 / MORNING CEREMONY



Dr. Virginia Ann Heath completed a

Bachelor of Science degree at the University of British Columbia, and Dr. John William Heath completed his Bachelor of Science at McGill. Both then completed MScs and MDs in clinical medicine at McGill. After postgraduate medical training in Halifax, Winnipeg, and Vancouver they set up a practice in Campbell River, B.C. and participated in many clinical research studies. In 1985, they established Yellow Island Aquaculture on Quadra Island, B.C., which quickly became a centre for aquaculture research, with numerous publications, including contributions in *Nature and Science*. They received the 2013 NSERC Synergy award for collaborative research and they have hosted numerous Waterloo students.

#### **DOUGLAS FREGIN**



СМ

Doctor of Engineering, *honoris causa* FRIDAY, JUNE 17 / EVENING CEREMONY

Douglas Fregin has been a leader in the telecommunications industry for over 35 years. He co-founded Research In Motion (RIM), which launched the world's first smartphone (the BlackBerry 5180). In 2013, he co-founded Quantum Valley Investments, driving the Region of Waterloo to the forefront of the global quantum technologies industry. He has donated millions towards educational and research programs at the University of Waterloo, enabling the establishment of the Waterloo Undergraduate Program in Nanotechnology (2005), the Waterloo Institute of Nanotechnology (2009), and the Mike & Ophelia Quantum-Nano Centre (2012). He received a Technical Emmy Award with Kodak and the National Film Board of Canada, and was awarded the Queen Elizabeth II Diamond Jubilee Medal in recognition of his achievements. In 2016, he was appointed a Member of the Order of Canada.

#### **VALERIE DAVIDSON**

BEng, MSc, PhD Doctor of Engineering, *honoris causa* SATURDAY, JUNE 18 / AFTERNOON CEREMONY

Valerie Davidson is a Professor Emerita in the University of Guelph's School of Engineering, where she was a faculty member for 24 years. During this time, she developed innovative courses in bio-process and food engineering, and was a recipient of the Provost's Award for Innovation in Teaching. Her group developed ground-breaking, fundamentals-based, engineering models of complex food processing systems to improve product quality and safety. Davidson recently consulted for the United Nations Food and Agriculture Organization to develop tools for food safety decision-making. For over three decades, Professor Davidson has been an exceptional citizen within the engineering community and a dedicated champion of diversity in the profession. While serving as NSERC Chair for Women in Science and Engineering, she founded the Ontario Network of Women in Engineering (ONWiE), now a pan-Canadian collaboration that inspires the next generation of engineers. In 2016, she received the Ontario Professional Engineers' Award for Citizenship.

## Distinguished Professors Emeriti

The Distinguished Professor Emeritus designation is made to faculty members who have had a distinguished record of service in teaching and research in the University. The honorary award is granted upon, or shortly after, retirement.

#### MARK E. HAVITZ



BSc, MSc, PhD Department of Recreation and Leisure Studies TUESDAY, JUNE 14 / MORNING CEREMONY

Dr. Mark Havitz was a professor in the Department of Recreation and Leisure Studies from 1992-2019, serving as department chair from 2008-2016. He is well known for his work in the theoretical advancement of ego-involvement, psychological commitment and loyalty, and marketing services to marginalized people, as well as his creative autoethnographic accounts and retrospective techniques. Havitz was honoured with a Fellow in the Academy of Leisure Sciences in 2000 and received the Theodore and Franklin Roosevelt Award from the National Recreation and Park Association in 2017. In 2021, he also received the Leisure Scholar Award, the highest recognition bestowed by the Canadian Association of Leisure Studies.

#### **STUART MCGILL**

BPE, MSc, PhD Department of Kinesiology TUESDAY, JUNE 14 / MORNING CEREMONY

Dr. Stuart McGill was a professor in the Department of Kinesiology from 1987-2017, serving as department chair from 2006-2009. He is internationally regarded for his work in spine biomechanics, investigating mechanisms of low-back injury and how to prevent and rehabilitate low-back pain and optimize performance. He has published more than 250 scientific papers and five books, mentored more than 40 graduate students, and taught thousands of clinicians and practitioners in courses and workshops around the world. Dr. McGill is the Chief Scientific Officer for Backfitpro Inc. and was named a Member of the Order of Canada in 2020.

#### ALICE KUZNIAR



BA, MA, PhD Department of German and Slavic Studies WEDNESDAY, JUNE 15 / AFTERNOON CEREMONY

Alice Kuzniar is one of the leading figures in German studies today, and is well known for her scholarly work in the earlier periods of German literary history, especially German classicism and romanticism. She is a noted film scholar, both in German-language film and world cinema. She is also well known as a leading thinker in the field of cultural studies, producing ground-breaking work in the areas of gender and queer studies as well as animal studies. Kuzniar's contributions have been recognized with a University research chair, two Alexander von Humboldt fellowships, two Outstanding Performance awards from the Faculty of Arts, and the Excellence in Arts Research Award.

#### JAMES W. ST. G. WALKER CM, FRSC, PhD



Department of History WEDNESDAY, JUNE 15 / AFTERNOON CEREMONY

James W. St. G. Walker has been widely recognized for his pioneering work in African-Canadian history, human rights, Holocaust studies, race relations, Indigenous history, and antisemitism, as well as immigration and other Canadian public policies. His publications have been widely recognized and his book *The Black Loyalists* was republished in 2017 by University of Toronto Press as part of the Canada 150 Collection, a collection of outstanding books that have shaped Canada as a nation. Walker's contributions to Canadian society have been recognized with honours that include the Bora Laskin National Fellowship in Human Rights Research, Fellow of the Royal Society of Canada, and Member of the Order of Canada.

#### IAN GOULDEN



BMath, MMath, PhD, FRSC Department of Combinatorics and Optimization THURSDAY, JUNE 16 / EVENING CEREMONY

Professor Ian Goulden received his PhD in Statistics from the University of Waterloo in 1979. He joined the Department of Combinatorics & Optimization in 1980, and was promoted to full professor in 1990, before retiring in 2019. Goulden is a leader in the field of enumerative combinatorics, and co-authored the influential textbook Combinatorial Enumeration with David Jackson. In 2010, he was elected as a Fellow of the Royal Society of Canada. Goulden is an exceptional teacher, and received the Faculty of Mathematics Award for Distinction in Teaching in 2009. He is also an accomplished administrator who served three terms as chair of Combinatorics & Optimization, and one term as dean of the Faculty of Mathematics.

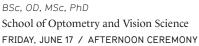
#### **KATHRYN HARE**



BMath, PhD, FCMS Department of Pure Mathematics THURSDAY, JUNE 16 / EVENING CEREMONY

Professor Kathryn Hare retired from the Department of Pure Mathematics in July 2021, after joining in 1988 as the first female professor. Hare has an extensive research portfolio on harmonic analysis, fractals, thin sets and multipliers and maximal operators. She has supervised dozens of postdoctoral, PhD and master's students, many of whom earned prizes for research excellence, including a Morgan Prize winner, and an AIM Fellowship winner. Hare is a Fellow of the Canadian Mathematical Society, and the recipient of an honorary doctorate from Chalmers University, and the Faculty of Mathematics Award for Distinction in Teaching. She tirelessly served the University, notably as department chair from 2014 to 2018.

#### WILLIAM BOBIER



Professor William Bobier completed his Bachelor of Science degree at Queen's University and then an Optometry degree at the University of Waterloo. After one year of private practice in Optometry, he returned to Waterloo to complete his Master of Science, then, moved to the University of Cambridge for his PhD. He joined the School of Optometry and Vision Science at the University of Waterloo as a faculty member in 1987 and rose to be become director. Bobier retired in December of 2019, after a distinguished 29-year career within the School. He remains active in research and graduate student supervision.

#### RAYMOND LEGGE BSc, PhD



Professor Emeritus Raymond Legge's record of scholarship, teaching, and service to the Department of Chemical Engineering and the University of Waterloo is exemplary and extends more than 37 years. He has made groundbreaking contributions to the development of biosensors, environmental monitoring and remediation, green bioprocesses, and water treatment and monitoring. Deeply committed to improving engineering education, Legge has served on more than 50 committees within his department and across the university, including several undergraduate task forces. In his roles as associate chair, associate dean, and assistant vice-president, Graduate Studies he has helped shape the engineering curriculum and elevate Waterloo to one of the most prominent engineering schools in the world. During his career he taught more than 7,000 students and received the Sandford Fleming Foundation Teaching Excellence Award on two occasions.

#### FLORA T.T. NG BSc, MSc, PhD

Department of Chemical Engineering



Professor Flora T.T. Ng joined the Department of Chemical Engineering at the University of Waterloo in 1987, after nearly a decade working with the Canada Centre for Mineral and Energy Technology, where she rose to assistant director, research programs. At Waterloo, her group is internationally recognized for innovation in catalytic processes and "green" chemistry. She has co-authored more than 250 journal and conference papers, delivered more than 100 invited talks, and supervised over 140 undergraduate and graduate students. She held a University Research Chair from 2006 to 2013 and was appointed a University Professor – Waterloo's highest academic honour - in 2008. She is a former president of the Canadian Catalysis Foundation and a Fellow of both the Chemical Institute of Canada (CIC) and the Royal Society of Canada.

#### **KEITH HIPEL**



BASc, MASc, PhD Department of Systems Design Engineering SATURDAY, JUNE 18 / EVENING CEREMONY

In his over 40 years at the University of Waterloo, Professor Keith Hipel has established a distinguished record of scholarship, teaching and service. He is an international authority in the field of environmental systems engineering, with profound impacts on the management of water, energy, and natural resources. His contributions to engineering education include co-supervision of 87 graduate students, founding of three highly successful exchange programs with leading universities in Japan, and serving as chair of the Board of Governors of Renison University College. Hipel has received 67 national and international honours, including election to Officer of the Order of Canada, President of the Academy of Science within the Royal Society of Canada, Fellow of the Canadian Academy of Engineering. He is also an international Member of the US National Academy of Engineering and Killam Prize Laureate.

## President Emeritus

#### FERIDUN HAMDULLAHPUR



Feridun Hamdullahpur was the University of Waterloo's sixth president and vice-chancellor (2010-2021). During his tenure as president, he expanded Waterloo's reach, broadened its influence and strengthened its impact. With a focus on students, he helped launch the Student Success Office (SSO) in 2010 and The Centre in 2019 to enrich the student experience through resources and services.

He led the growth of Waterloo's global network, expanding post-secondary partnerships in China, France, Israel, and the United Kingdom. Feridun oversaw the creation of 7,500+ jobs and \$2.3B+ in revenue through entrepreneurship programs at the University.

He was named a Fellow of the Canadian Academy of Engineering in 2014 and a Specially Elected Fellow of the Royal Society of Canada (RSC) in 2018. In acknowledgment of his leadership in education and innovation, he was awarded the Queen Elizabeth II Diamond Jubilee Medal in 2013.

## *Honorary Member of the University*

The Honorary Member of the University designation is the highest honour a staff member can obtain at the University of Waterloo and is granted upon retirement. It recognizes the individual for outstanding service to the University as a whole, not limited to one department or faculty. For faculty members, it recognizes distinctive administrative service to the University.



#### SALLY GUNZ

BA, MA, MBA, LLB School of Accounting and Finance WEDNESDAY, JUNE 15 / EVENING CEREMONY

Sally Gunz is recognized for her teaching and research excellence in legal studies and ethical responsibilities for professionals. She exemplifies exceptional service through her work with the Faculty Association of the University of Waterloo (FAUW) and her contributions to institutional policy development. Service contributions include president and past president of FAUW, chair of the Academic Freedom and Tenure Committee, and president and former president of the Canadian Academy of Legal Studies in Business. Honours and awards received in recognition of her excellence include the University of Waterloo Outstanding Performance Award, the Canadian Association of University Teachers Dedicated Service Award, and the Academy of Legal Studies in Business Kay Duffy Memorial Award.

## Guest Speakers



JOHN HIRDES BSc, MA, PhD, FCAHS Professor, School of Public Health TUESDAY, JUNE 14 / MORNING CEREMONY

John Hirdes has been a Faculty member at the University of Waterloo since 1989, currently as a Professor in the School of Public Health Sciences and as a Fellow of the Balsillie School of International Affairs. He is the Senior Canadian Fellow and a Board Member of interRAI (interRAI.org), an international consortium of researchers from over 35 countries. He obtained his BSc in Health Studies, a Certificate in Gerontology, MA in Sociology, and PhD in Sociology all from the University of Waterloo. Dr. Hirdes has published over 250 peer-reviewed studies, book chapters, and clinical manuals focusing broadly on health systems and services for vulnerable health populations. He has received numerous awards for his contributions to the fields of aging, mental health, and health information systems as well as his excellence in graduate student mentorship.

#### **GEOFF FONG**



OC, PhD, FRSC, FCAHS Professor, Department of Psychology and Public Health Sciences WEDNESDAY, JUNE 15 / AFTERNOON CEREMONY

Geoffrey Fong is renowned internationally for his pioneering research on population health and his leadership as founder and chief principal investigator of the International Tobacco Control Policy Evaluation (ITC) Project - a project involving over 150 researchers across 31 countries. His contributions to reducing the global tobacco epidemic include research on improved risk messaging on tobacco products alongside his work with international governments to adopt national tobacco-reduction policies and practices. One of the top-cited researchers in the world, Fong has been recognized with honours that include Fellow of the Royal Society of Canada, O. Harold Warwick Prize, the Governor General's Innovation Award (ITC Project), and Officer of the Order of Canada.

#### MARY E. THOMPSON



BSc, MS, PhD Distinguished Professor Emerita THURSDAY, JUNE 16 / AFTERNOON CEREMONY

Mary E. Thompson is Distinguished Professor Emerita of Statistics at the University of Waterloo in Waterloo. She holds a BSc from the University of Toronto, and an MS and PhD from the University of Illinois. She was a founding Co-Director of the University of Waterloo Survey Research Centre, and Director of the Data Management Core for the International Tobacco Control (ITC) Policy Evaluation Project. Thompson was elected as a Fellow of the American Statistical Association in 1985, and of the Royal Society of Canada in 2006. She is also an elected member of the International Statistical Institute and a Fellow of the Institute of Mathematical Statistics. She won the Waksberg Award of Survey Methodology in 2008.



#### **STEVE LAMBERT**

MEng, MSc, PhD Professor, Mechanical and Mechatronics Engineering FRIDAY, JUNE 17 / EVENING CEREMONY

Professor Stephan Lambert completed his undergraduate degree in Mechanical Engineering at the University of Waterloo in 1982, received his master's degree from Queen's University in 1984, and returned to Waterloo to complete his doctorate. He joined Waterloo's Mechanical and Mechatronics Engineering Department as an Assistant Professor in 1988. For 15 years, his group developed models to predict and ultimately reduce fatigue, fracture, and stress corrosion cracking in Canadian pipeline infrastructure. His recent work has advanced the design of load-bearing automotive components using forged magnesium alloys. He was the Design Processes Theme Lead within the AUTO21 Network of Centres of Excellence (2004-2015), the Waterloo-NSERC Chair in Design Engineering (2004-2016), and the Canadian Task Leader for Fatigue in the Magnesium Front End Research and Development Project (2006-2012). He has been the Faculty Advisor for Waterloo's Formula Motorsports team since 1996.

#### KARIM S. KARIM



BASc, MBA, PhD Associate Vice-President, Commercialization and Entrepreneurship SATURDAY, JUNE 17 / MORNING CEREMONY

Karim S. Karim received his BASc in Computer Engineering in 1999 and his PhD in Electrical Engineering in 2002, both from the University of Waterloo. He was briefly an Assistant Professor at Simon Fraser University before returning to Waterloo in 2008, where he is a Professor in the Department of Electrical and Computer Engineering and Associate Vice President, Commercialization and Entrepreneurship. Professor Karim has published over 100 journal articles, 150 conference papers, and has 80 patents related to large-area electronics and digital X-ray imaging solutions. He co-founded KA Imaging in 2015, which commercialized the world's first portable large area spectral X-ray detector. The product was recently endorsed by the World Health Organization for developing countries. Professor Karim is a Fellow of the Engineering Institute of Canada and the Canadian Academy of Engineering.

#### PAUL FIEGUTH

BASc, SM, PhD Associate Dean, Resources and Planning SATURDAY, JUNE 18 / EVENING CEREMONY



Paul Fieguth received his undergraduate degree in Electrical Engineering from the University of Waterloo and graduate engineering degrees from the Massachusetts Institute of Technology (MIT). He joined Waterloo's Department of Systems Design Engineering in 1996, where he has been Associate Chair for Undergraduate Studies and Department Chair. Presently he is Associate Dean for Resources and Planning. As co-Director of the Vision and Image Processing Lab, he has contributed major advances to statistical signal and image processing, hierarchical algorithms, data fusion, machine learning, and the interdisciplinary applications of such methods. As an educator, he has helped develop a deep understanding among engineering students on the impact of complex systems in many areas of engineering decision making. He is the author of three textbooks, a 2010 text on *Statistical Image* Processing & Multidimensional Modeling, a 2021 text on Complex Systems, and an upcoming text on Pattern Recognition.

## Valedictorians

**Precious Nwaka** Faculty of Health TUESDAY, JUNE 14 / MORNING CEREMONY

**Jaskaran Dhillon** Faculty of Environment TUESDAY, JUNE 14 / AFTERNOON CEREMONY

**Ola Idris Ali** Faculty of Arts WEDNESDAY, JUNE 15 / AFTERNOON CEREMONY

**Farzaan Nathoo-Khedri** Faculty of Mathematics THURSDAY, JUNE 16 / AFTERNOON CEREMONY

**Marya Talha** Faculty of Science FRIDAY, JUNE 17 / MORNING CEREMONY

**Aisosa Ohiegbomwan** Faculty of Science FRIDAY, JUNE 17 / AFTERNOON CEREMONY **Siddharth Kumar** Faculty of Engineering FRIDAY, JUNE 17 / EVENING CEREMONY

**Veraj Paruthi** Faculty of Engineering SATURDAY, JUNE 18 / MORNING CEREMONY

**Chukwunonso Jeffrey Moneme** Faculty of Engineering SATURDAY, JUNE 18 / AFTERNOON CEREMONY

**Ellen Margarete McGee** Faculty of Engineering SATURDAY, JUNE 18 / EVENING CEREMONY

## Distinguished Teacher Awards

The Distinguished Teacher Award is granted to a professor or lecturer who uses their human quality and concern for the needs of the students to create lasting influence on students and on colleagues. Recipients exhibit intellectual vigour and communication skills in the interpretation and presentation of subject matter, along with evidence of educational impact beyond the classroom.

#### **Robin Duncan**

BSC, PhD Kinesiology and Health Sciences, Faculty of Health

**Lowell Ewert** BA, JD, LLM Peace and Conflict Studies, Faculty of Arts, Conrad Grebel University College

**Igor lvkovic** BMath, MMath, PhD Systems Design Engineering, Faculty of Engineering

**Suzanne Kearns** BSc, MSc, PhD Geography and Environmental Management, Faculty of Environment **Rick Marta** 

BSc, PhD Chemistry, Physics and Astronomy, Faculty of Science

**Rajinder Pal** BTech, PhD Chemical Engineering, Faculty of Engineering

**Cynthia Richard** Pharm, PhD School of Pharmacy, Faculty of Science

**Dan Wolczuk** BSc, MMath Mathematics, Faculty of Mathematics

## University Professors

*The University Professor designation recognizes faculty with exceptional scholarly achievement and international pre-eminence. Once appointed, a faculty member retains the designation until retirement.* 

#### **Claudio Canizares**

MASc, PhD, PEng Department of Electrical and Computing Engineering, Faculty of Engineering

**Jennifer Clapp** BA, MSc, PhD School of Environment, Resources and Sustainability, Faculty of Environment

**Richard J. Cook** 

BSc, MMath, PhD Department of Statistics and Actuarial Science, Faculty of Mathematics

**John Hirdes** BSc, MA, PhD, FCAHS School of Public Health Sciences, Faculty of Health Lyndon Jones

BSc, PhD, DSc, FCAHS School of Optometry and Vision Science, Faculty of Science

**Robert Mann** BSc, MSc, PhD Department of Physics and Astronomy, Faculty of Science

**Weihua Zhang** BSc, MSc, PhD Department of Electrical and Computer Engineering, Faculty of Environment

## Awards of Excellence in Graduate Supervision

The award for excellence in Graduate Supervision recognizes exemplary faculty members who have demonstrated excellence in graduate student supervision. An outstanding graduate supervisor is a mentor, advisor, role model, humanist and strategist, and possesses a high level of energy and ingenuity.

#### **Jay Dolmage**

BA, MA, PhD Department of English Language and Literature, Faculty of Arts

**Brian Forrest** Department of Pure Mathematics, Faculty of Mathematics

#### Carolyn Ren

BSc, MSc, PhD Department of Mechanical and Mechatronics Engineering, Faculty of Engineering

#### **Paul Stolee**

BA, MPA, MSc, PhD School of Public Health Science, Faculty of Health

#### **Gordon Wilmot**

BMath, MMath, PhD Department of Statistics and Actuarial Science, Faculty of Mathematics



# FRIDAY<br/> **EVENING**<br/> **CERENING**<br/> **CERENIONY**

Degrees and diplomas from: UNIVERSITY OF WATERLOO FACULTY OF ENGINEERING

## Graduate Degrees

#### **DOCTOR OF PHILOSOPHY**

Ansari, Mazyar (Mechanical and Mechatronics Engineering) "Powder-Fed Laser Directed Energy Deposition of Near-β Titanium Alloy: A Comprehensive Analytical and Experimental Analysis"

**Ertay, Deniz Sera** (Mechanical and Mechatronics Engineering) "Modeling, Performance Evaluation, and Post-process Planning for Directed Energy Deposition"

Franco Dobaran, Oier (Mechanical and Mechatronics Engineering) "Influence of Feed Drives on the Structural Dynamics of Large-Scale Machine Tools"

**Hu, Jia Cheng** (Mechanical and Mechatronics Engineering) "An Exploration of Isolated Vortex Collisions"

**Ibragimova, Olga** (Mechanical and Mechatronics Engineering) "Machine Learning Approaches in Crystal Plasticity"

Imani Shahabad, Shahriar (Mechanical and Mechatronics Engineering) "Rapid Thermo-Mechanical Modeling of Laser Powder-Bed Fusion Additive Manufacturing Using

an Effective Heat Source" **Khodabakhshi, Milad** (Mechanical and Mechatronics Engineering – Nanotechnology) "Molecular Dynamics Simulation for Nanoparticle-Surface Collision"

Landry, Cederick (Mechanical and Mechatronics Engineering) "Cuffless Blood Pressure Monitoring: Estimation of the Waveform and its Prediction Interval"

Li, Yan (Mechanical and Mechatronics Engineering) "A New Crystal Plasticity Framework to Simulate Plastic Deformation Phenomena in Precipitation Hardened Aluminum Alloys"

Li, Yifu (Mechanical and Mechatronics Engineering) "Polypyrrole-Based Nanofibrous Membrane as Separator for Lithium-Ion Battery"

**Lin, Kaihsiang** (Mechanical and Mechatronics Engineering) "Effect of Surface State on Radiative Properties of Advanced High Strength Steel Strips"

#### Mohamadizadeh, Alireza

(Mechanical and Mechatronics Engineering)

"Characterization and Microstructure-Based Modeling of Spot Weld Failure in Hot Stamped Steel"

Mrayeh, Hasan Jumaah

(Mechanical and Mechatronics Engineering) "Nanoparticle Focussing Using Aerodynamic Lenses and a Divergent Nozzle"

Nouredanesh, Mina (Mechanical and Mechatronics Engineering) "An Intelligent Ambulatory Fall Risk Assessment Method Based on the Detection of Compensatory Balance Reactions and Environmental Factors"

Shah, Yash Hemant (Mechanical and Mechatronics Engineering) "Effect of Polymer Additives on Transitioning and Turbulent Boundary Layers"

Shamsi, Hamidreza (Mechanical and Mechatronics Engineering) "Economic, Environmental, and Health Impact Analysis of Developing Hydrogen Economy in Canada"

**Shamsolhodaei, Amirali** (Mechanical and Mechatronics Engineering) "Dissimilar Laser Welding of NiTi Shape Memory Alloys"

Shanbhag, Gitanjali (Mechanical and Mechatronics Engineering) "Performance Analytics for Electron Beam Powder Bed Fusion of Ti-6Al-4V"

**Sharifpour, Farzad** (Mechanical and Mechatronics Engineering) "Micromechanical Modelling of Local Failure and Ply Crack Formation in Fiber-Reinforced Plastic Laminates"

Taherkhani, Katayoon (Mechanical and Mechatronics Engineering) "In-Situ Monitoring and Quality Assurance Algorithms for Laser Powder-Bed Fusion"

#### **MASTER OF APPLIED SCIENCE**

**Al-Mfarej, Dalya Bassam** (Mechanical and Mechatronics Engineering)

Baghbanaghaie, Negar (Mechanical and Mechatronics Engineering) **Bhatti, Asad M.** (Mechanical and Mechatronics Engineering)

**Cann, Matthew Cameron** (Mechanical and Mechatronics Engineering)

Chang, Darren Ted Juin (Mechanical and Mechatronics Engineering -Nanotechnology)

**Darweesh, Marwan Ashraf** (Mechanical and Mechatronics Engineering)

**Elmanakhly, Faris Ihab** (Mechanical and Mechatronics Engineering)

**Er, Timothy Ching Gui** (Mechanical and Mechatronics Engineering)

**Fathazam, Amir** (Mechanical and Mechatronics Engineering)

**Gurbandurdyyev, Guvanch** (Mechanical and Mechatronics Engineering)

**Im, Solgang** (Mechanical and Mechatronics Engineering)

Kahlon, Azeem Singh (Mechanical and Mechatronics Engineering)

Kazemzadeh Heris, Pooriya (Mechanical and Mechatronics Engineering)

**Keaveny, Aidan** (Mechanical and Mechatronics Engineering)

Klassen, Cameron (Mechanical and Mechatronics Engineering)

**Li, Caiyin** (Mechanical and Mechatronics Engineering)

Madhavan, Pramoth Varsan (Mechanical and Mechatronics Engineering)

Malik, Saksham (Mechanical and Mechatronics Engineering)

Murdoch, David Andrew (Mechanical and Mechatronics Engineering)

**O'Hagan, Peter John** (Mechanical and Mechatronics Engineering)

**Patel, Kushant Dhirubhai** (Mechanical and Mechatronics Engineering)

**Pishyar, Hossein** (Mechanical and Mechatronics Engineering)

**Sen, Aastav Sasha** (Mechanical and Mechatronics Engineering)

**Sixt, Jeffrey Andrew** (Mechanical and Mechatronics Engineering)

**Su, Lang** (Mechanical and Mechatronics Engineering)

Syed Abid Hussain, Syed Imthiaz Ahamed Imthiaz Ahamed (Mechanical and Mechatronics Engineering)

Weng, Jiacheng (Mechanical and Mechatronics Engineering)

Zablotny, Tomasz (Mechanical and Mechatronics Engineering)

**Zhang, Jessica** (Mechanical and Mechatronics Engineering)

**Zhang, Yixiang** (Mechanical and Mechatronics Engineering)

**Zhao, Boxuan** (Mechanical and Mechatronics Engineering)

#### **MASTER OF ENGINEERING**

**Ai, Guide** (Mechanical and Mechatronics Engineering)

**Bayaraa, Bilegt** (Mechanical and Mechatronics Engineering)

**Blain, Brandon David** (Mechanical and Mechatronics Engineering)

**Chebiyyam, Yashasvi** (Mechanical and Mechatronics Engineering)

**Choksi, Mehul Amitkumar** (Mechanical and Mechatronics Engineering)

**Choodan, Rohit Anoop** (Mechanical and Mechatronics Engineering)

**Dantuluri, Vivek Sai Raju** (Mechanical and Mechatronics Engineering)

**Dharmaraj, Kamal Kumar** (Mechanical and Mechatronics Engineering)

**Ganesh, Sriram** (Mechanical and Mechatronics Engineering)

**Grewal, Herman Singh** (Mechanical and Mechatronics Engineering)

Jiang, Chenglong (Mechanical and Mechatronics Engineering)

**Jiang, Siyuan** (Mechanical and Mechatronics Engineering)

**Khan, Zahid Ali** (Mechanical and Mechatronics Engineering)

**Kitoko, Jason** (Mechanical and Mechatronics Engineering)

Kliska, Nemanja (Mechanical and Mechatronics Engineering)

Liao, Yanchen (Mechanical and Mechatronics Engineering)

Mehta, Tanveer (Mechanical and Mechatronics Engineering)

**Nassif, Dana** (Mechanical and Mechatronics Engineering)

**Palani, Kesarin** (Mechanical and Mechatronics Engineering)

Patel, Nisarg Manishbhai (Mechanical and Mechatronics Engineering)

**Patel, Parth Jitendrakumar** (Mechanical and Mechatronics Engineering)

**Patel, Rohan Pankajkumar** (Mechanical and Mechatronics Engineering)

**Shah, Darshit Mital** (Mechanical and Mechatronics Engineering)

**Shah, Sushim** (Mechanical and Mechatronics Engineering)

**Sharma, Arpit** (Mechanical and Mechatronics Engineering)

**Sharma, Astha** (Mechanical and Mechatronics Engineering)

**Sivamyinthan, Bibirajh** (Mechanical and Mechatronics Engineering)

**Song, Chunyang** (Mechanical and Mechatronics Engineering)

Vanukuri, Pranay Joseph Reddy (Mechanical and Mechatronics Engineering)

**Wang, Jiyuan** (Mechanical and Mechatronics Engineering)

Wang, Xueqi (Mechanical and Mechatronics Engineering)

**Wang, Yiyun** (Mechanical and Mechatronics Engineering)

**Xie, Yutong** (Mechanical and Mechatronics Engineering)

You, Zhenhao (Mechanical and Mechatronics Engineering)

Yuan, Shengyang (Mechanical and Mechatronics Engineering)

**Zhang, Yingqi** (Mechanical and Mechatronics Engineering)

**Zhong, Zhengyang** (Mechanical and Mechatronics Engineering)

**Zhu, Jiapeng** (Mechanical and Mechatronics Engineering)

#### **GRADUATE DIPLOMA**

Blain, Brandon David (Fire Safety)

**Choksi, Mehul Amitkumar** (Design Engineering – Co-operative Program)

**Choodan, Rohit Anoop** (Green Energy)

**Dantuluri, Vivek Sai Raju** (Green Energy)

**Dharmaraj, Kamal Kumar** (Design Engineering – Co-operative Program)

**Jiang, Siyuan** (Design Engineering – Co-operative Program) Khan, Zahid Ali (Green Energy)

Mehta, Tanveer (Green Energy)

Nassif, Dana (Fire Safety)

**Patel, Nisarg Manishbhai** (Design Engineering – Co-operative Program)

Patel, Parth Jitendrakumar (Design Engineering – Co-operative Program)

Shah, Sushim (Green Energy)

Sharma, Arpit (Green Energy)

Sharma, Astha (Green Energy) Sivamyinthan, Bibirajh (Fire Safety)

**Song, Chunyang** (Design Engineering – Co-operative

Program) **Vanukuri, Pranay Joseph Reddy** (Green Energy)

Wang, Xueqi (Design Engineering – Co-operative Program)

Xie, Yutong (Design Engineering – Co-operative Program)

#### **GRADUATE CERTIFICATE**

Azvar, Milad (University Teaching)

Rushton, Mitchell Macleod (University Teaching)

## Undergraduate Degrees

#### **BACHELOR OF APPLIED SCIENCE**

MECHANICAL ENGINEERING Abuabah, Hamza Wael Adamski, Stefan Shanmuha (Welding and Joining Specialization) \* Agrawal, Bhavinkumar Rajeshkumar (Welding and Joining Specialization) \* Ahmed, Ambreen Fathima \* Ahmed, Kareem Akinlalu, Oluwatofunmi (Biomechanics Option) Andrade, Denise Karen \* Andrade, Nicole Lisa Andrejczuk, Maksym Hilyarko Roy \* Anierobi, Chetachukwu Alexis Antzoulidis, Kyprianos Arneja, Dwij \* Avianto, Audrey Vilian \* Balfour, Joshua Kyle \* Barbosa, Linus \* Bentley, Cameron James Beri, George \* Black, Kelsey Korin Blackmore, Daniel Christopher \* Bui. Kevin Camilleri, Theo Carmel \*† Campbell, Aaron Kenneth (Biomechanics Option) Chan, Michelle Chung Si\* Chen. Cliff \* Chen, Shao-Yu \* Chen, Shuoyi (Mechatronics Option) Chen, TianXiang \* Cheng, Justin Guang Yuang \* Cheung Zhang, Kamin Andres (Mechatronics Option) \* Chopra, Anuj \*† Chu, Jonathan Ho-Yin \*† Chuah, Mable Cioceanu, Peter Cornelisse, Peter Staun \*† Cortes, Joseph Winston \* Coutts, Jordan Mitchell (Welding and Joining Specialization) Davis, Emma Grace (Mechatronics Option) \*

de Vries, Matthew Jan Decena, Gabriel Gacutan (Welding and Joining Specialization) \* DeKoter, Calvin Ryan DeKoter, Simon Peter Drost \* Dickson, Andrew Philip (Management Sciences Option) DiGiuseppe, Dante DiTommaso, Rachel Wirsig \* Donald, John Ryan \* Du, Jessica \* Dupuis, Sandrine \* Eistrat, Katrine Johanna \* El Naggar, Tarek Sherif \* Elipse, Angelito A \* Erb, Bronwyn Elizabeth \* Faiella, Matthew \*† Falconer. Alix Hélène \* Farrow, Colin Robert Brayden (Welding and Joining Specialization) \* Fernandes, Kevin Fu, Yu Chun \*† Gandhi, Nikhil \* Gao. Helen Hanzhi \* Garcha, Arnav \*† Gervais, Mathieu Andre \*† Gharehkhani, Siavash (Management Sciences Option) \* Godkin, Lucas Nolan \* Gunaratne, Sanjana Guo, Jia \* Gupta, Aditya \* Haider, Syed Armghan \* Hall, Kyle Christopher (Welding and Joining Specialization) \* Hane, Chung Jay Jackie \* Hanna, John William \*† Hartadi, Vito A.K \* Hdalevich, Leanid (Management Sciences Option) He, Shuo \* Hefner, Kai (Entrepreneurship Option & Mechatronics Option) Ho, Ryan Wesley \* Huang, Wenhao Hudlicka, Peter \*

Huynh, Carmen Iacobucci, Christopher Joel \* Ip, Pak Lam \* Jaffer, Abbas Jiang, Jiadai Jin, Yijie \* Joseph, Tholath Mammen Jung, David Youngjun \* Kaloty, Gurleen Kaur (Management Sciences Option) \*\* Kang, U Chan Kapa, Patryk \* Khouri, Fadi \*† Klosa, Emily Justine (Welding and Joining Specialization) Ko, Byung Min \* Kong, Shirley Kumar, Siddharth (Management Sciences Option) \* Kuyumcu, Zeynep \* Kwong, Donovan Julius (Welding and Joining Specialization) \*\* Lauzon, Seth Jared \* Law, Arion Ga Lae \* Le, Tran Cu Lam \* Lee, Hosoo Léger, Aaron Austin \* Lemus, Dylon Daniel \*† Li, Benjamin Ho-yin \*† Li, Wen Hui \* Lin, Torasan \* Lin, Zhuangzhuang (Environmental Engineering Option) \* Lindstrom-Humphries, Delainey Sybil (Environmental Engineering Option) Macmillan, Corwin Grant Jeon (Mechatronics Option) \* MacRobbie, Connor Jacob \*† Mai, Vivian Ngoc Tram \* Mamidwar, Mehul Abhay \* Masrur, Mahin \* McDonald, Vince Leroy Don (Welding and Joining Specialization) \* McKay, Patrick Charles Mehling, Connor Helmut \*† Miller, Alexander \*

Min, Justin Kuan \*

\* – Distinction

† – Dean's Honours List

#### Montanari, Massimiliano \*

Monte, Daniel John \*†

Moras, Alistair Felix (Welding and Joining Specialization) \*

Mounib, Qays Noor \*

Murray, Sean Alexander (Biomechanics Option) \*†

#### Neate, Ryan Leslie Michael \*

**Nelson, Stefanson Luke** (Welding and Joining Specialization) \*

Nguyen, Bao Anh

Nichols, Leiana Eleanor

Norris, Tyson \*†

**Obadun, David** (Mechatronics Option) \*

Oh, Yuna \*†

#### Orellana Arteaga, Brandon Raul \*

**Pandey, Hanut** (Welding and Joining Specialization) \*

Patel, Shalin \*

**Patel, Shrey** (Management Sciences Option)

Pateman, Christina Sarah \*†

Pavicic, Marco \*

Peifer-Dawson, Jack William (Management Sciences Option) \*

Phang, Steven Thomas

#### Pittis, Gianpaolo Otello \*†

**Popovic, Marko** (Biomechanics Option) \*

**Pugsley, Emma Catherine** (Welding and Joining Specialization) \*

Qadri, Moazam Saif \*

Qadri, Muneeb Saif \*

Qin, Sheng

Qu, Nicholas \*†

Quadri, Amaar \*†

Rahn, Sophia \*

Rattana, Jerica Lee

Renton, Cole Hien-San (Welding and Joining Specialization) \*

Roussel, James George \*†

Ru, Christina \*

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Rybka, Hannah

Sahadeo, Kristoff Stefon (Mechatronics Option) \*

Saini, Mantej Singh \*

Sajjad, Mohammad Mustafa \*

Sangha, Jusroop Kaur \*

Saud Al Faisal, Saud Al Faisal \*

Savage, Jordan Andrew  $^{*\dagger}$ 

**Scheepers, Johann Barry** (Welding and Joining Specialization) \*<sup>†</sup>

Spring 2022 Convocation / UNIVERSITY OF WATERLOO

**Seatle, Hannah Ruth** (Biomechanics Option) \*†

Segel-Brown, Rémy Stanley

Sethy, Karan

Singh, Yuvraj (Economics Minor) \*

Smith, Katherina Lynn \*

Snider, Nathan John \*

**Sobkowicz, Adam** (Welding and Joining Specialization)

Song, Peter Junho \*

Szeliga, Sandra Maria \*

Tagore, Ojaswi

**Talebi, Sepehr** (Artificial Intelligence Option) \*

Tan, Angelina Joy \*

Taylor, Brock Winston \*

Thevarajah, Vageesan \* Tofflemire, Cole Michael

(Mechatronics Option) \*

Traetto, Antonio \*

Tran, Anthony Tuan-Vinh \*

Truong, Jeremy \*†

**Uku, Mitchell Oji Lamogha Sogote** (Management Sciences Option)

Varghese, Sharon Ann (Management Sciences Option) \*

**Vasudevan, Dulasi** (Statistics Option) \*

**Voyer-Nguyen, Pascal Quang** (Biomechanics Option) \*

**Vrban, Nicolas Arthur** (Welding and Joining Specialization)

**Vytlingam, Dennis Michael** (Computing Option) \*

Walsh, Patrick Nicholas

Wang, Jia Bi

Wang, Yanming \*†

Wang, Yiwei (Mechatronics Option) \*

Ward, Carter James \*

Wardell, Eric Steven \*

Waterous, Kieran

Wootton, Michael Charles (Mechatronics Option) \*

Wright, Maclean Henry Arlington

Wu, Aaron

Wu, Winnie \*

Xie, Wei Jun \*

Yadav, Sharang

Yalchin, Zulphkar (Management Sciences Option) \*

Yoo, Heong Joo \*

Zhang, Yang

**Zhong, Yirong** (Management Sciences Option)

#### MECHATRONICS ENGINEERING

Ahuja, Sabar Singh \*

Ali, Adam Syed (Computing Option) \*

Amin, Muhammad Bilal

Andronescu, Tiberiu Andrei \*†

Annis, Mackenzie Ming

Arciszewski, Brendan Dóniz (Computing Option)

Armstrong, Jacob Paul (Computing Option)

**Bai, Xue** (Computer Engineering Option) \*

**Bao, Qinyang** (Artificial Intelligence Option & Computing Option)

**Bariciak, Terrance Marcus** (Artificial Intelligence Option) \*†

Barina, Richard \*

Barkin, Alex Harrison \*†

**Bhalla, Guragam** (Computing Option) \*

Bhavsar, Neel Hirenkumar \*

Birla, Anushka \*

Cai, Cindy Yang \*

Chang, Yu Yuan \*

Chen, Luana \*

Option) \*

Chen. Ziiin

Choi, Eun Seo

Sciences Option)

Daly, Andrew Mark

Deolal, Shashwat \*

De Jesus, Jean Allison

Dewar, Colin Gregory \*

Dighe, Sagar Rajiv \* Drury, Andrew Joseph

Sciences Option) \*

Ebrahim, Ayesha \*

**Bonin, Kalli Emerie** (Management Sciences Option)

**Butler, Rebecca Erin** (Artificial Intelligence Option) \*†

Calen, Nicholas (Artificial

Chan, Brandon Cameron \*

Chen, Xiuyu (Artificial Intelligence

Cheng, Michael Anthony Ling-Foan

Curry, Tristan Storm (Management

Dai, Zhao Feng (Computing Option)

Dugan, Samuel Matthew William

Duo, Benjamin Lan (Management

\* - Distinction
† - Dean's Honours List

Eisler, Kurtis Steven Leroy \*

Crundwell, Craig Deigan \*

Intelligence Option) \*

Chaudhuri, Kaustav \*

**Elsted, Jason Maximillian** (Artificial Intelligence Option & Computer Engineering Option) \*<sup>†</sup>

**Ethier, Martin** (Artificial Intelligence Option) \*<sup>†</sup>

Fernando, Diyane Rochelle (Computing Option) \*†

Ficek, Aleksander Conrad (Computing Option) \*

Fonseca, Brandon Anthony (Artificial Intelligence Option) \*†

Ford, Noah Samuel Robert (Computing Option) \*†

#### French, Rhys Trevor William \*

**Gao, Zixuan** (Artificial Intelligence Option) \*†

Garbe, Julia Kathleen \*

Garro, Gabriella Francesca

**Goold, Ethan** (Artificial Intelligence Option) \*

Grasley, Ethan Mitchell (Management Sciences Option) \*

Gutschon, Jonathan Ernst

Ha, Steven Qi (Computing Option) \*\*

Haas, Cameron Carl \*

Hanna, Mark Emad \*

Haro Muñoz, Alejandro Sebastian (Management Sciences Option) \*

He, Stephen \*

He, Yuchen \*

Hemphill, Dawson James

Houck, Emma Louise \*

Hu, Benjamin Jieming \*†

Huang, JingYue (Computing Option) \*

**Islam, Sumaiya** (Management Sciences Option) \*

Jeyakanthan, Shanika \*

Jimenez Albuja, Kevin Fernando (Management Sciences Option) \*

Jin, Dong Jun \*

Johnston, Brendan Zachary Zilong (Artificial Intelligence Option) \*

Joshi, Avani \*

Juneja, Ansh \*

Jung, Heechul \*

Kaai, Kimathi

**Kapadia, Ariq Firoz** (Management Sciences Option)

Kent, Connor Patrick

Khan, Usman \*

Kim, Dahwan

**Kim, Evan Mathew** (Biomechanics Option) \*

Kim, Na Yeun \*

**Kwong, William** (Management Sciences Option) \*

LaCoste, Garret James

Lai, Jeff Ho Lun (Artificial Intelligence Option) \*

Lam, Matthew Kei Lok

Lawson, Felix Albert \*

Lazo, Jonathan Adalberto

Lee, Eunji

Leite, Ryan John

**Li, Richard** (Artificial Intelligence Option) \*

Li, Sophy (Computing Option) \*

Li, William Hang (Computing Option) \*†

Li, Yilin (Artificial Intelligence Option) \*\*

Li, Yu Cheng \*

Li, Yuan \* Li, Zixuan (Artificial Intelligence Option) \*†

Lin, Derek Yu Xing \*

**Lin, Jonathan** (Computer Engineering Option) \*†

**Lin, Michael Jonathan** (Artificial Intelligence Option)

Lithgow, Ryan Michael \*†

Liu, Patrick \*

Liu, Yihui \*

Lowery, Julian Miles Corak (Computing Option) \*

#### Mackey, Mark

Mackinnon, Jack (Management Sciences Option) \*

Madonia, Nathan Elio \*†

Mao, Jingwen \*†

Marczak, Mikayla Rene \*

Mazumdar, Vishvam (Physics Minor) \*†

McCallum, Connor Peter (Management Sciences Option) \*†

McCauley, Joseph William  $^{st}$ 

Mehta, Laye Amar (Software Engineering Option)

Metke, Liam Ian Andrew (Computing Option) \*†

Mistry, Niel \*†

Mohazab, Danial \*

Morabito, Joseph Luke \*

Mouchantaf, Andrew Joseph

Muchynski, Jacob Riley \*

Mui, William Kenna Kawing \*

Mukalel, Kevin Babu \*

Neil, Emily \*

Nelson, Cameron Charles \*†

Nobile, Martina Ann \*

Oliveira, Julia Magnan

Cavalcante de \*

Paduchowski, Jack Zachary

Paglia, Kaitlyn Sarah

Pan, Zuoxin

Pandya, Rutvik Hiteshkumar \*

Papadopoulos, Daniel Smith \*†

Paredes Cordova, Ronny Patricio (Software Engineering Option) \*

Park, Harim

Park, Jae Hyung \*

Park, Youngchae Emma \*

Parson, Jonathan Michael \*

Patel, Kunj Sandipkumar \*

Patel, Meetkumar Dharmendra (Artificial Intelligence Option)

Petkovic, Alexander Zivorad \*

Phanse, Aniket Saneet \*

**PremAnand, Tanish** (Management Sciences Option) \*

**Raftus, Walter Robert** (Artificial Intelligence Option) \*

Raja, Sai Abhishek (Computing Option) \*

Intelligence Option & Computer

Reynolds, Matthew Takuya (Artificial

Raji, Ashraf

Revaneti, Prashant Ramani

Engineering Option) \*

Robertson, Mark Taylor \*

Rosenberg, Hannah Sara

Option & Artificial Intelligence

Rupa, Cyrus Sorab (Artificial

Salvosa, Malik Omar (Computing

Seunarine, Danielle Joanna \*

Shah, Parth Hitesh (Computing

Sharma, Aayush (Management

Sheth, Vishwa Viren (Artificial

Sibt-E Hassnain, Syed Muhammad

Sivasothy, Aggash (Management

\* – Distinction † – Dean's Honours List

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Saporito, Gerry Kego (Management

Shah, Kathan (Software Engineering

Intelligence Option)

Sciences Option)

Sciences Option) \*

Intelligence Option) \*

Sciences Option) \*\*

(Management Sciences Option) \*\*

Rowe, Nathan Campbell (Computing

Robson, Daniel Liang \*

Rojkov, Brian \*

Option) \*

Option) \*

Option) \*

Option) \*

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#### Skolseg, Andrew Richard \*

Song, Christopher Cunzhi (Computing Option – Mathematics Minor) \*

Song, Nicholas Charles \*

**Soni, Prabhdeep Singh** (Computing Option) \*

Srinivas, Bharath

Stephenson, Samantha \*

Studzinski, Emily \*

Sun, Bi Lun \*

Swift, Samuel Ernest \*

Syrnyk, Braeden Chance (Computing Option) \*

Tahir, Faraz (Biomechanics Option)

Tamboli, Sarthak Manojbhai (Artificial Intelligence Option)

Tenney, Frances Helen \*

Theodore, Nicolas

Thomas, Jonathan James

Tjong, Jonathan David

Tseng-Tham, Caleb Zhi-En \*†

Tuer, Steven Kevin \*

Tung, Dominic \*

van Vliet, Tyko Everest \*†

VanEgdom, Adam Martyn \*†

Veenstra, Michael Melvin \*

Voigt, Ryan Michael \*

Walters, Camille Helena

**Wang, Melvin Ming Chuan** (Artificial Intelligence Option & Computer Engineering Option) \*

Watkinson, James Edward Thomas

**Weisdorf, Daniel Alan** (Computing Option) \*

**Wong, Emily Laura** (Computing Option) \*

Wong, Simon Wing-Dat \*

Wood, Aidan

Workman, Graeme Douglas  $^{*\dagger}$ 

Wu, Baokang

Wu, Jeffrey \*

Yang, Eumin \*†

Yaryshevskiy, Pavel

Yeh, Vincent Yi-Ching \*

**Yuen, Matthew** (Artificial Intelligence Option) \*<sup>†</sup>

Zhang, Jessica (Computing Option) \*†

Zhang, Maria (Computing Option) \*

**Zhao, Leroy** (Artificial Intelligence Option & Computing Option) \*†

Zuo, Tingyun Zwicker, Benjamin Luke \*

\* – Distinction
† – Dean's Honours List



## SATURDAY **NORMAL STATURDAY CERENSES**

Degrees and diplomas from: UNIVERSITY OF WATERLOO FACULTY OF ENGINEERING

## Graduate Degrees

#### **DOCTOR OF PHILOSOPHY**

Alsaedi, Dawood (Electrical and Computer Engineering) "Breast Cancer Detection Using Microwaves and Microwave-Thermography Techniques"

#### Assolami, Yasser Obaidallah

(Electrical and Computer Engineering) "Impact of Residential Prosumer Ownership of Plug-in Electric Vehicles on Voltage Quality and Transformer Aging: Modeling, Assessment and Planning"

Ayoub, Ahmed (Electrical and Computer Engineering) "A Flexible Ultralight Hardware Security Module for EPC RFID Tags"

#### Bamatraf, Saeed Mohammed

(Electrical and Computer Engineering) "Non-Invasive Glucose Monitoring Using Microwave Sensor with Machine Learning"

Botros, Alexander (Electrical and Computer Engineering) "Lattice-Based Motion Planning with Optimal Motion Primitives"

**Chen, Yao** (Electrical and Computer Engineering) "Applying Fully Homomorphic Encryption: Practices and Problems"

**D'Souza, Rollen Sandeep** (Electrical and Computer Engineering) "Algorithmic Transverse Feedback Linearization"

#### Duanmu, Zhengfang (Electrical

and Computer Engineering) "Adaptive Streaming: From Bitrate Maximization to Rate-Distortion Optimization"

El-Sawaf, Heba Imam Ahmed Amin (Electrical and Computer

Engineering) "Shared Aperture 3D-Printed Dielectric Resonator Antenna Arrays for Millimeter-Wave Applications"

#### Espina Gonzalez, Enrique

Antonio (Electrical and Computer Engineering) "Distributed Secondary Control of Hybrid AC/DC Microgrids"

#### Ferreira Zambroni de Souza, Matheus (Electrical and Computer Engineering)

"Self-Scheduling Operations of a Compressed Air Energy Storage Facility Under Uncertainties" **Gholamian, Sina** (Electrical and Computer Engineering) "Logging Statements Analysis and Automation in Software Systems with Data Mining and Machine Learning

Techniques'

Gomes, Adam Daniel (Electrical and Computer Engineering) "Hedging in a Financial Market with Regime-Switching"

#### Guzman Encalada, Noela Sofia

(Electrical and Computer Engineering) "Dynamic Modelling and Performance Analysis of Energy Storage Systems for Frequency Regulation in Bulk Power Systems"

Jia, Huayong (Electrical and Computer Engineering) "High-Q Millimeter Wave RF Filters and Multiplexers"

#### Liddy, Madelaine Susan Zoritza

(Electrical and Computer Engineering - Quantum Information) "Optimal Control Theory Techniques for Nitrogen Vacancy Ensembles"

Mehemed Elkeshreu, Husein (Electrical and Computer Engineering) "Algorithm Selection in Multimodal Medical Image Registration"

**Mirosanlou, Reza** (Electrical and Computer Engineering) "Adaptive Dual-Mode Arbitration for High-Performance Real-Time Embedded Systems"

Mohamed, Nancy (Electrical and Computer Engineering) "Cyber-Physical Resilience Enhancement Strategies for Modern Power Grids"

**Olaimat, Melad Marzouq** (Electrical and Computer Engineering) "Electromagnetic Energy Harvesting"

Pape, Marten (Electrical and Computer Engineering) "An Offshore Wind Farm Featuring Differential Power Processing"

Raeesi, Amir (Electrical and Computer Engineering) "Phased-Array Antenna-in-Package Technology for Emerging Millimeter Wave Applications"

#### Sadeghianlemraski, Mozhgan

(Electrical and Computer Engineering - Nanotechnology) "Investigating the Influence of Electron Extraction Layers on the Photostability of Inverted Organic Solar Cells"

**Shantta, Kalifa** (Electrical and Computer Engineering) "Brain Tumor Diagnosis Support System: A Decision Fusion Framework"

Soltani, Mohammad (Electrical and Computer Engineering) "Miniaturization of Multiplexed Sensor for Continuous Health Monitoring Systems"

Srivastava, Rachna (Electrical and Computer Engineering) "Hardware Implementation of Fixed-Point Decoder for Low-Density Lattice Codes"

**Thakur, Shailja** (Electrical and Computer Engineering) "Security and Interpretability in Automotive Systems"

#### **MASTER OF APPLIED SCIENCE**

**Abedi, Sina** (Electrical and Computer Engineering)

Abraham, Kevin Mathew (Electrical and Computer Engineering)

**Anabestani, Hossein** (Electrical and Computer Engineering)

**Argasinski, Hubert** (Electrical and Computer Engineering)

**Cao, Yushi** (Electrical and Computer Engineering)

**Chan, Long Chung** (Electrical and Computer Engineering)

**Chowdhury, Sakib Mohammad** (Electrical and Computer Engineering)

**Demirci, Yekta** (Electrical and Computer Engineering)

**Dib, Mohammad** (Electrical and Computer Engineering)

**Downie, Andrew Coleman** (Electrical and Computer Engineering)

**Elmor Lang, Ian** (Electrical and Computer Engineering)

**Esanu, Bianca** (Electrical and Computer Engineering)

Feng, Yiting (Electrical and Computer Engineering)

**Garrow, Turner** (Electrical and Computer Engineering - Quantum Information)

**Gross, Aaron** (Electrical and Computer Engineering)

**Gu, Sunsheng** (Electrical and Computer Engineering)

**Guler, Goksen Umut** (Electrical and Computer Engineering)

**Guo, Qiang** (Electrical and Computer Engineering)

**Guo, Xinyu** (Electrical and Computer Engineering)

Hajbagheri, Amirhossein (Electrical and Computer Engineering)

Helal, Sherin Adel (Electrical and Computer Engineering)

Hossein Abbasi Abyaneh, Ali (Electrical and Computer Engineering)

Huang, Yiqin (Electrical and Computer Engineering)

**Iman, Aliasghar** (Electrical and Computer Engineering)

**Krishnan, Ashwin** (Electrical and Computer Engineering)

Kuttuva Prakash, Srinirdheeshwar (Electrical and Computer Engineering)

Lappalainen, Andrew James (Electrical and Computer Engineering)

**Liang, Qian** (Electrical and Computer Engineering)

Mellat, Alireza (Electrical and Computer Engineering)

**Nguyen, Van Duong** (Electrical and Computer Engineering)

**Pan, Anni** (Electrical and Computer Engineering)

**Pitropov, Matthew Alexander** (Electrical and Computer Engineering)

**Priya, Siddharth** (Electrical and Computer Engineering)

**Ray, Indrani** (Electrical and Computer Engineering)

**Samiezadeh, Sohrab** (Electrical and Computer Engineering)

**Smajevic, Armin** (Electrical and Computer Engineering)

**Soudi, Najiba** (Electrical and Computer Engineering)

**Strike, Zachary Aaron Charles** (Electrical and Computer Engineering - Nanotechnology)

**Sun, Chen** (Electrical and Computer Engineering)

**Toor, Tejvinder Singh** (Electrical and Computer Engineering)

**Wang, Di** (Electrical and Computer Engineering)

**Wang, Luyao** (Electrical and Computer Engineering – Quantum Information)

Yan, Zheng (Electrical and Computer Engineering)

**Ye, Xuehan** (Electrical and Computer Engineering)

**Yu, Hang** (Electrical and Computer Engineering)

**Zhang, An Qi** (Electrical and Computer Engineering)

#### **MASTER OF ENGINEERING**

Harnoor Singh (Electrical and Computer Engineering)

**Prabhdeep Kaur** (Electrical and Computer Engineering)

Abid Hussain, Muhammad Musa K (Electrical and Computer Engineering)

Ahjolia, Ayushi Hiteshbhai (Electrical and Computer Engineering)

Ahwin, Oghenerukevwe Emmanuel (Electrical and Computer Engineering)

**Ajayi, Olohireme Omoefe** (Electrical and Computer Engineering)

Allanah, Francis Nduka (Electrical and Computer Engineering)

Ambasana, Aakruti Anilbhai (Electrical and Computer Engineering)

Asim, Waqas (Electrical and Computer Engineering - Electric Power Engineering)

**Azeem, Khadija** (Electrical and Computer Engineering)

**Baashn, Tamam Ali Saeed** (Electrical and Computer Engineering)

**Balamurugan, Rahul** (Electrical and Computer Engineering)

Bangalore Sampath Kumar, Kaushal Kiran (Electrical and Computer Engineering)

**Bhatt, Niralee Dhrupad** (Electrical and Computer Engineering)

**Chahal, Arminder Kaur** (Electrical and Computer Engineering)

**Chebolu, Pragnya** (Electrical and Computer Engineering)

**Chen, Xiyuan** (Electrical and Computer Engineering)

**Chen, Zitao** (Electrical and Computer Engineering)

**Cheng, Yuanhui** (Electrical and Computer Engineering)

**Chow, Philip Mark** (Electrical and Computer Engineering - Electric Power Engineering)

**Dave, Atit Jayeshbhai** (Electrical and Computer Engineering)

**Deng, Zile** (Electrical and Computer Engineering)

**Dhanani, Jaitoon Sanjaykumar** (Electrical and Computer Engineering)

**Dharmarajan, Kavichandiran** (Electrical and Computer Engineering)

**Dhir, Sucheta** (Electrical and Computer Engineering)

**Dingria, Rahul Gobindram** (Electrical and Computer Engineering)

**Du, Jiayun** (Electrical and Computer Engineering)

**Elekwa, Uchechukwu McDaniel** (Electrical and Computer Engineering)

Feng, Zixuan (Electrical and Computer Engineering)

**Fu, Zhenggang** (Electrical and Computer Engineering)

**Ganesan, Harish Iyer** (Electrical and Computer Engineering)

**Ganeshna, Jaya Sriram** (Electrical and Computer Engineering)

**Gao, Yu** (Electrical and Computer Engineering)

Gaytan Lopez, Lluvia Lizeth (Electrical and Computer Engineering - Electric Power Engineering)

**Gehlan, Anshuman** (Electrical and Computer Engineering)

**Gerard Anand, Merin Sam** (Electrical and Computer Engineering)

**Guo, Lianxi** (Electrical and Computer Engineering)

**Gupta, Sayantan** (Electrical and Computer Engineering)

Han, Qianli (Electrical and Computer Engineering)

Hossein Abadi, Katayoun (Electrical and Computer Engineering)

Humayun, Sarim (Electrical and Computer Engineering)

Iftekhar, Dewan (Electrical and Computer Engineering)

Imhanzenobe, Jubilee AirenIosa (Electrical and Computer Engineering)

**Jacob, Anson** (Electrical and Computer Engineering)

Jariwala, Deep Ashish (Electrical and Computer Engineering)

Jaydeep Singh, Jaydeep Singh (Electrical and Computer Engineering)

**Joseph, Tarun** (Electrical and Computer Engineering)

**Kaur, Ishpinder** (Electrical and Computer Engineering)

**Kedia, Jugal Haresh** (Electrical and Computer Engineering)

**Kesamsetty, Sai Krishna** (Electrical and Computer Engineering)

Keunen, Benjamin Frank (Electrical and Computer Engineering)

Khoshparvar, Arash (Electrical and Computer Engineering)

**Kumar, Ajay** (Electrical and Computer Engineering)

**Kumar, Ayush** (Electrical and Computer Engineering)

Kundu, Samapti (Electrical and Computer Engineering)

**Li, Jianing** (Electrical and Computer Engineering)

**Li, Yuting** (Electrical and Computer Engineering)

**Liu, Xiaotong** (Electrical and Computer Engineering)

Madaan, Harshit (Electrical and Computer Engineering)

Mahashabde, Amruta Girish (Electrical and Computer Engineering)

Mahmud, Kashfia Binte (Electrical and Computer Engineering)

Mascaretti, Juan Pablo (Electrical and Computer Engineering)

**Mistri, Neha Hiteshbhai** (Electrical and Computer Engineering)

**Mohammed, Najeebuddin** (Electrical and Computer Engineering)

Mustafa, Faizaan Mohammed (Electrical and Computer Engineering)

Nachit, Abdelkhalek (Electrical and Computer Engineering)

Nagi Makki Hassan, Rayan (Electrical and Computer Engineering)

Nallan Chakravarthula, Sri Harsha (Electrical and Computer Engineering)

**Neelisetty, Sai Anurag** (Electrical and Computer Engineering)

**Okpala, Walter Chiemela** (Electrical and Computer Engineering)

**Pakanati, Uttej Reddy** (Electrical and Computer Engineering)

**Pala, Akshay** (Electrical and Computer Engineering)

**Pan, Yitao** (Electrical and Computer Engineering)

**Pan, Yuhui** (Electrical and Computer Engineering)

**Panchal, Rajvi Nilesh** (Electrical and Computer Engineering)

**Parikh, Sayonee Bimal** (Electrical and Computer Engineering)

**Patel, Kashyap Ashokkumar** (Electrical and Computer Engineering)

**Patel, Meet Manojkumar** (Electrical and Computer Engineering)

**Patel, Urviben Arvindkumar** (Electrical and Computer Engineering)

**Patel, Vasu Jayeshkumar** (Electrical and Computer Engineering)

**Pettigrew, William Travis** (Electrical and Computer Engineering - Electric Power Engineering)

**Prabhuram, Malavika** (Electrical and Computer Engineering)

**Qian, Jiawei** (Electrical and Computer Engineering)

**QIU, BINGCHANG** (Electrical and Computer Engineering)

**Qiu, Leming** (Electrical and Computer Engineering)

**Qiu, Yunyi** (Electrical and Computer Engineering)

**Rakheja, Akshay** (Electrical and Computer Engineering)

Ramalingam, Sindhumathi (Electrical and Computer Engineering)

Saini, Harkirat Singh (Electrical and Computer Engineering)

**Savani, Charmi Babubhai** (Electrical and Computer Engineering)

**Sekar, Sindhusekar** (Electrical and Computer Engineering)

**Shafique, Duaa** (Electrical and Computer Engineering)

**Sharma, Anamika** (Electrical and Computer Engineering)

**Sharma, Chandeep** (Electrical and Computer Engineering)

**Sharma, Pranay** (Electrical and Computer Engineering)

**Shen, Tongning** (Electrical and Computer Engineering)

**Sheng, Ze** (Electrical and Computer Engineering)

**Singh, Mudit** (Electrical and Computer Engineering)

**Sivashanmugam, Sangar** (Electrical and Computer Engineering)

**Syed, Hasnain** (Electrical and Computer Engineering)

Themistokleous, Theodoros Georgios (Electrical and Computer Engineering)

**Thompson, Tolulope Olatunde** (Electrical and Computer Engineering)

**Vaghasiya, Mili Dilipkumar** (Electrical and Computer Engineering)

Valivarthi, Nikhila (Electrical and Computer Engineering)

Wadhwa, Aayush (Electrical and Computer Engineering)

Wagh, Aishwarya Sureshrao (Electrical and Computer Engineering)

**Wang, Lu** (Electrical and Computer Engineering)

**Wang, Lu** (Electrical and Computer Engineering)

Wang, Ruowang (Electrical and Computer Engineering)

Wang, Yiran (Electrical and Computer Engineering)

**Wu, Haocheng** (Electrical and Computer Engineering)

**Xi, Hongyu** (Electrical and Computer Engineering)

**Xia, Haoyuan** (Electrical and Computer Engineering)

Xing, Huadong (Electrical and Computer Engineering)

**Xu, Jiarui** (Electrical and Computer Engineering)

**Xu, Yi** (Electrical and Computer Engineering)

**Xu, Zishuo** (Electrical and Computer Engineering)

**Yazdpour, Erfan** (Electrical and Computer Engineering)

**Ye, Linfeng** (Electrical and Computer Engineering)

**Yu, Donghong** (Electrical and Computer Engineering)

Yuan, Meng (Electrical and Computer Engineering)

**Zhai, Yueting** (Electrical and Computer Engineering)

**Zhang, Yuxi** (Electrical and Computer Engineering)

**Zhao, Fanchao** (Electrical and Computer Engineering)

**Zhao, Meng** (Electrical and Computer Engineering)

**Zhu, Linfeng** (Electrical and Computer Engineering)

**Zou, Tianyi** (Electrical and Computer Engineering)

## Undergraduate Degrees

#### **BACHELOR OF APPLIED SCIENCE**

COMPUTER ENGINEERING Abdullah, Ahmad \* Abdullahi, Fatum Aggarwal, Saksham \* Agrawal, Devanshu \* Agrawal, Prarabdha \* Ahmed, Waleed \* Alapati, Bhavya Meghana (Entrepreneurship Option) \* Alashqar, Omar Ayman Ahmad \*† Ali, Selina (Management Sciences Option) \* Anand, Sidhaant (Artificial Intelligence Option) \*\* Antao, Jason Savio \*† Arbiv, Yoav \* Arias, Steve \* Arora, Aditya (Artificial Intelligence Option) \*† Azimi-Tabrizi, Amirali \* Baig, Mohamed Hamza Ali \* Bansal, Prateek \* Barbulescu, Alexandru Stefan \*† Barker, Connor Peter \* Barton, Wesley Huie \*† Bhatia, Aditya \* Bhatia, Kiran Singh (Entrepreneurship Option) \* Bhatia, Parampreet Singh \* Bhattacharya, Shovnik \* Boddu, Satish \* Bonifacio, James Paul Lezada Bonnell, Matthew Douglas Cullen Boparai, Aikam Singh \* Branton, Mark Stanley Leonard \* Brar, Aman \* Burnett, Tobi Alana \* Caloian, Stefan Capombassis, Jack Panos Ian \* Catalig, Kyle Reyes \* Catral, Satchel Armena \* Chan, Callum Van \*† Chen, Han Xiao \* Chen, Wengian (Mathematics Minor) \* Chen, Yi (Artificial Intelligence Option) \* Chen, Yumeng Chong, Norman Way-Long Chung, Jonathan Tinlai \*† Cortez, Godfrey Joseph Cajucom \* Cousineau, Simon Roussel (Entrepreneurship Option) \*\* Dai, Linchuan Leon \* Datta, Shounak \* Denno, Zain Devasagayam, Brian Adam \* Devos, Tristan Donald Robert \* di Prata, Camillo Olindo \* DiBattista, Tyler Lyndon Drapeau, Justin Mathieu \*† Duffy, John Christopher Vincent \* Fan, Jiajun \*† Fatakdawala, Murtaza Aziz \* Finch, Benjamin Cecil \* Gan, Wenson Gao, Fuhai \* Gathieswaran, Janujan \* Ge, Wen Yu \* Goczi, Dora Beata \* Goel, Daivik (Management Sciences Option) \* Goldsmith, Jeffrey Elias \* Goutsev, Alexander \*† Goyal, Aryan \* Gu, Cheng \* Gu, Frank Xinyu \*† Guo, Hongyu \* Guo, Jerry \* Ha, Buu Quang \* Hachem, Joey Hadlaw, Patrick Stanislaw \* Haffar, Raymond \* Haider, Naziba \* Han. Yunzhi Hao, Max Yiming \*† Hao, Tiger \*† Hariharan, Priyanka (Management Sciences Option) \* Hejabian, Aidin

Hicks, Gary Jinghua \*† Ho, Gregory Robin \*† Houmani-Farahani, Borna \*† Hsu, Yu-Hsiang \* Hua, Jack \* Huang, Jin Tian \* Huang, Kaisheng Huang, Shan (Computer Engineering & Joint Honours Psychology) \* Hyder, Syed Areeb Hyun, Steven Seungjun \*† Ishraq, Shwapneel Islam. Russell \*† Ivanovska, Marija \* Iyer, Gaurav Swaminathan Jacobsen, Ben Brubacher \* Jain, Naman \* Jain, Yeshu (Artificial Intelligence Option) \*\* Jamal, Muhammad Adil Jha, Manish Jiang, Shangcheng \* Jin, Andy \* Joshi, Anantjit \* Kabani, Rohail \* Kamaleddine, Laith \* Kang, Indraj Singh Kappen, Tony \* Karray, Malek \* Karthikeyan, Hariharan (Artificial Intelligence Option) \*1 Kaul, Abhishek \* Khanna, Anish \* Kidd, Thomas Joseph \* Kim, Donghyuk \* Kim, Jun-Gwon Kim, Sangwoo \* Kingdon, Connor Logan \* Kong, Willa \*† Koul, Sneh \* Kumar, Rohan \* Lam, Hok Yin \* Lam Astudillo, Walter Alejandro Lee, Ka Hei \* Lee, Ken Ming \*†

\* – Distinction

† – Dean's Honours List

Lei. Qian \*† Leung, Michael Hin-To (Artificial Intelligence Option) \* Li. Eric Jasin Li, Linghan (Artificial Intelligence Option) \* Li, Yaxuan \* Li, Yi Cheng \*† Li. Yifan \* Li. Yuai \* Li, Zhuo Ran \* Liaw, Clement Kin Luk \* Lin, Stephen Yanghao \*† Liu, Shiji \* Liu, Shuhong (Artificial Intelligence Option) \* Lo, Tsz Seng Lincoln \* Lozhkin, Emma \* Lu. Zhan Yuan \* Ma. Lee \* Ma, Lichen \* Madan, Shaurya \* Mahmood, Iqra (Artificial Intelligence Option) \*\* Malik. Aser Hasan Matthews, Thomas Cameron \* McClure, Colin \* McCormick, Daniel Abraham \*† Mehta, Rhea Ketan \* Meng, Michael \* Mheir-El-Saadi, Maxine \* Mills, Colton Wesley Moonesawmy, Vishagen \* Mowrey, Sean (Entrepreneurship Option) \* Mu, Xiao Tong \* Mukherjee, Sohini (Artificial Intelligence Option) \*\* Myshakov, Illya Nagarsheth, Rushil Nileshkumar \* Najarian, Michel Georges \* Naumani, Saud Syed Muhammad \* Naurahee, Kirath Navajeevayokan, Tharseken \*† Nguyen, Bruce \*† Nguyen, Nguyen Dinh (Management Sciences Option) \* Nielsen, Matthew David \* Nikseresht, Mohammad Ali \*† Olteanu, Paul Anthony Ou, Yu Xuan \*

Palathunkal, James \* Pan, Jeffrey \*† Pan, Zheng \* Panchal, Shyam \* Paruthi, Veraj \*† Patel, Ankil \* Patel, Dhviti Jignesh (Management Sciences Option) \* Patel. Shahil \* Patel, Tirth Upendrabhai Pattni, Deven Rajesh (Management Sciences Option) \* Pirani, Aakash Afzal \*† Pletch, Nicholas Scott Tomlinson \* Pokhrel, Binil \*† Porat, Aylon Chaim \*† Quiambao, James Nicollier Qureshi. Azfaar Rehman \* Radford, Zachary James \* Rae, Andrew Jurgen \*† Rajagopalan, Akshaya Rangith, Rahul \*† Ravindran, Vianesh Ramakrishnan \* Rivas-Bonilla, Jose Luis \* Sahi, Jasman Singh \* Saini, Anubhav \* Salamadze, Nika \* San Martin Ferreira, Gustavo \* Schmied, Ryan Michael Shafiq, Uzair Shah, Muhammad Sibahatullah \* Shaikh, Abdulmateen Irfan \* Sharma, Aditya \* Shrivastava, Jayant \*† Sikka, Raghav \* Simmons, Darcy Robin Anderson \* Singh, Aryan Kushagra (Artificial Intelligence Option) \* Solanki, Vatsal \*† Somaskanthan, Sharan \* Song, Jia Ming Srinivas, Aishwarya \* Steneker, Ian Hugh \* Stephen, Andrew Matthew \* Stokes, Matthew Kevin (Artificial Intelligence Option) \* Su, Tong \*† Su, YaHeng \* Subramanian, Subramanian (Entrepreneurship Option) \*

Sun, Jonathan Shiu Ping \* Syal, Sanuj Sykora, Jacob Harrison \* Tan, Aaron Hofong Kefeng \* Tang, Anson Ho Pak \* Tao, Shuyi \* Tagizadeh Ganji, Azin (Artificial Intelligence Option) \*\* Tesfai, Daniel Michael \* Thiyaageswaran, Thulasika \* Tian, Yuda \* Tian, Yunfei Toyonaga, Robert Daniel \* Tsimkin, Artiom \* Ur-Rehman, Yuneeb \* Vajpayee, Samanvay \* Vannithamby, Ganashsai Koneswaran \* Vassilev, Anton Vesselinov \* Vasudevan, Aarti Vela, Timothy Jordan \* Vidovic, Dennis \* Vii. Shivansh \* Vinodh, Anuraa \* Walker, William Robert \* Wang, Shenjie \* Wang, Shihui (Management Sciences Option) \*\* Wang, Xinzhe (Artificial Intelligence Option) \*† Wang, Yifan \*† Warnar, Ethan Noel Peter \* Weninger, Cole Garrett \* Wigglesworth, Darius Andrew \* Williams, Daniel Douglas Glyn \* Wong, Hiu Wai \* Wong, Justin Aaron \* Wu, Bozhou Wu. Yuhan \* Xian, Jason \* Xian, William Mengxiong \* Xie, David (Artificial Intelligence Option) \* Xie, Feiyi \* Xie, Yuan \* Xing, Andrew \* Xu, Jian Peng Yang, Raymond Lichun \*† Yang, Zhicong \* Ye, Hanyuan \*

 <sup>\* –</sup> Distinction

<sup>† –</sup> Dean's Honours List

Ye, Sophia \*† Ye, Yunhan \* Yu, Heng Cheng Yuan, Bailan \* Yuan, George Zhihua \* Yuen, Jeffrey Wai Yin \* Yung, Marcus \* Zabihiyan, Bayan Jordan \* Zarebidaky, Reza \* Zeng, Aron \* Zhang, Daniel Now \* Zhang, Xiaoyu \* Zhao, Mengyue Zhou, Borui \* Zhou, Zipian \*† Zhu, Mingjie Zia, Yusef Abdallah \*†

ELECTRICAL ENGINEERING Al-Ajeel, Maryam \* Ali, Yousuf Hamdy Fahim (Artificial Intelligence Option) \*1 Alvarez Lopez, Christian Andres Bacani, Michael Roy (Economics Minor) \* Balaban, Josip Baveja, Sidharth \* Berbari, Farid-Anthony \* Blatt, Emma Lena Bortoff, Zachary Roland \* Bradley, Shaun Dylan \* Cao, Derek The-Dinh Chen, Qingyu \* Chepuru, Mahadeva Colucci, Jonathan Lucas \* Cupryn, Jacob \* Dubrick, Robert James \* Durrant, Lucas Robert \* Fang, Wenkai \* Feng, Yijing (Psychology Minor) \*\* Francis, Reeve Douglas Gaetan, Alicia Lynn \* Giebat, Jason Andrew Goodwin, Mackenzie James \* Gupta, Naman Sanjeev Han. Yufei Hare, Atticus Robert Hoyt, Mitchell Clifford Johnston, Nathaniel Ho-Wah \*† Kim, Ho June (Physical Sciences

Option) \*

Lam, Victor \* Lau, Jordan \* Lee, Veronica Kuo-Hui \* Leung, Brianna Li, Eric \* Lim, Thomas Kean Yi Liu, Haotong \*† Liu, Jingting (Management Sciences Option) Liu, Yu Yang Lowe, Bryden \* Marlow, Jack Frederick Martinez Chung, Andrea Mathews, Hannah \* Matyszczuk, Michael Kevin \* McLachlan. Shane Burns \* Metz, Noah Thomas Muratovic, Hanna \* Naik, Priyanka Narendran, Varan \* Ng, Bryant Kee Chun (Management Sciences Option) Parkin, Julian Thomas (Computing Option - Combinatorics and Optimization Minor) \*† Rennick, Elaine Jordan Sahba, Faraz (Physical Sciences Option) \* Saleem, Muhammad Bilal Bilal \* Saplagio, Ylrish Gwen Stephanie Gomez \*† Shen, Ziyang (Psychology Minor) Shi, Diwen \* Singh, Karan Preet \* Sivagnanenthirarajah, Ganan Smith, Jacob Bentley Sockabasin, Clayton Raymond Soliman, Amir Waleed Sridhar, Aneesh \* Tang, Jia Ming \*† Teper, Zachary \* Thomas, Riley Steven \* Tong, Si Yuan \* Unnikrishnan, Gokul \* Velasco Arteaga, Geisson Oswaldo \* Wu, Jun \* Wu. Tie Fu \* Yan, Zhiwei Yin. Yue \* Yu, Christopher Thomas \*† Yu, Yi Fan \*†

**Yuan, Yujia** (Physical Sciences Option) \*†

**Zhang, Runqi** (Management Sciences Option) \*

Zhang, Wan Xin \*† Zhao, Ling Yu \*†

\* - Distinction
† - Dean's Honours List



# AFTERNOON CEREMONY

Degrees and diplomas from: UNIVERSITY OF WATERLOO FACULTY OF ENGINEERING

## Graduate Degrees

#### **DOCTOR OF PHILOSOPHY**

Achebe, Jessica Chinwe (Civil Engineering)

"Incorporating Environmental Sustainability into Pavement Design and Management"

Adeli, Parvin (Chemical Engineering – Nanotechnology) "Synthesis, Crystal Structure and Performance of Solid Electrolytes for Lithium and Sodium Solid–State Batteries"

Agarwal, Piyush (Chemical Engineering) "Application of Deep Learning in Chemical Processes: Explainability, Monitoring and Observability"

#### Alkatheri, Mohammed Adel

(Chemical Engineering) "Data-Driven Optimization: Applications to Energy Infrastructure and Process Industry"

Ataeian, Parinaz (Chemical Engineering - Nanotechnology) "Application Of Cellulose Nanocrystals (CNCs) in Emulsified Asphalt"

Bhih, Moneer (Civil Engineering) "Integrated Daily Windows and Butfor Analyses for Accurate Schedule Forensics in Construction Projects"

#### Cao, Xiaotong (Chemical

Engineering)

"Separation of Phenols and Aniline From Water Streams Using Poly(Ether-Block-Amide) Membranes"

#### **Carvalho, Mariana** (Chemical Engineering)

"Empirical, Mechanistic, and Hybrid Models for Mammalian Cell Cultures"

**Chow, Heline** (Civil Engineering -Water)

"The Treatment of High Hardness Waters by Electrocoagulation: Factors Affecting Contaminant Removal, Electrode Fouling, and Precipitate Separation"

#### Fong, Stanley Hofai (Civil Engineering)

"Unsupervised Methods of Condition-Based Maintenance in Non-Stationary Operating Conditions"

#### Islam, Muhammad Shahidul

(Chemical Engineering – Nanotechnology) "Functional Polysaccharide Nanomaterials (PS-NMs) For the Reduction of Elevated Serum Cholesterol & Progressive Diet-Induced Obesity (DIO): A 'Novel' Application of PS-NMs"

Liang, Wanhua (Civil Engineering) "Fatigue Design and Behavior of Carburized Steel"

#### **Logan, Megan** (Chemical Engineering)

"Development of a Serum-Free Chemically Defined Medium for Adherent and Suspension Culture"

Mostafa, Kareem Tarek Mohamed Mohamed (Civil Engineering) "Machine-Learning Framework for Efficient Multi-Asset Rehabilitation Planning"

**Ni, Frank Mi-Way** (Civil Engineering) "Lightweight Cellular Concrete: Applicability of Pavement Subbase Layer Materials"

#### **Poddar, Tuhin Kanti** (Chemical Engineering)

"Optimal Design and Operation of Polygeneration Systems Incorporating Renewable Energy Sources and Chemical Production"

#### Ramachandra Prabhu, Sreehari

(Civil Engineering) "Development of Probabilistic Finite Element Models for Assessment of Deformation in CANDU Fuel Channels"

**Ranjram, Mark** (Civil Engineering -Water)

"Upscaling of Lateral Groundwater Flow Processes in Watershed Models"

#### Sharif, Mohammad-Mahdi (Civil Engineering)

"Integration of 3D Feedback Control Systems for Fabrication of Engineered Assemblies for Industrial Construction Projects"

Skwaruk, Jesse (Civil Engineering -Water)

"Drinking Water Treatment Technology Resilience for Management of Severely Deteriorated Water After Wildfire" Tabassum, Abid (Civil Engineering) "Development of CPATT Database and Quality Control Checks for Concrete Pavement Field Data"

Tao, Chen (Civil Engineering - Water) "Characterization of Tertiary Membrane Fouling in Cold Climates"

#### Valipour, Mahshad (Chemical Engineering)

"Novel Methodologies in State Estimation for Constrained Nonlinear Systems Under Non-Gaussian Measurement Noise & Process Uncertainty"

Wakefield, Amma (Civil Engineering) "Development of a Framework to Evaluate Asphalt Binder and Plant Produced Asphalt Mixes for Acceptance in Canada"

**Wang, Xuezhen** (Chemical Engineering) "Development of Oleophilic

"Development of Oleophilic Membranes for Volatile Organic Compound and Nitrogen Separation"

**Zhang, Maiwen** (Chemical Engineering) "Porous MXene Synthesis and Applications for Batteries"

**Zhao, Yinghui** (Civil Engineering) "Optimal Packing of Irregular 3D Objects For Transportation and Disposal"

#### **MASTER OF APPLIED SCIENCE**

**Abdi Kordlar, Haniye** (Chemical Engineering)

**Aggarwal, Chahat** (Chemical Engineering)

**Aguas, Oriana Isabel** (Civil Engineering)

**Allen, Benjamin Luke** (Civil Engineering)

Amini, Nima (Chemical Engineering)

**Beg, Mirza Shoaib** (Chemical Engineering)

**Budwal, Iqbal Singh** (Civil Engineering)

Cai, Yi (Civil Engineering)

**Chen, Chuhua** (Chemical Engineering)

**Cleroux, Maxime Daniel** (Civil Engineering)

Cui, Linan (Chemical Engineering)

Feng, Fan (Chemical Engineering)

Fluegel, Nigel Benjamin Grey (Civil Engineering)

Ghareeb Mohamed, Tarek Gamalelden (Civil Engineering)

**Golchi, MohammadSina** (Civil Engineering - Water)

**Guiao, Karelle Seno** (Chemical Engineering)

Haji, Fatemah (Chemical Engineering - Nanotechnology)

**Jiang, Yunsheng** (Chemical Engineering)

**Khezrian, Mehrdad** (Chemical Engineering - Water)

**Lall, Davinder Singh** (Chemical Engineering)

Mavani, Bhoomi Het (Chemical Engineering)

**Morsy, Omar Usama** (Chemical Engineering)

**Nallathamby, Punith Dev** (Civil Engineering)

**O'Callaghan, Robert Benjamin** (Civil Engineering)

Orr, Andrew Kevin (Civil Engineering)

**Polena, Joan** (Chemical Engineering)

**Preston, Nicholas Alexander** (Chemical Engineering)

**Qiu, Siyuan** (Civil Engineering) **Rahimijurabi, Roozbeh** (Civil

Engineering)

Rodríguez Vera, Héctor Uriel (Chemical Engineering)

**Saggu, Gurkamal** (Chemical Engineering)

Seward, Caleb Etienne Silas (Chemical Engineering)

Shoueb, Mohamad Basel Basam (Civil Engineering)

Trinh, Binh Minh (Chemical Engineering)

**Wu, Yan** (Chemical Engineering -Nanotechnology)

Yang, Fook Yee (Civil Engineering)

Yin, Zhaoyi (Chemical Engineering – Nanotechnology)

**Zhao, Feng** (Chemical Engineering – Nanotechnology)

#### **MASTER OF ENGINEERING**

Akhavan, Mohammad (Civil Engineering)

**Bajwa, Jamal Mohsin** (Chemical Engineering)

**Durán Ruiz, Lila Alessandra** (Chemical Engineering)

**Duscio, Mario Stewart** (Civil Engineering)

Good, Michael (Civil Engineering)

**Grace Mohan, Reshma** (Civil Engineering)

Ideva, Joshua Chukuka (Chemical Engineering)

Ikhlas, Farzan (Chemical Engineering)

Izere, Guy-Yguel (Civil Engineering)

**Jankhani, Sara** (Chemical Engineering)

**Kim, Jinhyoung** (Chemical Engineering)

**Lenci, Cary Anne** (Chemical Engineering)

**Li, Jiaqi** (Civil Engineering)

Math, Kartik Shivsharnayya (Chemical Engineering)

**Mughal, Muhammad Adeel** (Civil Engineering)

Nezamifar, Ehsan (Civil Engineering)

**Patel, Yash Sunilbhai** (Civil Engineering)

Pershina, Jenny (Civil Engineering)

Robinson-Priestley, Dustin (Chemical Engineering)

**Shah, Meet Pankaj** (Chemical Engineering)

**Sharma, Aakanksha** (Civil Engineering)

Thakar, Vidhi Mahesh (Civil Engineering)

**Usmani, Saad Ali** (Chemical Engineering)

**Veeramachaneni, Manoj** (Civil Engineering)

Wang, Yizhe (Civil Engineering)

Zhang, Huicheng (Civil Engineering)

#### **GRADUATE CERTIFICATE**

Lakshminarasimman Meanakshi Se, (University Teaching)

Narasimman

Mostafa, Kareem Tarek Mohamed Mohamed (University Teaching)

# Undergraduate Degrees

#### **BACHELOR OF APPLIED SCIENCE**

#### CHEMICAL ENGINEERING

Ah-Leung Ha-Hok, Tracyl Clarinda (Chemical Process Modelling, Optimization and Control Specialization) \*

**Alwaheidi, Jasmine** (Management Sciences Option) \*<sup>†</sup>

Ancimer, Elena Renée (Materials and Manufacturing Processes Specialization) \*

Aziz, Mohammed Ahnaf \*

**Bagnall, Jaxon Freeman Erroll** (Materials and Manufacturing Processes Specialization) \*

Bartman, Samantha Eleanor (Biomechanics Option) \*

**Bertin, Cody Roger** (Materials and Manufacturing Processes Specialization) \*

**Bhangu, Amrin** (Materials and Manufacturing Processes Specialization) \*<sup>†</sup>

**Bhattarai, Surabhi** (Management Sciences Option)

Blagojević, Maria \*

**Blanchard, Rachel Jessica** (Materials and Manufacturing Processes Specialization) \*<sup>†</sup>

**Chan, Clarence Mark** (Energy and Environmental Systems and Processes Specialization) \*

**Chen, Si Zhe** (Materials and Manufacturing Processes Specialization) \*

Chow, Andrew (Energy and Environmental Systems and Processes Specialization/ Environmental Engineering Option) \*

#### Cox, Joshua Douglas Wayne

**Crónín, Magnus Akira Acethorpe** (Materials and Manufacturing Processes Specialization) \*

**Cruz, Arjeanet Datu** (Management Sciences Option) \*

Cunanan, Carlo James \*

Darby, Carlton Jason (Materials and Manufacturing Processes Specialization) \*

**Davies, Jordan Evelyn** (Energy and Environmental Systems and Processes Specialization) **Diab, Yahya** (Energy and Environmental Systems and Processes Specialization) \*

Doran, Sean Thomas \*

Douglas, Cameron Allan (Management Sciences Option) \*

Elorza Casas, Carlos Andrés \*†

**Espitia, Andres Felipe** (Chemical Process Modelling, Optimization and Control Specialization) \*<sup>†</sup>

**Forshaw, Erica** (Chemical Process Modelling, Optimization and Control Specialization) \*

#### Gangwar, Monica Kristie \*

**Gu, Junjie** (Management Sciences Option)

**Ha, Leen** (Management Sciences Option) \*

Han, Irena Yuejia (Management Sciences Option) \*

Han, Tong Li (Chemical Process Modelling, Optimization and Control Specialization/Management Sciences Option) \*

Hayat, Haider Imran (Materials and Manufacturing Processes Specialization) \*

Henriques, Jordan Paul (Energy and Environmental Systems and Processes Specialization)

Houang, Steve (Materials and Manufacturing Processes Specialization) \*†

Howard, Nicole Marie (Materials and Manufacturing Processes Specialization) \*

Jaworecki, Thomas Konrad (Energy and Environmental Systems and Processes Specialization) \*

Jayakaran, Simran (Management Sciences Option) \*

Jeyachandran, Sherina (Management Sciences Option) \*

#### Kartha, Kashyap Mohandas \*†

**Krishnan, Shivani** (Chemical Process Modelling, Optimization and Control Specialization) \*

Kwon, Bo Hee (Materials and Manufacturing Processes Specialization/Management Sciences Option) \* La, David Manh Hung (Chemical Process Modelling, Optimization and Control Specialization/Management Sciences Option) \*

Lakdawala, Munira Mustansir \*

Lesage Fongué, Ophélie \*†

Luchmee, Ramini (Chemical Process Modelling, Optimization and Control Specialization) \*

Ma, Kris King Yiu \*†

Madayya, Kushaal \*

**Moneme, Chukwunonso Jeffery** (Materials and Manufacturing Processes Specialization) \*

**Moorthy, Dhanushree Oviya** (Materials and Manufacturing Processes Specialization) \*

Moya Escudero, Jónathan Israel \*

Murali, Mukunda \*

Nair, Nihant \*

**Nguyen, Angela** (Chemical Process Modelling, Optimization and Control Specialization) \*

Noegroho, Tiffany Nasya \*

**Oh, Ji Hye** (Materials and Manufacturing Processes Specialization) \*

#### Ou, Zijian \*

**Pang, Shawn Seng Jun** (Statistics Option) \*

Papadakis, Melina (Materials and Manufacturing Processes Specialization/Management Sciences Option) \*

Pattison, Phillip Quinn (Materials and Manufacturing Processes Specialization) \*†

**Piel, Leesha Emma** (Energy and Environmental Systems and Processes Specialization) \*

#### Pieters, Kyle Zachary \*†

**Primandono, Audreie Margaretha** (Materials and Manufacturing Processes Specialization) \*

Rasmussen, Nicholas Owen Derrick (Materials and Manufacturing Processes Specialization/ Management Sciences Option) \*†

Raval, Niyatiben Piyushkumar \*

Ravikumaran, Pirashan \*

Salha, Ghayas (Materials and Manufacturing Processes Specialization) \*

#### Satguneswaran, Jathiga Elaseya

Sergeeva, Evgenia (Materials and Manufacturing Processes Specialization) \*

Slaughter, Elijah Nathaniel

Smith, Bradley William \*

**Sosa Roque, Enmanuel David** (Materials and Manufacturing Processes Specialization) \*

Strong, Kennedy Peter \*†

Strong, MacKenzie Stephen \*†

#### Sung, Christopher Man Ken \*†

Thomas, Liam Steven \*

Thompson, Grace Anne (Management Sciences Option) \*†

Titcombe, Anne Adetola \*†

Ton, Nancy \*

Ujjainwala, Tehseen Sabir

Valliere, Lauren Nicole (Energy and Environmental Systems and Processes Specialization/ Entrepreneurship Option) \*

Vilcacundo Molina, Steven Eduardo (Chemical Process Modelling, Optimization and Control Specialization & Materials and Manufacturing Processes Specialization/Management Sciences Option) \*

Vollmer, Rhys Austin \*

#### Vuong, Francesca \*

Wong, Matthew Albert (Chemical Process Modelling, Optimization and Control Specialization/Management Sciences Option) \*

**Wong, Natalie Oi-Ying** (Chemical Process Modelling, Optimization and Control Specialization/Management Sciences Option) \*<sup>†</sup>

Wou, Jared Justin (Energy and Environmental Systems and Processes Specialization/ Management Sciences Option) \*

#### Wright, Iain Gordon \*

Yackoboski, Lauren Nicole (Energy and Environmental Systems and Processes Specialization) \*

Yang, Taotao (Statistics Option) \*†

Yildiz, Onat Tan (Energy and Environmental Systems and Processes Specialization) \*

Yorke, Mitchell Gregory (Chemical Process Modelling, Optimization and Control Specialization) \*

Young, Luke Steven (Materials and Manufacturing Processes Specialization) Yu, Cordelia Pui Men (Materials and Manufacturing Processes Specialization) \*

Zaidi, Shafaq (Materials and Manufacturing Processes Specialization) \*

#### Zhang, Haocheng \*

**Zhao, Xujing** (Materials and Manufacturing Processes Specialization)

Zhong, Helen (Chemical Process Modelling, Optimization and Control Specialization/Management Sciences Option) \*

#### CIVIL ENGINEERING

Abass, Ahmed Ashraf Elsayed (Transportation Specialization) \*†

Achilles, Evan Hugh (Structural Specialization) \*

Ahileswaran, Mathura (Transportation Specialization)

**Aqib, Azka** (Structural Specialization) \*

Aubin, Adam Luc (Structural Specialization) \*

#### Bartos, Charlotte Anne Margaret

**Bashbishi, Lamar** (Structural Specialization) \*

**Beacom, Oliver Jacob** (Structural Specialization)

**Bian, Miller Tian Cheng** (Structural Specialization & Transportation Specialization) \*

**Biondi, Isabella Nicole** (Structural Specialization) \*

**Bruce, Quintan John** (Water Resources Specialization) \*

**Brunkard, Trent Glen** (Geotechnical Specialization & Structural Specialization) \*

**Ceric, Matea** (Transportation Specialization) \*<sup>†</sup>

**Chae, Hyunwoo** (Structural Specialization)

**Chambers, Christopher Michael** (Transportation Specialization)

**Chan, Linda** (Transportation Specialization/Statistics Option) \*

**Chau, Michelle** (Structural Specialization) \*

**Chen, Brian William** (Structural Specialization)

**Chen, Roger** (Transportation Specialization/Statistics Option) \*†

**Cohen, Edan Avichai** (Transportation Specialization) \*†

**Dai, Anni** (Transportation Specialization) \*† **Delgado Leon, Thaylly Daniela** (Structural Specialization) \*

Easwaran, Herishanth \*

**Evans, Mason Mack** (Structural Specialization)

Ferry, Reid Michael (Structural Specialization) \*

Fiberesima, Tekena Clive \*

Filipetti, Clara Oland (Transportation Specialization) \*

**Gao, Willson** (Water Resources Specialization/Management Sciences Option) \*

**Garcia Almeida, Zayana Elizabeth** (Structural Specialization) \*

Gates-Crease, William Cody (Transportation Specialization) \*

**Gawtrey, Kyle Robert Owen** (Structural Specialization)

**Gebrezghi, Delina** (Transportation Specialization) \*

**Goldgruber, Alexander** (Transportation Specialization) \*†

Gordon, Nathaniel Joseph (Structural Specialization) \*

**Greenwood, Natasha Rebecca** (Structural Specialization & Water Resources Specialization) \*

**Gunajothy, Sangave** (Transportation Specialization)

Han, Michael David Taesung (Structural Specialization)

Hansford, Benjamin Howard (Geotechnical Specialization & Structural Specialization) \*

Herrmann, Mark William \*

Ho, Angus Wei Feng \*

**Ho, Winston** (Structural Specialization) \*<sup>†</sup>

Humphreys, Matthew (Structural Specialization)

#### Ke, Qinglin \*

**Keomany, Jeffrey** (Structural Specialization/Entrepreneurship Option) \*

**Kim, Ha Young** (Geotechnical Specialization & Structural Specialization) \*

**Kim, Heejae** (Structural Specialization/Management Sciences Option) \*

**Kim, Saemin** (Structural Specialization)

**Kolodziej, Scott Russell** (Water Resources Specialization) \*<sup>†</sup>

**Kratz, Ethan Maxwell** (Structural Specialization) \*

\* – Distinction

† – Dean's Honours List

Krijnen, Richard Joseph Agus (Structural Specialization) \*

**Kundu, Rohit** (Transportation Specialization) \*

Lad, Parth Hitesh \*

Lam, Ashley Jing Ying (Transportation Specialization) \*

Lane, Victoria Rebecca (Transportation Specialization) \*

Latorre, Anthony Joseph (Transportation Specialization) \*†

**Law, Wallace** (Structural Specialization) \*

**Lee, Jun Seo** (Structural Specialization) \*

Lehmann Skelton, Christopher Gilbert (Transportation Specialization) \*<sup>†</sup>

Leinenweber, Julia Renee (Structural Specialization) \*†

**Li, Ming Xi** (Geotechnical Specialization & Transportation Specialization) \*

Li, Ruomu (Structural Specialization)

Li, Wan Ting Wendy (Water Resources Specialization) \*

**Lin, Zi Jian** (Structural Specialization) \*†

Liu, Ziteng (Structural Specialization)

Logo, John Adrian Malijan

Mahoney, Circe Leal (Water Resources Specialization) \*

Mandau, Noah Tyler James (Structural Specialization) \*

Martin, Trent Davis (Structural Specialization) \*

Mcallister, James \*

**Mehdiabadi, Kimia** (Transportation Specialization)

Meighen, Timothy William Arthur

**Minniti, Alexis Diana** (Structural Specialization) \*<sup>†</sup>

Muyal, Jonah Isaac \*

**Neves-Oliveira, Tyler Joseph** (Structural Specialization) \*

**Nielsen, Phillip Robert** (Water Resources Specialization) \*

**Noomor, Terdkiat** (Structural Specialization/Management Sciences Option) \*

**Oluwaseyi, Oluwatamilore Ayomide** (Transportation Specialization)

**Pang, Kwun Yuen** (Water Resources Specialization)

**Park, Sung-Um** (Structural Specialization) \*†

**Pereira, Brandon Justin** (Water Resources Specialization) \*

**Perez Galarza, Maura Stefanny** (Transportation Specialization) \*†

**Pinargote Torres, Johanna Alejandra** (Geotechnical Specialization & Structural Specialization) \*<sup>†</sup>

**Propper, Brigitte Maria** (Transportation Specialization) \*

**Qi, Guozhao** (Transportation Specialization – Economics Minor) \*†

Raguthevan, Pavatharny (Transportation Specialization) \*

**Raveendiran, Sumithirai** (Structural Specialization) \*

**Repovski, James Christopher** (Structural Specialization)

**Rezaee, Bibi Saida** (Structural Specialization) \*

**Ruan, Oscar** (Structural Specialization) \*

**Ruel, Sean Micheal** (Transportation Specialization) \*

Schram, Emily Drew (Structural Specialization) \*

Shah, Prerna Devankumar (Structural Specialization) \*

Sharia, Kerit Singh (Water Resources Specialization)

Shepherd, Logan Richard (Structural Specialization) \*

Somers, Margaret Joan

**Soscia, Emily Anna** (Structural Specialization) \*

**Soulsbury, Antony** (Transportation Specialization & Water Resources Specialization) \*

**Steinberg, Jake Edward** (Water Resources Specialization) \*<sup>†</sup>

Tacay-Clarke, Keanna Marie (Structural Specialization) \*

**Terpstra, Michael Thomas Leona** (Structural Specialization)

Thirimanne, Hettige Dona Thiruni Dulara (Water Resources Specialization)

**Usaty, Dana Nicole** (Transportation Specialization) \*<sup>†</sup>

Villamarin Cueva, Bolivar Andres (Structural Specialization) \*

**Villanueva, Nico Gabriel** (Structural Specialization) \*

Wang, Shanting (Transportation Specialization/Statistics Option) \*

**Wu, Tian Yu** (Water Resources Specialization – Management Studies Minor) \* **Wu, Xiaoyue** (Transportation Specialization/Statistics Option) \*

**Xu, Grace Fei** (Structural Specialization)

**Yang, Ya-Ting** (Structural Specialization) \*

Yuan, Kelvin (Structural Specialization) \*

Zalewski, Veronica Ann (Transportation Specialization) \*

Zhang, Bixiao \*

**Zhang, Yi Fan** (Structural Specialization) \*†

**Zingaro, Giovanni** (Geotechnical Specialization & Structural Specialization) \*

#### ENVIRONMENTAL ENGINEERING

Ahmed, Nafisa Anjum (Energy Specialization) \*

Arends, Dana Alexandra \*†

Aziz, Hadia \*

Babla, Devansh Pankaj (Hydrology Specialization/Management Sciences Option) \*†

#### Balakrishnan, Siyanthi

Becerra Montenegro, Jessenia Lisseth (Pollution Treatment and Control Specialization)

**Berger, Etienne Charles** (Energy Specialization)

**Bhatt, Madhav Dhananjay** (Pollution Treatment and Control Specialization)

Casale, Matthew William

Chung, Jonathan Min Jik \*

Derksen, Ellis Isabelle Brynn \* Espanol, Nathaniel James (Hydrology Specialization) \*

Hamal, Yashashwini \*

**Iun, Megan Rachel** (Hydrology Specialization) \*<sup>†</sup>

Jara Soto, Raquel Rocio (Pollution Treatment and Control Specialization) \*

#### Kim, Susung

**Kinney, Sarah Alice** (Hydrology Specialization & Pollution Treatment and Control Specialization)

Lane, Madison Hunter (Pollution Treatment and Control Specialization) \*

Lauinger, Kirsten Cornelia (Hydrology Specialization)

Lavoie, Jacques Joseph Germain (Pollution Treatment and Control Specialization) \*

- Point Distinction
- † Dean's Honours List

Lee, Seoyeong (Hydrology Specialization & Pollution Treatment and Control Specialization)

**Lieberman, Mark Jacob** (Hydrology Specialization) \*

Liu, HaoBo (Energy Specialization) \*\*

Murria, Gauri \*

#### Orwin, Monika Krystyna \*

**Peever, Mara Joy** (Hydrology Specialization) \*

**Pfeiffer, Gillian Dawn Stoffelsen** (Pollution Treatment and Control Specialization) \*<sup>†</sup>

Prowse, Nicholas Jackson (Hydrology Specialization/ Management Sciences Option) \*†

**Reck, Lee Robin** (Energy Specialization) \*

**Reusing, Wilson** (Hydrology Specialization) \*<sup>†</sup>

**Reyes Cortez, Heinny Rebeca** (Pollution Treatment and Control Specialization) \*

Said, Raghda Ahmead (Pollution Treatment and Control Specialization)

Saini, Sukhpreet Kaur \*

Shah, Ankit (Energy Specialization) \*

**Taylor, Theadora Grace** (Hydrology Specialization) \*

Thomas, Sharon Susan \*

**Tulloch, Mitchell Blain** (Hydrology Specialization & Pollution Treatment and Control Specialization) \*

Veenkamp, Calvin Jacob (Pollution Treatment and Control Specialization) \*<sup>†</sup>

**Watson, Adele Rose Lenarduzzi** (Hydrology Specialization)

Xaykongsa, Arnold

Yuen-Lusetti, Nathalie \*

**Zhou, Zichun** (Water Resources Option) \*

#### GEOLOGICAL ENGINEERING

Bourdignon, Michael James (Geology Specialization & Hydrogeology Specialization) \*

Connelly, Jason Paul \*†

Cornielle Salazar, Jose Manuel \*

Deamude, Dallas Simone \*

Giffen, William Andrew (Hydrogeology Specialization) \*

Horan, Thomas Liam John (Management Sciences Option) \*

Jackson, McKenna Elizabeth (Hydrogeology Specialization) \*

Jenkinson, Kyle Justin Daniel (Hydrogeology Specialization) \*

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#### Kocken, Darren Jeffrey \*†

Ladyman, Eloise \*

Law, Calvin Kei Fung (Soil, Rock and Structures Specialization) \*

**Simon-Larivière, Bayard** (Geology Specialization)

**Sos, Nicole Esther** (Geology Specialization & Hydrogeology Specialization)

Van De Vegte, Joshua Lucas $^{\ast}$ 

Vyas, Meet H.

NANOTECHNOLOGY ENGINEERING Agrawal, Daisy (Management

Sciences Option) \*

Alexander, Aaranya Jordanna (Physical Sciences Option) \*

Ali, Syed Hassan

An, Kevin \*

Arham, Abdulla

Arulpragasam, Tabitha Daniella \*

Bachouchi, Gibril Gabriel \*

Bagga, Prashant Premkumar

Baig, Danish Ahmed \*

Barber, Brendan William Eric

Bhanderi, Kunjan Rameshkumar \*

Canlas, Kristelle Arnesto \*

Castro, Maribel Ellen

Cerelli, Anthony Amilcare \*

**Chaddha, Parmandeep Singh** (Psychology Minor) \*†

Chapman, Kylie Amelia \*

Chen, Zhi Kai

**Choi, Kaylie** (Management Sciences Option) \*

Christie, Jessie Elizabeth \*

Cohen-Kleinstein, Ben \*†

Croteau, Liam Alexandre \*

**Deganis, Michael Anthony** (Management Sciences Option)

Devlin, Lisa Emaline \*

Dolick, Sydney Nicole

Fatima, Manal \*

Flores, Elijah Earl \*†

Frew, Simon Robert \*†

Golubovic, Aleksa \*†

**Guilcamaigua Donoso, Bryan Israel** (Computer Engineering Option) \*

Hayter, Madeline Alyssa Mei-Ling (English Language and Literature Minor)

Hu, Xinyi (History Minor) \*† Huynh, Michelle Dieu Thao \* Ingalls, Logan Alexander \* Jain, Sana (Management Sciences Option) \*

Kam, Lyle \*

Kapar, Sparsh \*†

Kashmirian, Richard Singh \*

Kharbanda, Raghav

Klompstra, Audrey Madison

Koester, William Dean \*

Kokilathasan, Sathursan \*

Krishnakumar, Vyshna \*

Lai, Justin

Lan, Annette \*†

Lee, Jason Matthew \*

Lee, Silvia Suhyun \*†

**Li, Ze Yuan** (Physical Sciences Option) \*

Liu, Yujun \*†

**Losin, William Fredrick** (Physical Sciences Option)

Mac, Rebecca \*

Martens, Reese Samuel \*

Mayry, Jonathan David \*†

Milne, Emma Rose \*

Najib, Muhammad Saleem \*

Nanayakkara, Sama \*

Nassab, Yahia \*

Odinotski, Sarah Alexandra \*

Oldham, Zachary William \*

Pepe, Michael Roberto \*

**Powell, Adam Ambrose** (Physical Sciences Option) \*

Shahab, Zoobia (Management

Somani, Prakriti Jitendra \*

Takhar, Varinder Singh \*

Teplitski, Michelle Alyssa

Thind, Sukhjinder Singh \*

Tino, Matthew Peres \*

Tsai, Shannon Nicole \*†

Valani, Khalisa Rayan

Thompson, Ethan Connor \*†

(Management Sciences Option) \*\*

\* – Distinction
 † – Dean's Honours List

Tao, Rachel Long-Xin \*

Rogobete, Jessica Helen \*

Rowe, Sean Nicholas \* Sakheie, Meelad \*

Seo. Deokhwa \*†

Sciences Option) \*

Siu, Teri \*

Son, David \*

Stewart, Darion

Vasanji, Sahad \* Vivekanand, Anissh \* Wang, Zhi Yi \* Wei, Alex Kai \* Wong, Ka Ho \* Wood, Michael David \* Zamperoni, Ryan Joseph \*†

#### BACHELOR OF SOFTWARE ENGINEERING

Adewoye, Oluwatobi \*† Amin, Shahzeb \* Angammana, Ravindu Bandara \* Arevalo Arizaga, Daniel Sebastian Bahrani, Rosie Mahshid Balar, Dhruvin Rakshit \*† Banka, Anshuman \* Bhushan, Arjun \*† Bulathsinghala, Mayuka Chan, Alexander Men Ho Chen, Xiang Yi\* Chhina, Navraj Singh \* Choi, Caleb Tiger \* Choudhary, Shisheer \* Chow, Derrek \* Dai, Max Jing Hong \* Davison, Kieryn Mckenzie \* De Silva, Bimesh \* Dhakla, Abhishek Dhulia, Jay Dhiresh (Management Sciences Option) \*\* Dolny, Brooke Mackenzie \* Fang, Ding Bei Ni\* Gao, Max (Statistics Minor) \*†

**Gao, Tina Hang** (Human-Computer Interaction Specialization) \*

**George, Thomas** (Computational Mathematics Minor) \*†

**Girard, Alexandra Emma** (Human-Computer Interaction Specialization) \*

Godin, Mathieu

Guan, Gordon \*†

Gui, Yingning \*

Hamodi, Ahmed Raad (Management Sciences Option) \*

Han, Haosen \*

Haris, Muhammad \*

Hong, Joshua \*

Huang, Ellen \*

Huang, Jerry (Honours & Joint Honours Statistics) \* Huang, Stanley James \* Huang, Yuhan (Political Science Minor) \* Jez, Michal Gerard \* Jiang, Austin \* Jin, Lindsey \* Kapur, Ayush \* Kou, Yi Fan \* Kursell, Alexander William \*† Lam, Ariel \* Langlois, Ben Daniel \* Lao, Angelo Gabriel \* Ledgerwood, Jacob George Davie Leung, Wesley Alexander Ting-Zhang Li, Andi \* Li. Kyle Erlison (Honours & Joint Honours Statistics) \* Li. Run Tona Long, Yue Jin \*† Lu, Heng \* Lynch, Sean Warlina \* Ma, Sarah Amanda \* Macdonald, Alistair Finn Donal Maclean, Sarah Elizabeth Masood, Muhammad Taha \* Moseley, Callum John \*† Musson, Heather Angela Valerie \*† Nankani, Sailesh \* Nellutla, Sri Koushik Noguchi, Samuel Raymond \* Ou, Jasmine \* Patel, Ankit \* Qi, Haoyang \* Raj, Shubhangi \* Rao, Shun Yu \* Ren. Edward \* Robles Del Hierro, Gabriel Andres \* Schaefer, Joshua Edward \* Selby, Brett Michael Shou, Yeliang \* Singh, Amolik \* Skrinikov, Danieil \* Spenler, David Stephen \* Tafese, Joseph Elias (Artificial Intelligence Option - Cognitive

Science Minor) \* Tang, Saidi \*

**Terwiel, Erik Hans** (Computational Mathematics Minor) \*

Tong, Harry Haoyu \*†

Vasanthakumaran, Kashturi \*

Wang, Haolei (Artificial Intelligence Option - Computational Mathematics Minor) \* Wang, Qiuhan \*† Warwick, Stephanie Amelia \* Wijetunga, Vichara Nimnaka \* Wu, Jianying \* Xia, Gracie Ziqi \* Xiang, Hongru \*† Xiao. Yun Han \* Xie. Shen Yuan \* Xu, Derek Yangqiao \* Yan, Jayson Jia \* Zhang, Jiahao \* Zharov, Mikhael \* Zhou, Huiyi (Artificial Intelligence Option) \* Zhou, Zhiyuan \* Zhu, Ji Lin \*† Zhu, Xintao Zhuang, Bowen Robert \*†

## DIPLOMA IN ENVIRONMENTAL ASSESSMENT

Lee, Seoyeong

#### **DIPLOMA IN SPANISH LANGUAGE II**

Sergeeva, Evgenia

#### **DIPLOMA IN SUSTAINABILITY**

Bartos, Charlotte Anne Margaret

#### CERTIFICATE IN CO-OPERATIVE EDUCATION IN RESEARCH

Golubovic, Aleksa Martens, Reese Samuel Mayry, Jonathan David Odinotski, Sarah Alexandra

### CERTIFICATE IN GLOBAL EXPERIENCE

Taylor, Theadora Grace

\* - Distinction
† - Dean's Honours List



# SATURDAY<br/> EVENING<br/> CERENING<br/> CER

Degrees and diplomas from: UNIVERSITY OF WATERLOO FACULTY OF ENGINEERING

# Graduate Degrees

#### **DOCTOR OF PHILOSOPHY**

Arabi, Mohamed Samir Abdel Azim

(Systems Design Engineering) "Electrostatic Bifurcation In-Plane Sensors"

#### Arrambide Figueroa, Maria Karina

(Systems Design Engineering) "Player Agency, Decision-Making, and Morality in Cinematic Choice-Based Adventure Games"

Bülbül, Zeynep (Management Sciences)

"Dynamic Route Planning for Last-Mile Delivery"

#### Csonka-Peeren, Jacqueline

(Management Sciences) "Risk Assessment in Entrepreneurship"

#### De Carvalho, Paulo Renato Volpe

(Management Sciences) "Strategic Blockchain Adoption in Supply Chain Operations"

Homaeian, Leila (Systems Design Engineering) "Interaction Design for Mixed-Focus

Collaboration in Cross-Device Environments"

Hosseinaee, Zohreh (Systems Design Engineering) "Multimodal Photoacoustic Remote Sensing (Pars) Microscopy Combined With Swept-Source Optical Coherence Tomography (SS-OCT) for In-Vivo, Non-Contact, Functional and Structural Ophthalmic Imaging

# Kalra, Shivam (Systems Design Engineering)

Applications"

"Learning Discriminative Representations for Gigapixels Images"

**Khan, Salman** (Systems Design Engineering) "Contour Integration in Artificial Neural Networks"

**Kinay, Ömer Burak** (Management Sciences)

"Infrastructure Design for Electric and Autonomous Vehicles"

**Kitapli, Remziye** (Management Sciences)

"Chemotherapy Treatment Models: Incorporating Tumor Growth and Stochastic Cancer Staging"

#### Laschowski, Brokoslaw (Systems Design Engineering) "Energy Regeneration and

"Energy Regeneration and Environment Sensing for Robotic Leg Prostheses and Exoskeletons"

McNally, William (Systems Design Engineering)

"On the Design of 2D Human Pose Estimation Networks Using Accelerated Neuroevolution and Novel Keypoint Representations"

**Pardoel, Scott** (Systems Design Engineering) "Detection and Prediction of

Freezing of Gait in Parkinson's Disease Using Wearable Sensors and Machine Learning"

**Pfisterer, Kaylen Joy** (Systems Design Engineering) "Collaborative Design and Feasibility Assessment of Computational Nutrient Sensing for Simulated Food-Intake Tracking in a Healthcare Environment"

#### Safarpoor Kordbacheh, Amir

(Systems Design Engineering) "Deep Weakly Supervised Learning for Whole Slide Image Representation: A Multimodal Approach"

Saritas, Resul (Systems Design Engineering - Nanotechnology) "Dynamic Scanning Probe Lithography and Its Applications"

#### **MASTER OF APPLIED SCIENCE**

**Abdul Hamid, Owais Mateen** (Systems Design Engineering)

Adnan, Mohammed (Systems Design Engineering)

**Akgun, Sami Alperen** (Systems Design Engineering)

**Al-Rasheed, Merwa** (Systems Design Engineering)

**Aminoleslami, Arian** (Management Sciences)

**Boismenu-Quenneville, Frederic** (Systems Design Engineering)

**Chang, Bo Yuan** (Systems Design Engineering)

**Dey, Nolan Simran** (Systems Design Engineering)

Elsarague, MennaTallah Khaled (Management Sciences)

#### Eshraghi, Seyyed Mohammad Hossein (Management Sciences)

Farsangi, Sina Ebrahimi (Systems Design Engineering)

**Gaurav, Ramashish** (Systems Design Engineering)

**Gebotys, Brennan Mitchell** (Systems Design Engineering)

Haghpanah, Zahra (Systems Design Engineering)

**Jassar, Amrita** (Management Sciences)

**Kiss, Jordan** (Management Sciences)

**Kocer, Samed** (Systems Design Engineering - Nanotechnology)

Kothig, Austin Riley (Systems Design Engineering)

**Krishnan, Bharath** (Systems Design Engineering)

Litster, Gregory Michael (Management Sciences)

Liusko, Timofei (Systems Design Engineering)

Mahmassani, Ahmad Issam (Systems Design Engineering)

**McFarland, Tasha Chun Lien** (Systems Design Engineering)

**Morayko, Kateryna** (Systems Design Engineering)

**Murzello, Yovela Aurelia** (Systems Design Engineering)

**Niu, Jiansheng** (Systems Design Engineering)

**Pellegrino, Nicholas** (Systems Design Engineering)

**Rasoolijaberi, Maral** (Systems Design Engineering)

**Sadatsharifi, Kasra** (Systems Design Engineering)

Samithamby, Pelisha Emily (Management Sciences)

Seelemann, Corin Alexander (Systems Design Engineering)

Shirani Faradonbeh, Mohamad Sadegh (Management Sciences)

**Sola, Daniel Benjamin** (Systems Design Engineering)

**Sun, Baoshi** (Systems Design Engineering)

**Tu, Joseph Trieu Han** (Systems Design Engineering)

Wang, Derrick Maruko (Systems Design Engineering)

**Xu, Rongbing** (Systems Design Engineering)

Yun, Stone (Systems Design Engineering)

#### **MASTER OF ARCHITECTURE**

Ahmed, Shahal Brammanis, Liga Brownlie, Kate Elizabeth Chahboun, Meryem Clarke-Hicks, James Lorne Coulter, Shaina Anne Damus, Charlotte Elizabeth Dawson, Kelsey Rose Eng, Cynthia Garg, Nupur He, Celia

Hosseini, Mohamad Hossein (Co-operative Program)

Kopp, Natalie Jianyi

Longrigg, Anna Louise

Maki, Rain Lauren

Mckinley, Meaghan Ashley

Michailova, Violeta Juliano

Miri, Sarah Sadat (Co-operative Program)

**Mobini, Hanieh** (Co-operative Program)

Moseley, Emma Kate

Ochoa, Isabel

Ottoni, Maria Luiza De Souza Oliveira (Co-operative Program)

Palantzas, Mariah Eleni

Paridy, Caitlin Jakusz

**Patel, Dhroov** (Co-operative Program)

Shahbaz, Shanze

Tien, Brian

Titizian, Zaven Alexander

Tran, Truong-Tuan-Thanh

Van Weerden, Levi Herman

#### MASTER OF BUSINESS, ENTREPRENEURSHIP & TECHNOLOGY

Almada, Santiago Nicolas

#### **MASTER OF ENGINEERING**

**Bahri, Rishabh** (Systems Design Engineering)

Jafri, Syed Rehan Abbas (Systems Design Engineering)

**Krishty, Dorodi Afroze** (Systems Design Engineering)

Li, Ruoxin (Systems Design Engineering)

**Rioux, Jeremy** (Systems Design Engineering)

**Saha, Sristi** (Systems Design Engineering)

Tang, Yuxin (Systems Design Engineering)

**Wang, Daoyi** (Systems Design Engineering)

**Wu, Miaowen** (Systems Design Engineering)

Yiu, Peter Chung Tak (Systems Design Engineering)

Yuan, Haoming (Systems Design Engineering)

#### MASTER OF MANAGEMENT SCIENCES

**Afsharghotli, Azin** (Co-operative Program)

Ahmed, Usama (Co-operative Program)

Alhatabeh, Basel Ammar

Antony, Jagat Issac

Anwar, Sara

**Atray, Akshat** (Co-operative Program)

Aziz, Muhammad Saadi (Co-operative Program)

Bai, Xuanzhen

Bari, Mohammad Tahmid Bleaney, Edward Clarke Cai, Wanrong Chang, Dion Chaudhury Bhadra, Shama Desai, Hemant Jayeshkumar Hu, Cuiwen Jain, Priyansh (Co-operative Program) Khamsehzadeh, Mohammad Khan, Tauhir (Co-operative Program)

Knill, Hana Frances (Co-operative Program)

Laseinde, Akinola Oladipo

#### Le, Ha Tram Anh

Ma, Mingfei (Co-operative Program)

Mahaldar, Bushra Azeem

**Mehta, Divya** (Co-operative Program)

Michaelides, Alexandra Lynn Narkhede, Parthesh Manohar (Co-operative Program)

Osman, Alla (Co-operative Program) Panorel. Eric Revelo

Patel, Ronak Hiteshbhai

Patole, Aniket

**Peter, Samuel** (Co-operative Program)

Pickel, Jessica Lee

**Prabhu, Nagendra Uday** (Co-operative Program)

Rado Peralta, Arturo Enrique (Co-operative Program)

Redman, Lynsey

Rose, Sheldon Damion

Samra, Rupneet Kaur Sehgal, Tania (Co-operative Program)

Sharmin, Fariha

Srinivasan, Arun Kumar

**Sun, Yuqing Angela** (Co-operative Program)

Suri, Aeikas

**Talluri, Sivanagalakshmi Prerana** (Co-operative Program)

Tang, Janet You-Ging (Co-operative Program)

Yu, Xiao Jing Zahid, Farhan

#### **GRADUATE DIPLOMA**

Chang, Dion (Data Analytics) Suri, Aeikas (Data Analytics) Yu, Xiao Jing (Data Analytics)

#### **GRADUATE CERTIFICATE**

Azzi, Charbel (University Teaching)

# Undergraduate Degrees

#### **BACHELOR OF APPLIED SCIENCE**

#### BIOMEDICAL ENGINEERING Allana, Sana \*

**Arshad, Hamza Nazir** (Artificial Intelligence Option) \*<sup>†</sup>

**Bauer, Emily Ann** (Management Sciences Option)

Buta, Andreea (Computing Option)

**Chudha, Ramnik Kaur** (Computing Option) \*

**Chung, Ethan Yat-Ken** (Computing Option) \*

Damus, Elena Kathleen \*

Danial, Karam (Computing Option) \*

**DiMaio, Rachel Marie** (Computing Option) \*<sup>†</sup>

Doe, Jessica L (Computing Option) \*

**Erb, Danielle Mary Anne** (Neural Engineering Specialization/Artificial Intelligence Option) \*

Feng, Jeffrey (Computing Option) \*\*

#### Fortin, Thomas \*

**Genatios, Cesar Enrique** (Computing Option) \*

Haw, Andrea Lori (Computing Option) \*

Hope, Amanda (Computing Option) \*

Jagan, Cierra Anjali (Computing Option) \*†

Jain, Ankit (Computing Option) \*

Janhunen, Rachel Anneli (Computing Option) \*

Jo, Amanda Won-Kyung \*

Joseph, Abel John (Computing Option) \*

Kaklamanos, Evandros \*

**Kim, Jung Yun** (Artificial Intelligence Option) \*†

Koo, Charmaine (Computing Option) \*

**Kuang, Joey Jingyi** (Computing Option) \*

Lavergne, Paige Nicole Sandwell (Computing Option & Management Sciences Option) \*

Leone, Cathleen Grace \*

**Lew, Jinhwan** (Artificial Intelligence Option) \*

**Luo, Alison Zhijin** (Computing Option) \*

MacKinnon, Madeleine Rose \*

#### Madukayil, Rachel Johnson \*

McCafferty, James Robert Daniel (Computing Option) \*

Mei, Anne (Computing Option) \*

Mohsin, Muhammad Usama (Computing Option) \*

Ng, Olivia Siu Yiu (Computing Option) \*

Nolan, Madeleine Kiera (Management Sciences Option) \*

**O'Callaghan, Caitlin Christina** (Software Engineering Option) \*

**Pavlova, Maya Stefanova** (Neural Engineering Specialization/Artificial Intelligence Option) \*†

**Rocco, Simona Elizabeth** (Computing Option) \*<sup>†</sup>

Roulston, Erin Elizabeth \*

Schwartzel, Sarah Joy (Computing Option)

Seto, Timothy Shi Hsin \*

**Shah, Darshil Rajesh** (Computing Option) \*

Singh, Pranayjit \*

Smallegange, Shaylin Briana Godfrey (Neural Engineering Specialization/Management Sciences Option) \*†

**Syed, Furqan Ullah** (Artificial Intelligence Option) \*

Thatte, Anjali Himanshu (Neural Engineering Specialization/ Computing Option) \*

**Thusoo, Sheen** (Artificial Intelligence Option) \*

Wadden, Kira Marie (Computer Engineering Option) \*

Wei, Ruihan (Computing Option) \*

Willis, Natasha Carly (Computing Option) \*<sup>†</sup>

Wong, Samantha Paige Tigger \*†

Yu, Jie (Computing Option) \*

Yu, Soo Jong (Computing Option) \*

**Yu, Trevor Christopher Wei-Kin** (Computing Option) \*<sup>†</sup>

Zhang, Xujia (Computing Option) \*

Zhang, Yukun (Neural Engineering Specialization/Computing Option)

**Zhukas, Laura Maria** (Software Engineering Option) \*

#### MANAGEMENT ENGINEERING

AbuHassan, Karim Ayman (Computing Option) \*

Al-Atari, Mayyar (Computing Option) \*

Ali, Aneesa (Computing Option) \*

Areola, Fatimah Olayinka (Computing Option) \*

Bhatia, Harjot (Computing Option) \*

Black, Jonathan Cuthbert \*

Bondi, Peter Raja Dorkhom \*

Butt, Nayab (Computing Option) \* Celebi, Defne (Computing Option)

**Chan-Lee, Evette Madeline** (Computing Option) \*

Chugh, Hardik

**Cotter, Abigail** (Computing Option) \*† **Dai, Zhen Feng** (Statistics Option & Computing Option) \*

Doran, Nicole Margery \*

**Follegot, Matthew** (Computing Option) \*

Fountain, Lucy Kathleen Davidson (Computing Option) \*†

Ghori, Joshua Sumeer

Gunay, Cem (Computing Option)

Gupta, Varoon (Computing Option)

Habib, Rafiq Riyaz (Computing Option – Economics Minor) \*†

Hallett, Bradley Thomas Morley (Computing Option) \*†

**Hira, Dylan Andrew** (Computing Option) \*

How Tein Fat, Ryan Yen Kwee (Computing Option) \*<sup>†</sup>

Kang, Rosa Seohwa (Computing Option) \*

Kazmi, Syed Mohammad Hamza (Computing Option) \*

Khalil, Samer Ehab Ibrahim Moustafa

Leal Ramos, Carla Esperanza (Computing Option) \*

Lee, Jiyun (Computing Option) \*

Li, Kyle (Computing Option) \*

Li, Vivian (Computing Option) \*

Lin, Joy Jiayi \*

Lui, Wing Ching (Artificial Intelligence Option) \*

Distinction

† – Dean's Honours List

#### Mah, Jason (Computing Option) \*

Mastin, Andrei Robert William (Computing Option) \*

McAllister, Michael Fraser (Computing Option)

Meyer, William Maarten

Minsariya, Jishaan Anwar (Computing Option) \*

Mishra, Palak (Computing Option) Mudbhatkal, Gaurav (Computing Option) \*

Nag, Simran \*

Nairn, Emily Jean (Computing Option) \*

Najeeb, Miral

Nanda, Tanvi (Computing Option) \* Nasim, Ruhollah (Computing Option) \*

Nesarajah, Nivethaa

Niazi, Rushan (Computing Option) \*

Pai, Chalyn Lily \*

**Petkar, Kanav Rahul** (Computing Option) \*

Poladian, Alik (Computing Option) \*

#### Prabhakar, Neelakshi \*

**Qaderi, Mauhtab** (Computing Option) \*

**Quiambao, Jeffrey Charles** (Computing Option) \*

Rodgers, Ryan John Alexander

**Sarin, Seher Kaur** (Computing Option) \*†

Saxena, Nimisha

Schneider, Matthew Daniel (Computing Option) \*†

Semba Kuttiarchchige, Indusha Menaji (Computing Option) \*

Sheng, Bill (Computing Option) \*

**Sison, Mara Nadine** (Computing Option) \*

Sood, Bhoomika (Computing Option)

**Spasik, Nino** (Computing Option) \*

Sun, Austin \*†

ΔΔ

**Syed, Adam Amir** (Computing Option) \*<sup>†</sup>

Tai, Chi-En Amy (Statistics Option & Computing Option) \*<sup>†</sup>

Tawfeeq, Hiba Imad (Computing Option) \*†

**Tran, Melissa Thuy Anh** (Computing Option)

Van der Wee, Jaad Matthew (Computing Option) \*

**Villavarajan, Thushnica** (Computing Option) \*

Spring 2022 Convocation / UNIVERSITY OF WATERLOO

Wang, Amy (Computing Option) \*

**Wu, Alan Chia-Lun** (Computing Option) \*

**Xu, Derek Li Heng** (Computing Option) \*

Yampolsky, Daria (Computing Option) \*

Yong, Zhenghan (Computing Option) \*

**Zou, Yanjun** (Statistics Option & Computing Option) \*†

#### SYSTEMS DESIGN ENGINEERING

Adhami, Maheen (Management Sciences Option & Computing Option) \*

**Aggarwal, Shivani** (Computing Option) \*†

Amorim, Nicholas Paul (Computing Option) \*†

Beckley, Thomas Edward (Mechatronics Option) \*

**Bhardwaj, Devansh** (Computing Option) \*

Brewster, Margaret Cheryl \*

**Brudnicki, Jozef Jan** (Management Sciences Option)

#### Chapman, Noah Robert \*

**Chen, Jonathan Huang Hai** (Management Sciences Option & Computing Option) \*

Cheung, Darren Thomas (Computing Option)  $^{\ast\dagger}$ 

Ching, Robyn Janice (Management Sciences Option & Computing Option) \*

**Choi, Young-Eun** (Computing Option) \*

**Cook, Griffin McCarthy** (Computing Option) \*

**Dang, Mickey Minh** (Computing Option) \*<sup>†</sup>

Ding, Zhaowei (Computing Option) \*†

**D'Silva, Tyler Jacob** (Artificial Intelligence Option & Computing Option) \*

Eden, Michael Alexander (Computing Option) \*†

Foster, Gwyneth Claire \*

Gaina, Victor Paul

**Gangl, Ryan Matthew Jessen** (Computing Option) \*

Goel, Vishrut (Computing Option) \*

Goldfarb, Jacob Daniel (Computing Option) \*

Graham, Victoria Maria

Haider, Syed Ashja \*

Heidebrecht, Conrad Ray Brubacher (Computing Option)

#### Hermanns, Katrina Bianca

(Entrepreneurship Option & Computing Option) \*

Hociota, Vlad Gabriel (Computing Option) \*

Holierhoek, Joshua (Philosophy Minor)

#### Jamieson, Michael Robert

**Jian, Amy Weixi** (Management Sciences Option & Computing Option) \*<sup>†</sup>

Khalil, Rola (Computing Option) \*

**Kwon, Daniel Min-Woo** (Computing Option & Management Sciences Option) \*

#### Ladak, Armaan Amin \*

Lane, Kyle Alexander (Computing Option) \*

Lee, Brian Jaemin \*

Lee, Kendrick Eunjae

**Legaspi, Koreen Maria Maluenda** (Computing Option – Religious Studies Minor) \*

**Lipski, Michael James** (Physical Sciences Option & Computing Option) \*

Liu, Lu Yu (Cognitive Science Minor) \*

Lu, Jing (Computing Option – Cognitive Science Minor) \*

Marshall, Peter David (Computing Option) \*

Martin, Abby Cullimore (Software Engineering Option) \*

Mathur, Aman (Computing Option) \*

Mathur, Arushi (Computing Option)

McGee, Ellen Margarete \*

McGuire, Kevin Gadelrab \*

McIntyre, John Anthony (Computing Option)

Mehta, Twinkle (Computing Option) \*

Mudryk, Adam (Computing Option) \*

Neter, Thomas Christopher

Oren, Ran (Computing Option) \*†

Paliath-Pathiyal, Milind

Panesar, Tanjot Singh

Patel, Het Anand (Management Sciences Option & Computing Option) \*

Paul, Naomi Vannessa \*

Pita, Kimberley Madeline \*†

**Pushparajah, Shanthosh** (Computing Option) \*

Ren, Winnie Rui Jia \*

**Puvitharan, Krishan** (Management Sciences Option)

\* – Distinction
 † – Dean's Honours List

# **Rink, Maximillian Werner Joao** (Computing Option)

#### Scanlan, Laura Faye

**Sequeira-Hogg, Cameron Oliver** (Statistics Option) \*<sup>†</sup>

**Serez, James David** (Computing Option) \*

**Shabbir, Sarah** (Management Sciences Option) \*†

**Shah, Wajiha** (Management Sciences Option & Computing Option) \*

**Shahid, Smavehyia** (Computing Option) \*<sup>†</sup>

Shen, Peter Ray (Computing Option) \*†

#### Shin, Hyeyeon

Sondhi, Aaditya (Computing Option) \*

**Staykov, Chris** (Computing Option – Economics Minor) \*†

Tang, Enoch (Computing Option) \*

Truax, Conor Gabriel \*

#### Tuinstra, Tia Jantine \*

Varabioff, Nicholas Michael (Computing Option & Management Sciences Option) \*

Voigt, Brynn Alexandra (Biomechanics Option & Computing Option) \*

Vucicevich, Alexander Lee (Computing Option)

Wang, Cynthia Xinjia (Biomechanics Option) \*

**Werezak, Sarah Julia** (Computing Option) \*

Wishart, Sienna Kah Mun (Computing Option) \*

**Wong, Adrian Ming-Hin** (Computing Option) \*

**Wong, Enoch Yan Lok** (Computing Option) \*

**Wu, Shuang Queenie** (Computing Option) \*

Xia, Jenny (Computer Engineering Option) \*

Xin, Leslie (Computing Option) \*

**Yu, David** (Management Sciences Option & Computing Option) \*

Zhen, Michael (Computing Option)

**Zheng, Jackson** (Artificial Intelligence Option) \*

Zhong, Judy

\* – Distinction

† – Dean's Honours List

# **Outstanding Achievements**

#### **MEDALS AND AWARDS**

#### UNIVERSITY FINALIST FOR THE GOVERNOR GENERAL'S GOLD MEDAL Doctoral

Heline Chow

#### UNIVERSITY FINALIST FOR THE GOVERNOR GENERAL'S GOLD MEDAL Master's

Khaled Younes (Fall 2021)

#### THE UNIVERSITY OF WATERLOO PRESIDENT'S AWARD OF EXCELLENCE

Highest standing in an undergraduate degree program Kennedy Peter Strong

#### THE UNIVERSITY OF WATERLOO ALUMNI GOLD MEDAL

Outstanding academic achievement Chi-En Amy Tai

#### AMIT AND MEENA CHAKMA AWARD FOR EXCEPTIONAL TEACHING BY A STUDENT

Rollen Sandeep D'Souza

#### ONTARIO PROFESSIONAL ENGINEERS FOUNDATION FOR EDUCATION GOLD MEDAL

Kennedy Peter Strong

#### PEARL SULLIVAN EMERGING GLOBAL LEADERS AWARD

Leadership through participation in extra-curricular and volunteer activities

Ahmed Raad Hamodi

#### ROY DUXBURY LEADERSHIP AWARD

Delainey Sybil Lindstrom-Humphries

#### THE ALBERT SHERWOOD BARBER MEDAL

Best overall work term and academic performance Yousuf Hamdy Fahim Ali

#### CANADIAN SOCIETY FOR MECHANICAL ENGINEERING GOLD MEDAL

Outstanding academic achievement in Mechanical Engineering Matthew Faiella

#### THE JOHN FISHER AWARD FOR LEADERSHIP

Chukwunonso Jeffrey Moneme

#### THE SANDFORD FLEMING FOUNDATION MEDALS

#### Academic excellence

Roger Chen Zhaowei Dina Arnav Garcha Frank Xinyu Gu Tiger Hao Ryan Yen Kwee How Tein Fat Jung Yun Kim Darren Jeffrey Kocken Kris King Yiu Ma Connor Jacob MacRobbie Liam Ian Andrew Metke Callum John Moseley Gillian Dawn Stoffelsen Pfeiffer Tyko Everest van Vliet Taotao Yang Christopher Thomas Yu Ryan Joseph Zamperoni

#### Co-operative work term proficiency

Jasmine Alwaheidi Jason Savio Antao Jason Paul Connelly Simon Robert Frew Gary Jinghua Hicks Winston Ho Yilin Li Daniel John Monte Yuna Oh Phillip Quinn Pattison Maya Stefanova Pavlova Kimberley Madeline Pita Matthew Takuya Reynolds Chi-En Amy Tai Calvin Jacob Veenkamp Ji Lin Zhu

# *Waterloo brings home the gold*

Alumni Gold Medal recipients share in the pursuit of discovery, so we created a lasting symbol to honour their achievements.

Since 1970, Alumni Gold Medals have graced the convocation gowns of our top undergraduate and graduate students. The Royal Canadian Mint produced these medals in the past – but in the true spirit of Waterloo, we've decided to make them ourselves.

Carefully crafted on campus in state-of-the-art labs, each medal is created out of nickel superalloy using a 3D printer. The surface is finished by hand to produce a brilliant shine. Through the process of electroplating, the medal is then coated in 24-carat gold. The result is a tribute to Waterloo's most accomplished graduates, made for each proud recipient by members of the University community.



GO INSIDE THE LAB AT uwaterloo.ca/impact-stories/new-gold-medals

# CONGRATULATIONS TO THIS YEAR'S ALUMNI GOLD MEDAL RECIPIENTS! YOU HAVE MUCH TO CELEBRATE, AND EVEN MORE TO ANTICIPATE IN YOUR FUTURE AS UNIVERSITY OF WATERLOO ALUMNI.

# Our tradition of regalia

## THE GOWN

At the University of Waterloo, as at most universities, academic robes are worn only on these special occasions. In the Middle Ages, robes were everyday clothing, and some students were so poor they had nothing else to wear. The black wrapper now called a "gown" served them as jacket, coat and sometimes bedclothes. Stone college buildings of the Middle Ages were unheated and the colourful "hood" could be pulled up to help keep out the cold wind. Today, the officers of the University, faculty members and graduating students all wear garments that are symbolic, not functional.

The scholars and students in long-ago universities were generally monks and other members of church orders. Over time, their vestments came to identify their universities. There are many variations, and the exact hood, gown or hat worn by an individual are determined by the university where they qualified. The array of colours and styles demonstrates the worldwide range of universities from which Waterloo's faculty have come.

## THE HOOD

Hoods are unique in design and colour to each degree and each university. The academic dress chosen for Waterloo is patterned after that of Oxford, the world's oldest English-speaking university. The chief officers on the convocation platform – the chancellor (the ceremonial head of the University) and the president (who is also vice-chancellor) – wear gowns of the Oxford cut and trim, each with its own distinctive colour. The gowns worn by recipients of honorary degrees have the same design, as do the black gowns worn by candidates for regular degrees, and the red-and-green gowns which are Waterloo's regalia for Doctor of Philosophy degrees.

The ritual at convocation reflects the old custom that anyone in a university could wear a gown, but a hood was the symbol for a degree.

Academic Dress

## **BACHELOR'S**



Bachelor of Accounting and Financial Management



















Bachelor of Knowledge Integration



 $\bigtriangledown$ 

achelor of Public Health







**PROFESSIONAL DOCTORATE** 





## **MASTER'S**





Master of Climate Change



Master of Fine Arts









Master of Public Service



Master of Science

Master of

Social Work



Master of



Master o





## DOCTORAL







**HONORARY DOCTORATE** 











Doctor of Mathematics





















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