

University of Waterloo
SENATE EXECUTIVE COMMITTEE
Notice of Meeting

Date: Monday 6 June 2022
Time: 3:30 p.m. – 4.30 p.m.
Place: Microsoft Teams Videoconference

AGENDA	Action
1. Minutes of the 2 May 2022 Meeting	Decision
2. Business Arising from the Minutes	
3. Draft 20 June 2022 Senate Agenda	Decision
4. Draft Senate Governance Review Report	Discussion
5. Other Business	

24 May 2022

Karen Jack
University Secretary

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University of Waterloo
SENATE EXECUTIVE COMMITTEE
Minutes of the 2 May 2022 Meeting

Present: Michael Beauchemin, Joan Coutu, Catherine Dong, Benjamin Easton, George Freeman, Vivek Goel (chair), Karen Jack (secretary), Christiane Lemieux, Carol Ann MacGregor, Graham Murphy, Luke Potwarka, James Rush, Clarence Woudsma

Regrets: Jeff Casello, Lori Curtis, Glauca Melo

Guests: Jenny Flagler-George, Diana Gonçalves, Andrea Kelman, Christine Tausig Ford (1.)

1. SENATE GOVERNANCE REVIEW

Report from the Consultant

The chair welcomed Christine Tausig Ford to the meeting and on behalf of the committee, thanked her for her excellent report. He invited her to speak to her findings, which she did. Following her review, and in response to questions, she shared: her opinion that effort be placed on reconciliation efforts while finding creative solutions for decolonization activities in light of the challenges of opening the *University of Waterloo Act*; ways to encourage those with dissenting opinions to speak up, including direct messaging to this effect in the future orientation activities.

Relations with the Board

The chair spoke to the briefing note distributed with the agenda. In discussion: the similar findings made on this subject by the Board Governance Review; whether, in light of some common areas of interest, a joint Senate-Board working group should be considered; a suggestion that scholarship on best practices be reviewed; whether any orientation activities might be held jointly by the Senate and Board; a suggestion to find pathways for the Student Relations, and the Student Services Advisory Committees to provide informational reports to Senate; the desirability of finding ways to generate interest in the community re: Senate's activities.

The chair advised that the draft final report of the group's findings and recommendations will be distributed to members soon for feedback in advance of final consideration at the 6 June meeting. He thanked Ms Tausig Ford again for her valuable contributions to the group's work and she departed the meeting.

2. MINUTES OF THE 4 APRIL 2022 MEETING

Members heard a motion to approve the minutes of the 4 April 2022 meeting.

Murphy and Freeman. Carried unanimously.

3. BUSINESS ARISING FROM THE MINUTES

There was no business arising.

4. REPORT OF THE VICE-PRESIDENT, ACADEMIC & PROVOST

Roster of Graduands

The committee heard a motion to recommend that Senate delegate the approval of the roster of graduands for the June convocation ceremony to its Executive Committee for its 6 June 2022 meeting.

Rush and Freeman. Carried unanimously.

5. DRAFT 16 MAY 2022 SENATE AGENDA

The chair reviewed the agenda and advised that Shelley Hulan, chair of the Department of English Language and Literature will be present to speak to the new academic program in creative and professional writing, and that the report of the Dean of Environment Nominating Committee will be distributed to Senate on the day of

the meeting. Following confirmation that a typographical error will be corrected, the committee approved the agenda by consensus.

6. OTHER BUSINESS

The chair informed members that Senators Glerum, Gorbet, MacEachen, and Woo were elected by Senate as the new faculty representatives to the Board of Governors.

He advised that the Faculty of Health had put forward a candidate for service on two committees, and the committee heard a motion to approve Narveen Jandu to be the Faculty of Health representative on the Senate Long Range Planning and Honorary Degrees Committees, term to 30 April 2023.

Potwarka and Woudsma. Carried unanimously.

In closing, he spoke to the existing technical challenges for hosting effective hybrid meetings in Needles Hall, and noted that Senate meetings will remain virtual until at least the fall while solutions are considered. He invited members to offer feedback on something the Board is considering, namely, hosting some future meetings entirely virtually and some entirely in person. In discussion: a suggestion that thought be given to the timing of Senate meetings; agreement that technology can be used to help with participation and engagement generally.

10 May 2022

Karen Jack
University Secretary

University of Waterloo
SENATE
Notice of Meeting

Date: Monday 20 June 2022**Time:** 3:30 p.m.**Place:** Microsoft Teams Videoconference

	OPEN SESSION		PAGE #
3:30	<u>Consent Agenda</u> Motion: To approve or receive for information by consent items 1-4 below.		
	1. Minutes of the 16 May 2021 Meeting	Decision	7
	2. Reports from Committees and Councils	Information	13
	a. Senate Graduate & Research Council	Information	15
	b. Senate Undergraduate Council		
	3. Report of the Vice-President, Academic & Provost	TBD	
	4. Reports from the Faculties	Information	17
	<u>Regular Agenda</u>		
3:35	5. Business Arising from the Minutes		
3:40	6. Reports from Committees and Councils		
	a. Senate Executive Committee*	Decision	
	b. Senate Graduate & Research Council	Decision	19
	c. Senate Long Range Planning Committee	Information	21
	d. Senate Undergraduate Council	Decision	23
4:00	7. Report of the President		
	a. Strategic Plan Update - Research	Information	
	b. President's Update	Information	
5:00	8. Report of the Vice-President, Academic & Provost	Information	
5:20	9. Report of the Vice-President, Research & International	Information	25
5:30	10. Other Business		
	CONFIDENTIAL SESSION		
5:35	11. Minutes of the 16 May 2022 Meeting	Decision	11
	12. Business Arising from the Minutes		
5:40	13. Reports from Committees and Councils		
	a. Honorary Degrees Committee	Decision	31
5:45	14. Report of the President	Information	
5:50	15. Report of the Vice-President, Advancement		
	a. New Gifts and Pledges \$250,000 + (May 2021/April 2022)	Information	33
	16. Other Business		
	* Report to follow		

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University of Waterloo
SENATE
Minutes of the Monday 16 May 2022 Meeting

Present: John Abraham, Jean Andrey, Marc Aucoin, Sandra Banks, Michael Beauchemin, Anne Bordeleau, Jeff Casello, Trevor Charles, Neil Craik, Kim Cuddington, Lori Curtis, Kristine Dalton, Laura Deakin, Charmaine Dean, Jack DeGooyer, David DeVidi, Nenone Donaldson, Catherine Dong, Benjamin Easton, Aiman Fatima, Paul Fieguth, Wendy Fletcher, Cindy Forbes, George Freeman, Mark Giesbrecht, Moira Glerum, Vivek Goel (chair), Onurcan Gokkaya, Rob Gorbet, Kelly Grindrod, David Ha, Kevin Hare, Dennis Huber, Natalie Hutchings, Sonia Ismail, Karen Jack (secretary), Narveen Jandu, Martin Karsten, Achim Kempf, Jennifer Kieffer, Veronica Kitchen, Christiane Lemieux, Xianguo Li, Kristina Llewellyn, Brad Lushman, Ellen MacEachen, Carol Ann MacGregor, Blake Madill, Ceileigh McAllister, Peter Meehan, Nasser Mohieddin Abukhdeir, Graham Murphy, Richard Myers, Beth Namachchivaya, Cathy Newell Kelly, Erin O’Connell, Daniel O’Connor, Troy Osborne, Douglas Peers, Nicholas Pfeifle, Luke Potwarka, Mary Robinson, James Rush, Naima Samuel, Matthew Schwarze, Marcus Shantz, Siv Sivaloganathan, Siva Sivoththaman, Chao Tan, Graeme Turner, Diana Vangelisti, Paul Ward, Dan Weber, Stan Woo, Changbao Wu, Annie Yang, En-Hui Yang

Guests: Jean Becker, Bruce Campbell, Aldo Caputo, Sam Charles, Lois Claxton, Tracelyn Cornelius, Katrina Di Gravio, Donna Ellis, Jenny Flagler-George, Barbara Forrest, Anne Galang, Amanda Garcia, Diana Goncalves, Mike Grivicic, Sarah Hadley, Shelley Hulan, Suzanne Kearns, Andrea Kelman, Nick Manning, Jennifer McCorrison, Kristiina Montero, Bessma Momani, Fayaz Noormohamed, Colleen Phillips-Davis, Ian Rowlands, Daniela Seskar-Hencic, Marianne Simm, Taydon Sinopoli, Allan Starr, Kerry Stryker, Sherri Sutherland, Brandon Sweet, Anita Taylor, Mathew Thijssen, Sean Thomas, Weber-Kraljevski

Absent: Dominic Barton*, Joan Coutu*, Lisa Bauer-Leahy, Scott Kline, Alysia Kolentsis, Robert Lemieux, Lili Liu, Glaucia Melo*, Oudy Noweir, Sharon Tucker, Clarence Woudsma*
*regrets

OPEN SESSION

CONFLICT OF INTEREST

Senators were asked to declare any conflicts they may have in relation to the items on the agenda; no conflicts were declared.

CHAIR’S REMARKS

The chair welcomed returning and new Senators to the first meeting of the governance year.

Consent Agenda

Senate heard a motion to approve or receive for information the items on the consent agenda.

Hare and Turner.

1. MINUTES OF THE 18 APRIL 2022 MEETING

Senate approved the minutes of the meeting.

2. REPORTS FROM COMMITTEES AND COUNCILS

Senate Graduate & Research Council

Senate received the report for information.

Honorary Degrees Committee

Senate received the report for information.

Senate Undergraduate Council

Senate received the report for information.

3. REPORT OF THE VICE-PRESIDENT, ACADEMIC & PROVOST

University Research Chairs

Senate received the report for information.

4. REPORTS FROM THE FACULTIES

Senate received the reports for information.

The question was called and carried unanimously.

Regular Agenda

5. BUSINESS ARISING FROM THE MINUTES

There was no business arising.

6. REPORTS FROM COMMITTEES AND COUNCILS

Graduate & Research Council

Casello spoke to the report and Senate heard a motion to approve the following Faculties joining the Collaborative Aeronautics Program (CAP), effective 1 September 2022: Arts and Environment (Master of Arts in Global Governance – Aeronautics); Environment (Master of Environmental Studies in Sustainability Management – Aeronautics, Doctor of Philosophy in Sustainability Management – Aeronautics, Master of Arts in Planning – Aeronautics, Master of Environmental Studies in Planning – Aeronautics); Engineering (Doctor of Philosophy in Systems Design Engineering – Aeronautics, Master of Applied Science in Systems Design Engineering – Aeronautics); Science (Master of Science in Vision Science – Aeronautics, Doctor of Philosophy in Vision Science – Aeronautics); Arts (Master of Arts in Psychology – Aeronautics).

Casello and Andrey.

Senate heard from Suzanne Kearns, director, Waterloo Institute for Sustainable Aeronautics about the program and the broad engagement across the University. The chair offered thanks to all who have been working on the initiative, and noted that it is an excellent example of the strategic plan in action.

The question was called and the motion carried unanimously.

Senate Undergraduate Council

DeVidi briefly spoke to the report and Senate heard a motion to approve the proposed English – Creative and Professional Writing program, effective 1 September 2023.

DeVidi and Peers.

Peers noted the breadth of potential career outcomes for graduates, and Senate heard from Shelley Hulan, chair of the Department of English Language and Literature about the keen interest by students in the program, and its benefits for those who plan for a career in writing.

The question was called and the motion carried unanimously.

7. REPORT OF THE PRESIDENT

President's Update

The chair provided an update on a variety of matters including: that there are no significant changes for the post-secondary sector in the recent provincial budget; news and activities since the last meeting; his recent [statement on open and constructive dialogue](#); that the Senate Executive Committee's governance review continues apace and a report on the work, including

recommendations, will be ready for the June meeting of Senate; the long-range visioning exercise re: [Waterloo at 100](#) that has begun; the in-person convocation ceremonies in June; the continued response to the pandemic. There were no questions.

President's Anti-racism Taskforce (P.A.R.T.) Report

The chair reminded Senators about the President's Forum being held on 19 May about the [P.A.R.T. Report](#) and encouraged members to attend. He invited Dean to speak to Senate about the taskforce's work and resulting report. Members heard about: the broad engagement by the whole community; P.A.R.T.'s membership, structure and approach; the work of the implementation teams and working groups; a summary of themes and recommendations; and from Senator Samuel, some personal reflections on her experiences on P.A.R.T., and from Tracelyn Cornelius, a staff member who is also a part-time student, about how she was inspired by the work to pursue further academic research and her PhD. In discussion: expressions of appreciation for the taskforce's work, and in particular, to Samuel and Cornelius for sharing their personal stories; how several recommendations in the "educational environment and the development of learners" section of the report are meant to help address economic inequities and that work on these recommendations is underway; the availability of scholarship about "different" or "other" ways of knowing for those who are interested; the transparent accountability framework being put in place.

Sustainability Update

The chair invited Mat Thijssen, director of sustainability to speak to sustainability activities at Waterloo. Senators heard about: support offered by his office; the governance structure; core documents and ongoing reports; some high-level indicators; progress risks; actions. In discussion: costs, and striking a balance with respect to immediate expenses and long-term benefits; beneficial outcomes that will come from the integrated planning review of the budget model for these commitments; agreement that accelerating the pace of this work is important.

8. REPORT OF THE VICE-PRESIDENT, ACADEMIC & PROVOST

Roster of Graduands

Senate heard a motion to delegate approval of the roster of graduands to the Executive Committee for its 6 June 2022 meeting.

Rush and Newel Kelly. Carried with one abstention.

Policy 45 Exception

Rush spoke to the report distributed earlier in the day regarding the recommendation from the Science Faculty Council to increase the membership of the upcoming Nominating Committee for the Dean of Science. Senate heard a motion to approve increasing the membership of the 2022 Nominating Committee for the Dean of Science by one to include seven regular faculty members.

Rush and Dalton. Following some discussion about how the policy can be revised, the question was called and the motion carried unanimously.

General Update

Rush provided Senate with a general update, including commentary about: the [2021 annual report from the library](#); a status update on the [digital learning strategy](#); the teaching innovation incubator; the [Wellness Collaborative](#); the budget and integrated planning review; the new Council of Academic Leaders.

In discussion: agreement to work with the student associations and the University colleges to ensure effective consultations occur with those groups for the digital learning strategy project.

9. REPORT OF THE VICE-PRESIDENT, RESEARCH & INTERNATIONAL

Dean briefly reviewed the report distributed with the agenda and took the opportunity to offer kudos to Dr. Avery Broderick for his continued success with the Event Horizon Telescope Collaboration and the group's recent revelation of the first image of the black hole at the heart of the Milky Way galaxy.

10. OTHER BUSINESS

There was no other business.

Senate convened in confidential session.

20 May 2022

Karen Jack
University Secretary

CONFIDENTIAL SESSION

The Confidential Session minutes have been removed.

The meeting was adjourned at 5:41 p.m.

20 May 2022

Karen Jack
University Secretary

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University of Waterloo
SENATE GRADUATE & RESEARCH COUNCIL
Report to Senate
20 June 2022

Senate Graduate & Research Council met on 9 May 2022 and agreed, in accordance with [Senate Bylaw 2](#) (section 4.03), to forward the following items to Senate for information as part of the consent agenda.

Further details are available at: <https://uwaterloo.ca/secretariat/committees-and-councils/senate-graduate-research-council>

FOR INFORMATION

ACADEMIC PROGRAM REVIEWS

On behalf of Senate council approved, as presented:

- Two-Year Progress Report: Global Governance
- Two-Year Progress Report: Theological Studies

CURRICULAR SUBMISSIONS

On behalf of Senate, council approved new courses and milestones, course revisions, course and milestone inactivations, and minor program revisions for the Faculties of Engineering (Electrical and Computer Engineering; Mechanical and Mechatronics Engineering; Systems Design Engineering), Environment (Environment, Resources, and Sustainability; Planning), Health (Kinesiology and Health Sciences; School of Public Health Sciences; School of Social Work), and Mathematics (Master of Mathematics for Teachers).

GRADUATE AWARDS

On behalf of Senate, council approved the Adosi Graduate Scholarship for Food & Agriculture (trust) and the Janet E.A. McDougall Scholarship in Pharmacy (endowment).

RESEARCH CENTRES AND INSTITUTES

On behalf of Senate, council approved the name change of Interdisciplinary Centre on Climate Change (IC3) to the Waterloo Climate Institute, as presented.

/mh kw Jeff Casello
Associate Vice-President, Graduate Studies and
Postdoctoral Affairs

Charmaine Dean
Vice-President, Research & International

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University of Waterloo
SENATE UNDERGRADUATE COUNCIL
Report to Senate
20 June 2022

Senate Undergraduate Council met on 10 May 2022 and agreed, in accordance with [Senate Bylaw 2](#) (section 5.03) to forward the following items to Senate for information in the consent agenda.

Further details are available at: uwaterloo.ca/secretariat/committees-and-councils/senate-undergraduate-council

FOR INFORMATION

MINOR PLAN & CURRICULAR MODIFICATIONS

Council approved the following on behalf of Senate:

- minor plan changes for the Faculty of Engineering (architectural engineering, school of architecture, management engineering, management sciences option, complementary studies electives); Faculty of Environment (co-operative education requirements); Faculty of Mathematics (mathematical optimization/business specialization, math/business administration, math/information technology management, mathematics/financial analysis and risk management plan, mathematics/information technology management plan, mathematics/business administration plan, mathematical studies-business specialization, joint actuarial science, actuarial science minor); Faculty of Health; (co-operative education requirements); Faculty of Science (astrophysics minor, physics minor, co-operative education requirements).
- new courses for the Faculty of Mathematics (combinatorics & optimization).
- course changes for the Faculty of Engineering (school of architecture, Conrad school of entrepreneurship and business); Faculty of Mathematics (combinatorics & optimization, mathematics); Faculty of Science (aviation, pharmacy, physics).
- course inactivations for the Faculty of Engineering (complementary students elective).

/twk

David DeVidi
Associate Vice-President, Academic

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University of Waterloo
REPORT TO SENATE FROM THE FACULTIES
20 June 2022

FOR INFORMATION

The Faculty Reports for Senators' information regarding the variety of appointments, reappointments, special appointments, leaves, and other matters of interest about individuals in the Faculties are available at the [Senate agenda page](#)¹.

¹ https://uwaterloo.ca/secretariat/sites/ca.secretariat/files/uploads/files/june_report_all_fac.pdf

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University of Waterloo
SENATE GRADUATE & RESEARCH COUNCIL
Report to Senate
20 June 2022

Senate Graduate & Research Council met on 9 May 2022 and agreed, in accordance with [Senate Bylaw 2](#) (section 4.03), to forward the following item to Senate for approval as part of the regular agenda.

Further details are available at: <https://uwaterloo.ca/secretariat/committees-and-councils/senate-graduate-research-council>

FOR APPROVAL

PROGRAM CHANGES

- 1. Motion:** To approve the following Faculties joining the Collaborative Aeronautics Program (CAP), effective 1 September 2022, as presented¹.
 - Environment: Master of Arts in Geography – Aeronautics; Master of Science in Geography – Aeronautics; Master of Environmental Studies in Geography – Aeronautics; Doctor of Philosophy in Geography – Aeronautics.
 - Health: Master of Science in Kinesiology – Aeronautics; Doctor of Philosophy in Kinesiology – Aeronautics.
 - Mathematics: Master of Mathematics in Applied Mathematics – Aeronautics; Doctor of Philosophy in Applied Mathematics – Aeronautics.

Rationale: Faculty research programs at the University of Waterloo are joining CAP—coupling their disciplinary expertise with a foundation understanding of aeronautics—as an additional offering to their existing and future thesis or major research paper-based Master’s and PhD students. Participation requires the development of an academic plan that results in the CAP designation for students. The creation of the plan involves articulating the curricular elements including common curricular elements across the CAP, specifying research milestones, and ensuring other academic requirements result in the students achieving the desired collaborative program learning outcomes.

Faculty of Engineering

- 2. Motion:** To approve updating the MEng in Electrical and Computer Engineering degree requirements to include one new Graduate Specialization in Business Leadership, effective 1 September 2022, as presented.

Rationale: The Graduate Specialization has been designed to introduce students to the processes and best practices for leading technical teams, processes, and organizations in a North American business context. The key purpose of leadership is creating a framework for action. Doing this well requires an understanding of people, familiarity with the “language” of business which is finance, and disciplinary expertise. The Graduate Specialization supplements the expertise students develop in the ECE MEng program with the core skills needed to lead a business venture. Note: Students are not expected to have a background in business to take any of the courses.

¹ See 16 May 2022 Senate ([agenda item 6a](#)) for faculties that have already joined CAP.

3. **Motion:** To approve a direct entry Co-operative program/option to the MEng in Electrical and Computer Engineering program., effective 1 September 2022, as presented.

Rationale: The rationale for the addition of the co-operative program/option is as follows:

- To facilitate MEng students in applying the knowledge they gained in their coursework.
- Helps in professional development, networking and developing new collaborations.
- Aligns with the University's and Province's vision and policy on "Work Integrated Learning."
- Benefits in job search and placement of MEng students after completion of their programs.
- Will attract the best applicants to the MEng in ECE program, as well as to other graduate programs.
- Will allow international students to take up co-op jobs without impacting their Post Graduate Work Permit (PGWP).

Faculty of Environment

4. **Motion:** To approve adding a new Master's Research Paper with Internship study option to the Master of Environmental Studies in Social and Ecological Sustainability, effective 1 September 2022, as presented.

Rationale: The MES in Social and Ecological Sustainability program has been generating a steady stream of high-caliber, multi-disciplinary Master's graduates for over two decades. In recent years, the program has been augmented by the establishment of a "Master's Research Paper" (MRP) study option with a view to responding to student demands for a highly focused and intensive program without undertaking the more traditional thesis study option stream. Student and employer market trends increasingly point to the desire for work-integrated-learning (WIL) approaches at the graduate student level giving rise to what we see as a significant opportunity to augment this graduate program with a renewed emphasis on providing MES MRP students in SERS with a well-supported and rewarding graduate WIL opportunity.

Faculty of Health

5. **Motion:** To approve changing the PhD and MSc program names to align with the following recent department and school name changes, effective 1 September 2022, as presented.

- "Department of Kinesiology" to the "Department of Kinesiology and Health Sciences"
- "School of Public Health and Health Systems" to the "School of Public Health Sciences"

Rationale: Aligning degree designations with the recent department and school name changes will be more inclusive/reflective of the areas of research being undertaken by some current graduate students. The proposed changes would align with the breadth of research conducted by faculty members, which could assist with recruitment of future/prospective graduate students.

Faculty of Mathematics

6. **Motion:** To approve the discontinuation of the coursework study option from Master of Mathematics in Computer Science and the Co-operative Program, effective 1 September 2022, as presented.

Rationale: Computer Science is requesting the discontinuation of the current MMath in Computer Science coursework study option. Due to student volume, the department is having to create more sections of course offerings, therefore requiring more faculty members to teach. In addition, the coursework students consume a significant amount of resources and financially, the current program is not sustainable.

/mh kw Jeff Casello
Associate Vice-President, Graduate Studies and
Postdoctoral Affairs

Charmaine Dean
Vice-President, Research & International

University of Waterloo
SENATE LONG RANGE PLANNING COMMITTEE
Report to Senate
20 June 2022

The Senate Long Range Planning Committee met on 13 May 2022 and agreed, in accordance with [Senate Bylaw 2](#) (section 3.04b), to forward the following item to Senate for information as part of the consent agenda.

Further details about the committee are available at: <https://uwaterloo.ca/secretariat/committees-and-councils/long-range-planning-committee>

FOR INFORMATION

WATERLOO AT 100

The committee participated in the first of several long-term visioning exercises for the university—receiving from the President and Vice-Chancellor, Dr. Vivek Goel, the invitation to examine and discuss what the institution aspires to become by its 100th anniversary in 2057. Goel provided an overview of the [Waterloo at 100 webpage](#), including a futures framework, and posed 6 key discussion questions pertinent to the evolution and future shaping of the University, as presented.

Through considered reflection, the Senate Long Range Planning Committee identified elements fundamental to the question “*How Waterloo will evolve as an institution?*” These include:

- Addressing and prioritizing the impacts of many years of injustices through realizing a fully indigenized and decolonized institution (bringing reform to policy, scholarship, research, teaching, physical space, hiring practices).
- Increasing the value of the in-person experience; community building, emphasizing the grad/undergrad student experience, student-centred activities, work-integrated learning with external partnerships.
- Building agile/nimble infrastructure, including governance, that aligns with external branding and messaging.
- Envisioning future needs of individuals and society and pioneering responses thereon (flexible and individualized pathways, missions or disciplines vs majors, shorter-term credentials, lifelong learning, Alumni as expert resource pool).
- Increasing internal visibility to more comprehensively leverage interdisciplinarity (e.g., A.I., quantum, nano, and intersection with Health).
- Communicating core strengths more adeptly and impactfully.

The Senate Long Range Planning Committee committed to ongoing involvement in shaping and visioning Waterloo at 100.

/kw

James Rush
Vice-President, Academic & Provost

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University of Waterloo
SENATE UNDERGRADUATE COUNCIL
Report to Senate
20 June 2022

Senate Undergraduate Council met on 10 May 2022 and agreed, in accordance with [Senate Bylaw 2](#) (section 5.03) to forward the following items to Senate for approval in the regular agenda.

Further details are available at: uwaterloo.ca/secretariat/committees-and-councils/senate-undergraduate-council

FOR APPROVAL

ACADEMIC PLAN INACTIVATION

Faculty of Science
Chemistry

1. **Motion:** That Senate approve the inactivation of the Honours Chemistry, Biobased Specialization, effective 1 September 2023.

Background and Rationale: The Honours Chemistry, Biobased specialization was originally set up as part of a Joint Academic Exchange program with the University of Bordeaux. It first appeared in the 2015-16 Calendar. The specialization has had very few students – only 2 total. The Academic Collaboration Agreement expired on January 26, 2021. Thus, there is no need to have this specialization.

/twk

David DeVidi
Associate Vice-President, Academic

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Vice-President, Research & International

Report to Senate

June 2022

Introduction

This report to Senate highlights successful research outputs and outcomes for the period April -May, 2022 by the thematic areas as outlined in Waterloo's Strategic Plan 2020-25.

ADVANCING RESEARCH FOR GLOBAL IMPACT

R1 - Research strengths to solve real-world problems

Awards and Distinctions

Andrea Edginton (School of Pharmacy) - 2022 Faculty of Science - Excellence in Science Research

- Professor Andrea Edginton, the Hallman Director of the School of Pharmacy, has been selected for one of this year's tenure-level awards. She is a globally recognized leader in pharmacokinetic (PK) modeling, an area of study that explores how the human body processes medications.

Anna Klinkova (Chemistry) - 2022 Faculty of Science - Excellence in Science Research

- Professor Anna Klinkova from the Department of Chemistry has been selected for this year's tenure-track award. She focuses her research on developing catalytic materials and chemical reactions for sustainability applications, including electrochemical conversion of carbon dioxide to useful chemicals, treatment and upgrading of nitrogenous waste, and electrosynthesis of renewable fuels.

Rebecca Rooney (Biology) - 2022 Faculty of Science - Excellence in Science Research

- Professor Rebecca Rooney from the Department of Biology has also been selected for this year's tenure-track award. She studies the effects of human disturbance and invasive species on wetlands.

Matthias Schonlau (Statistics and Actuarial Sciences) - Humboldt Prize - Alexander von Humboldt Foundation

- Honours exceptional alumni for their outstanding accomplishments in pharmacy practice and pharmaceutical sciences.

Faculty of Environment Award: The Faculty of Environment introduced four annual awards in recognition of faculty and staff for their exceptional contributions and dedication to their field (teaching, research, service) which has led to the enrichment of the Faculty. Recipients of the award include:

- **Daniel Scott** (Geography and Environmental Management) - Research
- **Paul McKone** (Knowledge Integration) - Teaching

- **Janice Barry** (School of Planning) - Service

Tri-Council Funding

CIHR Operating Grant: Addressing the Wider Health Impacts of COVID-19

- **Justine Giosa** (School of Public Health Sciences), Co-designing action-oriented mental health conversations between care providers and aging Canadians in the community: mitigating the wider impacts of COVID-19, \$499,948

SSHRC Partnership Development Grants

1. **Philip Beesley** (Architecture), Empathetic Spaces Partnership, \$114,176
2. **Dawn Parker** (Planning), Why did the 'Missing Middle' miss the train? Exploring barriers and solutions to intensified family housing in Waterloo Region, \$189,926
3. **Bessma Momani** (Political Science), Digital Transformation of Work: Determining Impacts on Women and Skills Retraining Needs, \$199,999

Institutional Research Funding

Canada Research Chairs

- **Jun Liu** (Applied Mathematics), Renewal Tier 2 NSERC, Chair in Hybrid Systems and Control, \$100,000 over 5 years.

Canada Foundation for Innovation John R. Evans Leaders Fund (CFI-JELF)

For the **June 2021** CFI-JELF competition, Waterloo was successful in securing eight of the nine (or 89% success rate) submissions, totalling **\$1,109,850** in funding.

1. **Chris Bachmann** (Civil and Environmental Engineering), Virtual Mobility Lab (VML) for Innovative Transportation Research, \$174,850
2. **Dayan Ban** (Electrical and Computer Engineering), An advanced evaporator for dedicated high-quality and high-precision indium deposition, \$145,000
3. **Slim Boumaiza** (Electrical and Computer Engineering), Realistic Over-the-air Test System for Researching Wireless and Satellite Communications at up to 44 GHz, \$270,000
4. **Joyce Kim** (Civil and Environmental Engineering), An integrated digital platform for occupant-centric building operation, \$160,000
5. **Ewen MacDonald** (Systems Design Engineering), Measurement Systems for Investigating Speech Communication, \$80,000
6. **Jozef Nissimov** (Biology), Experimental modelling of aquatic microbial hosts and their viruses, \$100,000

7. **Serhiy Yarusevych** (Mechanical and Mechatronics Engineering), Infrastructure for the analysis of multi-phase flows for airborne disease mitigation and pollution control, \$180,000
8. **Shunde Yin** (Civil and Environmental Engineering), Laboratory investigation of geosynthetics reinforced pavement system in response to low temperature and climate change, \$90,000

For the **October 2021** CFI JELF submission cycle, Waterloo was successful in securing 15 of 16 submissions (or 94% success rate), for a total funding of **\$2,728,885**.

1. **Raouf Boutaba** (Cheriton School of Computer Science), Timely and privacy-preserving threat intelligence using machine learning, \$85,000
2. **Monica Emelko** (Civil and Environmental Engineering), Infrastructure to Identify and Mitigate Threats to Drinking Water Source Quality and Treatability in a Changing Climate, \$250,000
3. **Parsin Haji Reza** (Systems Design Engineering), Developing Photoacoustic Remote Sensing (PARS) for Next Generation Real-Time Medical Imaging in-Situ, \$209,440
4. **Holger Kleinke** (Chemistry), Multi-User High-Resolution X-ray Powder Diffractometer with Heating Stage, \$103,668
5. **Daniel Lacroix** (Civil and Environmental Engineering), Infrastructure for the experimental evaluation of innovative mass timber and FRP-hybrid systems, \$104,000
6. **Anita Layton** (Applied Mathematics), A data-informed model for predicting kidney outcomes, \$118,221
7. **Logan MacDonald** (Fine Arts), Longhouse Labs, \$577,855
8. **Monica Maly** (Kinesiology and Health Sciences), Human Motion Analyses to Predict and Treat Osteoarthritis, \$79,776
9. **Yash Vardhan Pant** (Electrical and Computer Engineering), Advancing Safety of Autonomous Systems for real-world applications, \$80,000
10. **Hamed Shahsavan** (Chemical Engineering), Infrastructure for the characterization and manipulation of soft robotic materials, \$90,000
11. **Rodney Smith** (Chemistry), Laboratory X-ray Absorption Spectroscopy to Accelerate Sustainable Technology Development, \$560,000
12. **Marek Stastna** (Applied Mathematics), CPU-GPU enabled computational modelling of the coastal ocean, \$83,425
13. **James Tung** (Mechanical and Mechatronics Engineering), Real-world Assessment of Assistive Robotics for Mobility Impairments and Injury Prevention, \$227,500

14. **Boxin Zhao** (Chemical Engineering), Infrared Imaging and Drop Shape Analyzer Systems for Surface Science and Bionanomaterials Development, \$80,000
15. **Jian Zhao** (Cheriton School of Computer Science), Human-Machine Collaborative Visual Data Exploration and Analytics, \$80,000

Ontario Research Fund-Small Infrastructure Fund (ORF-SIF) (Oct 2020)

The ORF-SIF program co-funds with John R. Evans Leaders Fund through the Canada Foundation for Innovation. In the October 2020 ORF-SIF competition, Waterloo secured three awards, totalling **\$362,000**.

1. **Kelsey Leonard** (School of Environment, Resources and Sustainability), Chair Indigenous Waters, Climate and Sustainability, \$125,000
2. **Jason Au** (Kinesiology and Health Sciences), Infrastructure for advanced hemodynamics research, \$100,000
3. **Chul Min Yeum** (Civil and Environmental Engineering), Infrastructure for Advancing Vision-Based Structural Assessment Technologies, \$137,000

Early Researcher Awards (ERA) - Round 16

The ERA provides funding to exemplary new researchers working at publicly funded Ontario research institutions to build a research team. For Round 16, Waterloo was successful in winning eight awards out of 29 submissions, representing a success rate of 28%. The provincial success rate was 16%. The Award is valued at **\$190,000** (\$100,000 direct + \$40,000 indirect; \$50,000 UW matching).

1. **Martine August** (School of Planning), Investing in Rents: The Impacts of Apartment Financialization in Canada
2. **Chris Bachmann** (Civil and Environmental Engineering), Modeling Crude Oil Shipments for Risk Assessment and Economic/Environmental Analysis
3. **Anna Klinkova** (Chemistry), Designing electrocatalysts to convert waste small molecules into value-added products
4. **Shane McIntosh** (Cheriton School of Computer Science), Self-Sustaining Software Build Systems
5. **Walaa Moursi** (Computational Mathematics), Splitting algorithms for pathological optimization problems: Static results and dynamic behaviour
6. **Christine Muschik** (Physics and Astronomy), Quantum Simulations of Fundamental Particle Interactions
7. **Crystal Senko** (Physics and Astronomy), Partial readout of quantum information using trapped ions

8. **Sophie Spirkl**, (Combinatorics and Optimization), Structure and algorithms in graph theory

R3 - Leveraging partnerships for research impact

Waterloo International Agreements

Waterloo International facilitated the signing of one agreement as follows:

- University College London (UCL), United Kingdom, Traditional Student Mobility (Exchange) Agreement.
 - This was a renewal of an agreement first signed in 2013 between UCL and Waterloo. It applies university-wide at Waterloo and in the Faculty of Arts and Humanities, Faculty of Social and Historical Sciences, Faculty of Mathematical and Physical Sciences, Faculty of Engineering, Faculty of Life Sciences and Faculty of Brain Sciences at UCL.

University of Waterloo and University of Strathclyde Transatlantic Funding Call Participants and Projects

Waterloo International stewards the *Strathclyde/Waterloo Joint Transatlantic Funding Call* with colleagues at Strathclyde. Five funded teams were selected from 35 completed applications, submitted by both researchers and professional services staff, bringing together over 100 colleagues in the process. All funded projects connect with the Universities' strategic objectives. Ten awards of up to CAD \$20,000/£12,000 have been awarded in pairs, with Strathclyde and Waterloo each providing their side of the joint collaborative teams an award.

1. **John Zelek** (Systems Design Engineering), Explainable AI for Nuclear Core Component Inspection
2. **Eric Croiset** (Chemical Engineering), The Role of Hydrogen in Decarbonising the Steel Industry: Upstream and Downstream Opportunities in Scotland and Ontario
3. **Sarah Turnbull** (Sociology and Legal Studies), COVID-19 Justice as Penal Justice: Examining the Impacts of the Pandemic on Prisons in Canada and Scotland
4. **Juewen Liu** (Chemistry), New Aptamer and Surface-enhanced Raman Scattering Based Biosensors for Detecting Antibiotics in Water
5. **Plinio Morita**, (School of Public Health Sciences and cross appointment with Systems Design Engineering), Applications of AI in the Development of Public Health Solutions

For more information please see: <https://uwaterloo.ca/international/news/university-waterloo-and-university-strathclyde-transatlantic>

Scholars At Risk (SAR) Network

On 19 April 2022, the University of Waterloo announced that it is joining the Scholars at Risk (SAR) Network, effective immediately. SAR's mission is to protect threatened scholars, prevent attacks on higher education, and promote academic freedom and related values. SAR arranges temporary research and teaching positions at institutions in its network and provides advisory and referral services for scholars forced to leave their communities for reasons including war, intimidation, and threats of violence. By joining, Waterloo will engage in—and contribute to—SAR's two sets of activities:

- **Protection:** By arranging temporary academic positions at member universities and colleges, SAR offers safety to scholars facing grave threats, so scholars' ideas are not lost and so that they can keep working until conditions improve and they are able to return to their home countries.
- **Advocacy and Learning:** SAR also provides advisory services for scholars and hosts, campaigns for scholars who are imprisoned or silenced in their home countries, monitoring of attacks on higher education communities worldwide, and leadership in deploying new tools and strategies for promoting academic freedom and improving respect for university values everywhere. Waterloo members will be able to join global peers on a variety of initiatives, and network with like-minded colleagues in working groups, workshops, and conferences.

For more information on this announcement please visit <https://uwaterloo.ca/international/news/waterloo-joins-scholars-risk-network>.

Association of Commonwealth Universities (ACU)

Waterloo International published an article about the University of Waterloo's participation in the Association of Commonwealth Universities (ACU). The ACU aims to build a better world through higher education and proposes that bringing universities together from around the world will help to advance knowledge, promote understanding, broaden minds, and improve lives. To view the article, visit: <https://uwaterloo.ca/international/news/university-waterloos-membership-association-commonwealth>

Internationalization and Sustainability

On Earth Day 2022, Waterloo International shared reflections on Internationalization and Sustainability in higher education generally and more specifically, at the University of Waterloo, over the past year. To read the full article: <https://uwaterloo.ca/international/news/earth-day-2022-reflections-internationalization-and>