**MEETING**

**OPEN SESSION**

1:30

1. Conflict of Interest  
   Oral  Declaration

2. Remarks from the Chair  
   Oral  Information

3. Agenda/Additional Agenda Items  
   Oral  Decision

**Consent Agenda**

**Motion:** To approve or receive for information by consent items 4-8 below.

1:40

4. Minutes of the 4 April 2017 Meeting  
   4  Decision

5. Report of the President  
   a. Recognition and Commendation  
   14  Information
   b. Sabbatical and Administrative Leaves, and Administrative Appointments  
   18  Decision/Information

6. Report of the Vice-President, Administration & Finance  
   a. Incidental Fee Changes  
   23  Decision

7. Report of Executive Committee  
   25  Information

8. Institute for Quantum Computing Annual Report to the Ministry of Innovation, Science, and Economic Development, Executive Summary*  
   26  Decision

**Regular Agenda**

1:45

9. Business Arising from the Minutes  
   Input

1:50

10. Report of the Dean of Science  
    Oral/At Places  Information

11. Report of the President  
    a. President’s Update  
    Oral/31  Information

2:00
### OPEN SESSION

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<tbody>
<tr>
<td>2:20</td>
<td>a. Undergraduate Admissions Update</td>
<td></td>
<td>Information</td>
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<tr>
<td>2:30</td>
<td>b. Graduate Enrolment Update</td>
<td></td>
<td>Information</td>
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<tr>
<td>2:40</td>
<td>13. Conflict of Interest Declaration Form</td>
<td>47</td>
<td>At Places</td>
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<tr>
<td></td>
<td></td>
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<td>Information</td>
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<tr>
<td>2:45</td>
<td>BREAK</td>
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<td>2:55</td>
<td>14. Reports from Committees</td>
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<tr>
<td>2:55</td>
<td>a. Audit &amp; Risk</td>
<td>48</td>
<td>Decision</td>
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<tr>
<td>3:05</td>
<td>b. Building &amp; Properties</td>
<td>49</td>
<td>Information</td>
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<td>3:15</td>
<td>c. Finance &amp; Investment</td>
<td>50</td>
<td>Information</td>
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<td>3:25</td>
<td>d. Governance</td>
<td>51</td>
<td>Information</td>
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<tr>
<td>3:35</td>
<td>e. Pension &amp; Benefits</td>
<td>52</td>
<td>Decision/Information</td>
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<tr>
<td>3:40</td>
<td>15. Other Business</td>
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### CONFIDENTIAL SESSION

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<tr>
<td>3:45</td>
<td>16. Conflict of Interest</td>
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<td>Declaration</td>
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#### Consent Agenda

**Motion:** To approve by consent items 17 and 18 below.

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<th>Time</th>
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<tr>
<td>3:50</td>
<td>17. Minutes of the 4 April 2017 Meeting</td>
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<td>Decision</td>
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<td>18.</td>
<td>Report of the President</td>
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<td>Decision</td>
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<tr>
<td>3:50</td>
<td>a. New Appointments with Tenure</td>
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<td>Decision</td>
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#### Regular Agenda

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<tr>
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<tr>
<td>4:00</td>
<td>20. Report of the President</td>
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<tr>
<td>4:00</td>
<td>a. Executive Compensation Update</td>
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<td>Information</td>
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<tr>
<td>4:05</td>
<td>b. Advancement Update</td>
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<tr>
<td>4:15</td>
<td>21. Reports from Committees</td>
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<tr>
<td>4:15</td>
<td>a. Executive</td>
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<td>Decision</td>
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<td>4:20</td>
<td>b. Governance</td>
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<td>Decision</td>
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<tr>
<td>4:30</td>
<td>22. Other Business</td>
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<tr>
<td>4:35</td>
<td>23. Next Meeting: Tuesday 31 October 2017 at 1:30 p.m.</td>
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### IN-CAMERA SESSION

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<tr>
<td>4:35</td>
<td>24. Conflict of Interest</td>
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<td>Declaration</td>
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<tr>
<td>4:40</td>
<td>25. Minutes of the 4 April 2017 Meeting</td>
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<td>Decision</td>
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IN-CAMERA SESSION

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<tr>
<td>4:45</td>
<td>26. Business Arising from the Minutes</td>
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<tr>
<td>4:50</td>
<td>27. Other Business</td>
<td>Input</td>
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| 4:55 | 28. Report from Governance Committee  
   a. Presidential Performance | Information |
| 5:05 | 29. Adjournment | |


At places: Conflict of interest declaration form; Board of Governors 2017 handbook; Faculty of Science brochure; *University of Waterloo Magazine*, spring 2017; *University Affairs*, June 2017

**Note:** To allow the Board to complete a number of matters quickly and to devote more of its attention to major items of business, the agenda has been divided between items that are to be approved and/or received for information by consent and those that are to be presented individually for discussion and decision and/or information.

A consent agenda is not intended to prevent discussion of any matter by the Board, but items listed under the consent sections will not be discussed at the meeting unless a governor so requests. Governors are supplied with the appropriate documentation for each item and all items will be approved by means of one omnibus motion. The Board will then move immediately to consideration of the items on the regular agenda.

KJJ/ees

30 May 2017

Karen Jack

University Secretary

Secretary to the Board of Governors
OPEN SESSION

Opening Remarks
The Chair welcomed governors to the final meeting of the governance year. He asked Hamdullahpur to say a few words about the University’s recent student deaths and at Hamdullahpur’s invitation, members observed a moment of silence.

1. CONFLICT OF INTEREST
Governors were asked to declare any conflicts they may have in relation to the items on the agenda. No conflicts were declared.

2. REMARKS FROM THE CHAIR

Governors Stepping Down
A number of governors are stepping down at the end of April. The Chair acknowledged them, as follows:

- Community-at-Large Representatives:
  Catherine Booth (Vice-Chair; Executive Committee, Building & Properties Committee, and Governance Committee)
  Murray Gamble (Executive Committee, chair of Building & Properties Committee, and Governance Committee)
  Michael Stork (Executive Committee, Building & Properties Committee, and Finance & Investment Committee)
  William Watson (Chair; chair or Executive Committee, Audit & Risk Committee, chair of Governance Committee)
Governor Booth has served three terms total on Board. Governors Gamble, Stork and Watson have served two consecutive terms on Board, respectively.
• **Lieutenant Governor in Council Representative:**
  Karen Wilkinson (chair of Pension & Benefits Committee, Finance & Investment Committee, Governance Committee, and Executive Committee)

  Governor Wilkinson has served two consecutive terms as well.

• **Faculty Representatives:**
  Tara Collington (Building & Properties Committee)
  David DeVidi (Executive Committee)
  Fraser Easton
  Karim Karim (former member of Building & Properties Committee)

• **Undergraduate Student Representatives:**
  Christos Lolas (Executive Committee and Building & Properties Committee)
  Tristan Potter

  Mr. Lolas concludes two consecutive terms as Federation of Students president.

• **Graduate Student Representative:**
  Robert Bruce (Executive Committee and Building & Properties Committee)

  Mr. Bruce concludes his term as Graduate Student Association president.

**Stepping Down Reception**
The Chair reminded governors that a reception in honour of those governors stepping down will take place immediately following the Board meeting across the hall in room 3318.

3. **AGENDA/ADDITIONAL AGENDA ITEMS**
The Board heard a motion to approve the agenda as distributed.

  Lolas and DeVidi. Carried unanimously.

**Consent Agenda**
The Board heard a motion to approve and/or receive for information by consent items 4-8 below.

  Clubine and Wilkinson.

  Members heard that two changes will be made to page 7 of the minutes: following “a total review of Waterloo’s international fees be undertaken;” the following sentence will be added: “a suggestion that such a review not only look at fees, but also the services offered to students that these fees support”, and Peggy Jarvie’s title at the time the meeting occurred will be corrected to “executive director, co-operative education and career action”.

4. **MINUTES OF THE 7 FEBRUARY 2017 MEETING**
The Board approved the minutes of the meeting with the two changes mentioned above.

5. **REPORT OF THE PRESIDENT**
**Recognition and Commendation.** The Board received the report for information.

  **Sabbatical and Administrative Leaves and Administrative Appointments.**
  **Motion:** The Board heard a motion to approve the sabbatical and administrative leaves as presented in the report.
The remaining items in the report were received for information.

6. REPORT OF THE VICE-PRESIDENT, ACADEMIC & PROVOST
   
   University Professor Designation. The Board received the report for information.

   Department Name Change – Graduate Studies Office
   Motion: To approve the following name change: change from “Graduate Studies Office” to “Graduate Studies and Postdoctoral Affairs.”

   Department Name Change – Writing Centre
   Motion: To approve the following name change: change from “Writing Centre” to “Writing and Communication Centre.”

7. REPORT OF THE VICE-PRESIDENT, ADMINISTRATION & FINANCE
   
   Incidental Fee Changes
   Motion: To approve the 2017-18 Student Services Fee as presented in the report.
   Motion: To approve the Arts Student Union Fee as presented in the report.
   Motion: To approve the Environment Students Society Fee as presented in the report.

8. ACCOUNTABILITY STATUS REPORT
   
   Undergraduate Recruitment and Admissions. The Board received the report for information.

   The question was called, and the motion carried unanimously.

Regular Agenda

9. BUSINESS ARISING FROM THE MINUTES
   
   Governor Porreca inquired as to the status of the review committee for Policy 42, Response and Response to Sexual Violence, and members heard that the draft terms of reference will be distributed to the constituencies very soon.

10. PRESENTATION BY MEDELLA HEALTH, WINNER OF THE NATIONAL JAMES DYSON AWARD
    
    Chris Read, associate provost, students, introduced Harry Gandhi, founder of Medella Health.

    Medella Health, founded by former science and business student Harry Gandhi, won the National James Dyson Award for developing a contact lens that will revolutionize how diabetics monitor their blood sugar. Gandhi informed members about the company’s start and connections with Velocity, about its “smart” contact lens which helps people manage diabetes, media attention and awards, why they remain in Waterloo: local talent and support, and the rich contact lens research environment. Gandhi finished with thanks to the University for the opportunities it has presented over the years. In discussion, members heard: pilot testing is taking place with a goal to market the product next year, the lenses are prescription and correct vision too.

11. REPORT OF THE PRESIDENT
    
    President’s Update. The President focused his remarks on updates about government relations (advocacy and outreach activities, visits from federal ministers and activities in Ottawa, strategic mandate agreement negotiations are underway), Waterloo’s key role in the federal artificial intelligence strategy, next steps for Waterloo’s Global Entrepreneurship and Disruptive Innovation initiative, the University’s success in QS Subject Rankings, Faculty Roundtables and Department visits he is undertaking with the Provost, the University’s assessment of and recommendations regarding its business education options, and action being taken on mental health.
In response to questions about the report re: business education at Waterloo, the President clarified that the report articulates how Waterloo is different and does not contain a recommendation for, nor are there plans to create a business school. Mario Coniglio, associate vice-president, academic, advised that next steps are under consideration and invited feedback. Some members expressed hope that the plan is not to devise six separate “business school” entities, and the President advised that unity is the objective and all Faculties will be involved as plans move forward. Members heard that the report will be available online soon.

With respect to the University’s role in the federal artificial intelligence strategy, one governor encouraged the University to leverage that activity to strengthen the Waterloo-Toronto corridor concept.

**Advancement Update.** The Vice-President, Advancement presented an update on the University’s current advancement position relative to both relationships and revenue. Shoveller shared her initial findings (existing strong framework, solid local and alumni base, robust internal leadership); Advancement’s roadmap (relationships, the story, and infrastructure); the hybrid approach involving alumni and donors, faculty, senior leadership; optimizing central activities; and producing accountability and results.

Slides used in the Vice-President’s presentation may be seen here: [https://uwaterloo.ca/secretariat/sites/ca.secretariat/files/uploads/files/item_11b_advancement_update.pptx](https://uwaterloo.ca/secretariat/sites/ca.secretariat/files/uploads/files/item_11b_advancement_update.pptx)

**12. REPORT OF THE VICE-PRESIDENT, ACADEMIC & PROVOST**

**2017-18 Operating Budget.** The Vice-President presented a summary of the proposed 2017-18 operating budget. He spoke to the approvals already received, the fact that revenue from government has not increased and the fact that the deficit likely will become resolved over the course of the year.

The Board heard a motion to approve the 2017-18 Operating Budget, as described in Attachment 1.

Gamble and Schlegel.

In response to questions, Orchard advised that the 33% of the budget deriving from the government grant is typical for Ontario universities, the University’s international strategy alters things slightly, and the new budget model is meant to increase transparency.

The question was called, and the motion carried unanimously.

**Undergraduate Admissions Update.** Maureen Jones, interim registrar, provided a brief update on undergraduate admissions.

Graduate Admissions Update. Jeff Casello, associate provost, graduate studies, provided a brief update on graduate admissions.

Slides used in the Associate Provost, Graduate Studies’ presentation can be seen here: https://uwaterloo.ca/secretariat/sites/ca.secretariat/files/uploads/files/item_12c_graduate_admissions_update.pptx

In response to questions, Casello advised that the significant improvement in domestic admissions looks to put the University back on its former trajectory and is a result of increased marketing efforts and improved management of available award funding by his office.

13. REPORTS FROM COMMITTEES

Audit & Risk.
- **Modification of the Terms of Reference**
  
The Board heard a motion to approve the terms of reference of the Audit & Risk Committee as to include suggested language as per the attachment.

  Heins and Pristanski. Carried unanimously.

  Following Heins’ brief review, the Board received the remaining items in the report for information.

Building & Properties.
- **Student Life Centre/Physical Activities Complex (SLC/PAC) Addition**
  
The Board heard a motion to approve a revised SLC/PAC project budget of $41 million and grant the Building & Properties Committee the authority to approve the award of a construction contract after the Board of Governors’ meeting on 4 April 2017.

  Gamble and Lolas.

  Following commentary by Gamble regarding the budget over-run and work being done to understand and allay concerns expressed by members of the Graduate Student Association, the Chair called upon Christos Lolas, president of the Federation of Students, to speak. Lolas spoke to his role in the plan’s development and his excitement for the improved space for all students and advised that he was strongly in favour of the motion. Another student governor thanked the University for supplying the additional funds, but articulated that the concern from graduate students is whether the changes are significant enough to require a new referendum. In response, Gamble advised that none of the key components of the original plan have changed, and Read expressed a commitment to continuing conversations with any concerned parties.

  In further discussion, members heard: the extra money being supplied by the University is not being taken from another project, and a request that planners keep in mind employee requests for their own spaces.

  The question was called, and the motion carried unanimously.

  The Board received the remaining items in the report for information.

Finance & Investment.

Following Schlegel’s brief review of the report, Dennis Huber, vice-president, administration & finance, confirmed that the committee will seek approval for any changes to the University’s investments through both the Finance & Investment and Pension & Benefits Committees. The Board received the report for information.
Governance.
Following Booth’s review, the Board received the report for information.

Pension & Benefits.
Wilkinson briefly reviewed the report and noted that in item 3., “by” should read “to”. The Board received the report for information.

14. OTHER BUSINESS
Governor DeVidi asked for an update regarding last year’s request to the Board that the University consider ethical investing. In response, Huber advised that the Responsible Investing Working Group has been established with former governor Bruce Gordon as chair. Part of the group’s mandate is to make recommendations to the Board as to whether and how to incorporate environmental, social and governance factors into decision making re: the investment of the endowment and pension funds and that reports to the Board from the group will occur.

The Board convened in confidential session.

20 May 2017
Karen Jack
Associate University Secretary
Secretary to the Board of Governors
CONFIDENTIAL SESSION

The confidential minutes have been removed.
The confidential minutes have been removed.
The confidential minutes have been removed.
IN-CAMERA SESSION

The in-camera minutes have been removed.
FOR INFORMATION

Recognition and Commendation

In late March, the United Way held their annual Community Spirit Awards at St. George Banquet Hall. The University of Waterloo was well-represented: Leadership Award – University of Waterloo; Individual Campaign Champion Award – James Skidmore, Campaign Co-Chair, faculty member in Germanic & Slavic Studies; Individual Impact Award – Doris Jakobsh, faculty member in Religious Studies. We have another reason to celebrate: we beat our 2016 goal for the United Way campaign! Thanks to all of you, we raised more than $275,000. (Adapted from the Daily Bulletin, 23 March 2017.)

The fifth annual Three Minute Thesis (3MT) final competition was held at University of Waterloo in late March. Emmanuel Alabi, a PhD student from the School of Optometry and Vision Science emerged as the first place winner as well as winner of the People’s Choice award. Emmanuel delivered a poised and entertaining presentation on his graduate research, which focuses on developing an objective method to measure pain. Emmanuel is supervised by Trefford Simpson, a Professor in the School of Optometry and Vision Science. Andria Bianchi, a PhD student in Philosophy was named runner-up for her powerful and engaging presentation on how applied philosophy can help us better navigate tricky questions around sexual consent in people with dementia. Andria is supervised by Patricia Marino, a Professor in the Department of Philosophy. The 3MT competition challenges graduate students to articulate the breadth and significance of their research to a non-specialist audience in 3 minutes, using only one static slide. The university final saw fifteen students compete for the first place $1000 prize. In addition to winning the monetary prize, Emmanuel Alabi will advance to the Ontario Provincial 3MT competition in April, where he will compete from the top contenders from across Ontario. (Adapted from the Daily Bulletin, 27 March 2017.)

Two teams of engineering students at the University of Waterloo have been awarded $50,000 each to turn their fourth-year projects into startup companies after graduation. The funding is provided by celebrated Waterloo Engineering graduates Chamath Palihapitiya and his wife Brigette Lau, founders of Social Capital, a Silicon Valley venture capital fund dedicated to solving some of the world’s most difficult problems. Established in 2014, the Palihapitiya/Lau Venture Creation Fund at Waterloo backs students with promising Capstone Design projects who want to try to commercialize their ideas post-graduation. This year’s winning projects involve concepts for an endoscope for use in arteries and a much smaller, lighter device for people requiring portable oxygen therapy. The endoscope – called SWIRVE, an acronym for ‘short wave infrared vascular endoscope’ – is the brainchild of mechanical engineering students Phil Cooper, 22, of Pembroke, Ontario, and Michael Phillips, 22, of Sussex, New Brunswick, who plan to call their startup Vena Medical. They are developing a system involving a fibre optic bundle and infrared light that would allow surgeons to see inside arteries while positioning catheters for interventional procedures. Capable of seeing through blood, it would replace the two-
dimensional x-ray images now used to snake guidewires through arteries. “Navigation is our objective,” said Phillips. “We want doctors to be in the right spot.” The other project is the work of nanotechnology engineering students Mostafa Saquib, 21, of Kitchener, John Grousopoulos, 22, of Kitchener, and Chris Hajduk, 22, of Guelph. Pablo Enrique was also a member of the student team, but will not be part of the startup, which is called VivaSpire. It seeks to replace heavy, bulky devices to supply oxygen to people with conditions including chronic pulmonary obstructive disease, cystic fibrosis and lung cancer when they leave home. Its “secret sauce” is a nanoscale powder (a nanometre is one billionth of a metre) that absorbs oxygen from unpressurized air and releases it again when heated, eliminating the need for heavy compressors and batteries to power them. To be eligible for support from the fund, Waterloo Engineering teams must commit to working full-time on commercialization of their student projects in Kitchener-Waterloo for at least four months after graduation. (Adapted from the Daily Bulletin, 30 March 2017.)

A Waterloo student who is helping to educate people about a serious medical condition is among six students the University is recognizing for their outstanding achievements in co-operative education. Natalya O’Neill is the winner of the Faculty of Science’s Co-op Student of the Year Award. She spent two work terms with the hematology unit at St. Michael’s Hospital in Toronto, where she created a medical alert card and educational booklet for patients with asplenia, or abnormal spleen function, and at high risk of infection. In addition to winning her Faculty’s Co-op Student of the Year Award, she also received an honourable mention for the Education at Work Ontario (EWO) Co-op Student of the Year Award. The following are the recipients of the 2016 University of Waterloo Co-op Student of the Year Awards for their contributions to co-operative education and their community. This is Waterloo’s top award for students in a co-op program. Pearl Zaki – Health Studies (Faculty of Applied Health Sciences), Adnan Khan – Accounting and Financial Management (Faculty of Arts), Baraa Hamodi – Mechatronics Engineering (Faculty of Engineering), Regan Zink – Urban Planning (Faculty of Environment), Alister D’Costa – Bioinformatics (Faculty of Mathematics), Natalya O’Neill – Materials and Nanosciences (Faculty of Science). In addition, John Pagado (Applied Heath Sciences), Jona Cho (Arts), Karan Bir (Engineering) and Stephanie Chan (Science) received honourable mention. (Adapted from the Daily Bulletin, 31 March 2017.)

St. Paul’s GreenHouse held its Winter Social Impact Showcase recently, announcing the winners of the Big Ideas Challenge and the recipients of the Social Impact Fund, as well as celebrating the successes of past Social Impact Fund recipients such as Richard Yim of Landmine Boys and Tina Chan of PASS. The Big Ideas Challenge is a social venture competition, with winners receiving GreenHouse Fellowships during the summer months. This year, five social enterprises received Fellowships totalling $9,500 and the possibility of accessing $15,000 more through the Social Impact Fund. They are: MapleKey, a modular sleeping pod service; Soleful, a technology to reduce falls among older adults; Cultured, a plant-based approach to culturing meat; SEED, an innovative approach to burial; and Arawelo, a cross-cultural women’s health platform. Other winners at the Showcase included the recipients of the Social Impact Fund, which provides startup support to developing GreenHouse ventures. This term, Nicole Yang and Anna Chang were the recipients of $2,500 and $1,000 respectively. Nicole’s venture, rePUBLIC, aims to create more engaging public spaces through art installations paired with an app, and Anna’s venture, Midori, will investigate how to alleviate textile waste by repurposing used textiles into eco-friendly clothing. (Adapted from the Daily Bulletin, 13 April 2017.)
The Centre for Extended Learning (CEL) in conjunction with Associate Vice President, Academic Mario Coniglio were pleased to announce the recipients of the University of Waterloo’s inaugural Online Teaching and Design Awards: Professor Edwin Ng and Professor Doug Cowan. Edwin Ng (Assistant Professor, School of Social Work, Renison University College) was nominated for the Online Teaching Award based on his teaching of SWK 605R: Knowledge Mobilization and Evidence-Based Practice, SWK 601R: Health Policy, and SWK 609R: Social Work Practice in Mental Health, part of the online Master of Social Work program at Waterloo, which is unique in Canada. The Online Course Design award goes to Doug Cowan, Professor of Religious Studies and Social Development Studies for his authorship of RS 270R: Religion and Popular Film, developed with CEL support. The course is cross-listed as Fine Arts 252. The Online Teaching and Design Awards are given out annually. In addition to a Certificate of Recognition, each recipient will receive a monetary prize of $1000, sponsored by the Office of the Associate Vice-President, Academic. Students, teaching assistants, faculty, instructors, chairs, and deans are all eligible to nominate any fully online course for the Online Course Design Award. For the Online Teaching Award, students are encouraged to nominate their online instructor at the end of each term in a course announcement. (Adapted from the Daily Bulletin, 20 April 2017.)

The Waterloo Aboriginal Education Centre (WAEC) won the Equity and Inclusivity Award from the University’s Status of Women and Equity Committee (SWEC). While the Centre is first and foremost a supportive and safe space for Indigenous students, it also manages to engage non-Indigenous students, staff, and faculty in the sharing of Indigenous knowledge, and has been especially successful in forming collaborative partnerships with other community organizations. WAEC activities include everything from outreach educational programs with Indigenous communities, lectures and events, an annual Pow Wow, and – to those on campus – Soup and Bannock lunches every week during the Fall and Winter. (Adapted from the Daily Bulletin, 21 April 2017.)

On April 18th, The Fields Institute held its inaugural thesis competition in collaboration with TEDxUofT. Doctoral students studying any form of mathematics from across Ontario competed to see who could best present their thesis topic within three minutes. Three of the eleven student presenters were from Waterloo. Congratulations to Thomas Bury (Applied Mathematics) who placed second, Tyrone Ghaswala (Pure Mathematics) who placed third, and Anton Mosunov (Pure Mathematics) who received an honorable mention. (Adapted from the Faculty of Mathematics News website, 21 April 2017.)

Excellence in teaching is both a tradition and a core mission of the University of Waterloo’s Faculty of Science. Each year the Faculty of Science celebrates this dedication and superior teaching calibre by selecting up to two instructors to receive its highest teaching honour: the Excellence in Science Teaching Award (ESTA). This year’s ESTAs were awarded to Michael Beazely an associate professor in the School of Pharmacy and Richard Epp, a continuing lecturer in the Department of Physics and Astronomy. The winners of the ESTA receive a certificate and a monetary award, which is used to support teaching activities. (Adapted from the Daily Bulletin, 25 April 2017.)

The Fields Institute has announced that Professor Brian Forrest of the University of Waterloo’s Department of Pure Mathematics was chosen as the 2017 recipient of the Margaret Sinclair Memorial Award. This honour recognizes innovation and excellence in mathematics education. “The adjudication committee was impressed by the significant impact his accomplishments have had at all levels of mathematics education: high school, undergraduate, graduate, postdoctoral, and teacher education,” says
a statement from the Fields Institute. Professor Forrest is the first University of Waterloo recipient of this award. “It is a tribute to him as a talented mathematician, an outstanding teacher and a driving force for curricular development,” says an article on the Mathematics website. (Adapted from the Daily Bulletin, 10 May 2017.)

Five University of Waterloo researchers have been awarded more than $6 million through the Canada Research Chairs (CRC) and Canada Foundation for Innovation’s John R. Evans Leaders Fund (JELF). The researchers named in the announcements are: **Chris Eliasmith** (Philosophy & Systems Design Engineering) – CRC advancement from Tier 2 to Tier 1 in Theoretical Neuroscience ($1.4 million over seven years). Professor Eliasmith was also awarded $69,965 through CFI’s JELF for Computational and Robotic Infrastructure for Large-Scale Neural Simulation. **Laura Hug** (Biology) – New Tier 2 CRC in Environmental Microbiology ($500,000 over five years). Assistant professor Hug was also awarded $50,000 through CFI’s JELF for Microbial Diversity and Function in Contaminated Sites. **Raafat Mansour** (Electrical and Computer Engineering) – Renewed Tier 1 CRC in Micro and Nano Integrated Radio Frequency (RF) Systems ($1.4 million over seven years). **Janusz Pawliszyn** (Chemistry) – Renewed Tier 1 CRC in New Analytical Methods and Technologies ($1.4 million over seven years). **Catherine Rosenberg** (Electrical and Computer Engineering) – Renewed Tier 1 CRC in the Future Internet ($1.4 million over seven years). (Adapted from the Daily Bulletin, 17 May 2017.)
1. **Sabbatical and Administrative Leaves**

The University of Waterloo Policy 3 – Sabbatical and Other Leaves for Faculty Members [excerpts below, full text available at: http://uwaterloo.ca/secretariat-general-counsel/policies-procedures-guidelines/policy-3] sets out the purpose of leaves for faculty members as well as the requirements/responsibilities of faculty who are granted such leave.

The granting of a leave . . . depends on the University’s assessment of the value of such leave to the institution as well as to the individual, and on whether teaching and other responsibilities of the applicant can be adequately provided for in her/his absence. A faculty member who is granted a sabbatical or other leave is expected to return to duties in the University for at least one year and upon return will be expected to submit a brief report to the Department Chair regarding scholarly activities while on leave.

The purpose of a sabbatical leave is to contribute to professional development, enabling members to keep abreast of emerging developments in their particular fields and enhancing their effectiveness as teachers, researchers and scholars. Such leaves also help to prevent the development of closed or parochial environments by making it possible for faculty members to travel to differing locales where special research equipment may be available or specific discipline advances have been accomplished. Sabbaticals provide an opportunity for intellectual growth and enrichment as well as for scholarly renewal and reassessment.

. . . the granting of sabbatical leave is contingent upon the faculty member’s department being able to make the necessary arrangements to accommodate such an absence, and also upon the financial resources of the University in any given year. Should problems arise in any of the above, it may be necessary to postpone individual requests until such time as all the conditions can be satisfied.

- **Sabbatical Leaves**

  **Anderson, William**, Chemical Engineering, September 1, 2018 to August 31, 2019 at 100% salary

  *I will focus on current and potential new collaborative research with companies, to advance the development and use of antimicrobial materials and processes for the reduction of infection transmission in clinical and other settings. Courseware updating and improvements will also be pursued in collaboration with other instructors.*

  **Baaj, Hassan**, Civil and Environmental Engineering, September 1, 2017 to February 28, 2018 at 100% salary

  *I have been invited by Professor Di Benedetto from the Ecole Nationale des Travaux Publics de l’Etat (ENTPE) in France and Dr. François Olard, R&D Director of Eiffage TP, to join the research team of the Eiffage Industrial Research Chair as Visiting Professor and contribute to research projects of the chair.*

  **Bauch, Christopher**, Applied Mathematics, January 1, 2018 to June 30, 2018 at 100% salary

  *I will further develop my new research program on applying dynamical systems theory to data science, with special focus on coupled human-and-natural ecological and epidemiological systems and online social media data sources.*
Bell, Jason, Pure Mathematics, July 1, 2017 to June 30, 2018 at 85% salary
My area of research is noncommutative algebra and its applications to problems in dynamics and number theory; I plan to finish several ongoing projects with Boris Adamczewski and Eric Delaygue (Institut Camille Jordan, Lyon, France) along with projects with Dan Rogalski (University of California, San Diego).

Bigelow, Philip, Public Health and Health Systems, January 1, 2018 to December 31, 2018 at 100% salary
I will further develop my research program in the area of the health and wellness of truck drivers through collaboration with investigators in BC and in France. I will continue my studies of the impacts of wind turbines on sleep and health in residents of Ontario through research collaborations with health units and community groups.

Blay, Jonathan, Pharmacy, January 1, 2018 to June 30, 2018 at 100% salary
I will acquire expertise in three areas of laboratory research, to expand my study of the tissue environment in cancer and the design of new therapeutic technologies. These relate to how cancer cells leave the blood in metastasis (the focus of a clinical collaboration with Grand River Hospital) and related interventions that may be of benefit to cancer patients.

Chenouri, Shojaeddin, Statistics and Actuarial Science, September 1, 2017 to August 31, 2018 at 100% salary
I will continue expanding my research on complex and high-dimensional analysis. I am planning to spend parts of my sabbatical in the multi-scale additive manufacturing (MASM) lab, the smart hybrid and electric vehicle system lab, and the perimeter institute, as well as my home department.

Cleve, Richard, Computer Science, August 1, 2017 to July 31, 2018 at 85% salary
I intend to pursue research in the area of quantum information, including quantum algorithms and quantum entanglement.

Fidan, Baris, Mechanical and Mechatronics Engineering, September 1, 2017 to August 31, 2018 at 85% salary
I will be establishing and strengthening academic links with collaborators from University of New South Wales, Australian National University, University of Southern California, University of Santa Barbara and San Diego, Chalmers University of Technology, Kungliga Tekniska Högskolan (KTH) Stockholm, and Delft University of Technology (Netherlands) within the fields of adaptive and networked dynamic systems with mechatronic and automotive applications.

Hill, Robert, Physics and Astronomy, September 1, 2017 to August 31, 2018 at 100% salary
I will visit the Shoenberg Laboratory for Quantum Matter in the Cavendish Laboratory, Cambridge University, UK. The overarching research goal is to develop novel, high sensitivity measurement techniques for use at low temperatures and in high magnetic field with the goal of advanced studies of quantum materials such as the topological Kondo insulator SmB6.

Hudson, Michael, Physics and Astronomy, September 1, 2017 to August 31, 2018 at 100% salary
I work in astrophysics and cosmology, specifically weak gravitational lensing and the large-scale structure of the Universe, and am involved in major international projects in each of these two areas. I plan to work on these projects with colleagues at the Institut d’Astrophysique de Paris, the University of Cape Town, Swinburne University (Melbourne), the Australian National University and the Anglo-Australian Observatory.
Jao, David, Combinatorics and Optimization, September 1, 2017 to August 31, 2018 at 85% salary
I intend to develop and submit cryptographic standards for various post-quantum cryptography standardization processes currently under way, including at the US Government’s National Institute of Standards and Technology (NIST) and the European Telecommunications Standards Institute (ETSI), based on Supersingular Isogeny Diffie-Hellman (SIDH), a post quantum cryptosystem that I invented.

Laflamme, Raymond, Physics and Astronomy, September 1, 2017 to August 31, 2018 at 100% salary
I will investigate Thermodynamics and Machine Learning in the light of Quantum Information Processing. These are two fields of science that have been developed using processing and the laws of classical physics. I will investigate if any advantage can be gained or lost when using the laws of quantum mechanics.

Leoni Lambeck, Monica, Spanish and Latin American Studies, July 1, 2017 to June 30, 2018 at 100% salary
I will rebuild my research program at the level commensurate to a regular faculty member following my 6 years as Chair of the Department of Spanish and Latin American Studies. My research focuses on Spanish literature, theater, mysticism, women’s writing, and gender studies. My hope is to develop and write a number of articles to resume my research output after several years of heavy administrative load.

Mariantoni, Matteo, Physics and Astronomy, September 1, 2017 to February 28, 2018 at 100% salary
I will be completing a variety of experimental projects in view of the tenure and promotion evaluation. The projects are on superconducting quantum circuits, with emphasis on technologies for extensible quantum computing architectures.

Nimubona, Alain-Désiré, Economics, September 1, 2017 to February 28, 2018 at 85% salary
I will undertake new research to investigate the use of economic instruments for water management and regulation. I will also complete ongoing research into climate change adaptation and mitigation, and abatement technology search. The results of my research work will be presented at conferences and later submitted in peer-reviewed journals for publication consideration.

Orchard, Ian, Biology, July 1, 2017 to December 31, 2017 at 100% salary
My research investigates the functioning of the nervous system, using insects as experimental models. We are establishing the mechanisms by which the nervous system communicates information. The work focuses on the medically-important bug, “Rhodnius prolixus”. This bug takes enormous blood meals from humans, and can then transmit the parasite, “Trypanosoma cruzi” to the human host where it causes Chagas disease. We study the insect neuroendocrinology that controls this transmission.

Pignatti, Lorenzo, Architecture, July 1, 2017 to December 31, 2017 at 100% salary
My research proposal aims to confront a variety of cities (starting with Rome, Pescara and Sarajevo, etc.) through their urban form and structure in order to develop a deep understanding of urbanity and define strategies or urban re-generation. It is in fact true that nowadays the urban project, at least in Europe, is mostly about reuse and regeneration. To give a new life to an abandoned site or building is the most generous act that we can give to a portion of a city. However, this implies the knowledge of the urban, social and cultural phenomena that crated an urban armature and the understanding of its physical and metaphorical structure.
Purbhoo, Kevin, Combinatorics and Optimization, September 1, 2017 to August 31, 2018 at 85% salary
My primary area of research is combinatorial algebraic geometry. Much of my work is related to the Mukhin-Tarasov-Varchenko theorem, which connects real algebraic geometry, differential equations, Schubert calculus, and representation theory.

Ross, Martin, Earth and Environmental Sciences, January 1, 2018 to December 31, 2018 at 100% salary
My research focuses on understanding glacial sedimentary processes and related sediments. The knowledge is applied to a wide range of problems including mineral exploration under glacial sediment cover, natural hazards, and shallow groundwater resources. The sabbatical will be used to strengthen collaborations (in Canada, Finland, and the UK) needed to develop new approaches and integrate emerging innovative techniques.

Shen, Winny, Psychology, September 1, 2017 to February 28, 2018 at 100% salary
I will further my research on the psychology of work in two ways: a) submitting an Insight Development Grant application to fund a new stream of research on methodological innovations for studying work-family conflict, b) traveling to Australia, Israel, and the U.S. to develop or build upon international collaborations with colleagues on projects concerning leadership and occupational health and stress.

Storjohann, Arne, Computer Science, September 1, 2017 to August 31, 2018 at 85% salary
My research deals with computational problems involving matrices with integer and polynomial entries. The input and output are exact. The objective is to discover improved algorithms for fundamental problems such as matrix inversion, rank computation, and computing matrix normal forms. The goal is to achieve algorithms that are nearly optimal in terms of the computational time required. I plan to develop new techniques and algorithms for both integer and polynomial matrices. My time will be split between the University of Waterloo and visits with collaborators in France, Denmark and the United States.

Straube, John, Civil Engineering and Architecture, July 1, 2017 to December 31, 2017 at 85% salary
I will be revising, updating and extending my textbook “Building Science for Building Enclosures”, into a second edition. I will also develop new skills for teaching design studios in response to needs expressed in the Civil and Environmental Engineering Department and by the proposed Architectural Engineering Program. Three peer-reviewed papers of completed research work will be prepared for submission.

Strickland, Donna, Physics and Astronomy, July 1, 2017 to December 31, 2017 at 100% salary
I will work with my students to complete a project on developing an all-fiber-coupled two-colour laser system. I will also work with my graduate students on the study of multi-frequency Raman generation for ultrashort pulse generation. I will work with my visiting student on laser induced breakdown spectroscopy.

Young, Steven, Environment, Enterprise and Development, September 1, 2017 to August 31, 2018 at 97.5% salary
I plan to expand my research program on sustainability management of raw materials, including developing a major international funding proposal. Travels will include a research stay in Australia and a number of visits in Europe and Asia to study management approaches in global supply chains of critical materials.
• **Sabbatical Change**
  Elkamel, Ali, Chemical Engineering, May 1, 2017 to October 31, 2017, and May 1, 2018 to October 31, 2018, to September 1, 2017 to February 28, 2018, and September 1, 2018 to February 28, 2019, at 85% salary.

  Fowler, Michael, Chemical Engineering, July 1, 2016 to December 31, 2016, and July 1, 2017 to December 31, 2017, to July 1, 2016 to December 31, 2016, and July 1, 2018 to December 31, 2018, at 85% salary.

**FOR INFORMATION**

2. **Administrative Appointments**

  Case, Lori, appointment as Associate Dean, Co-op Education, Faculty of Mathematics, July 1, 2017 to June 30, 2020.

  Frayne, Bruce, appointment as Director, Environment, Enterprise and Development, Faculty of Environment, July 1, 2017 to June 30, 2021.

  Woudsma, Clarence, re-appointment as Director, Planning, Faculty of Environment, July 1, 2017 to June 30, 2020.

  Feridun Hamdullahpur
  President
FOR APPROVAL

Incidental Fees

Federation of Students Fee
It is recommended that the compulsory Federation of Students fee, assessed and collected from all full-time on-campus undergraduate students, be increased from $56.62 to $57.76 per term effective September 2017 (fall term). Part-time on-campus undergraduate students are assessed 30% of the full-time fee or $17.33 per term.

Comments:
- The previous full-time fee increase was $1.95 per term effective September 2016.
- The 2017 fee increase of $1.14 (2.0%) was approved at their General Meeting on March 29, 2017.
- Payment of the fee is a requirement of registration and is non-refundable.

Orientation Fee
It is recommended that the Orientation Fee, assessed and collected from each incoming full-time on-campus, first-year undergraduate student, be increased from $105.60 to $107.01 effective September 2017 (fall term).

Comments:
- The original $100.00 fee was approved by student referendum in February 2005.
- The fee is collected in the fall term only for 1A students.
- The fee can be adjusted by CPI each year and last increased in September 2015; the proposed increase is 1.3% and was approved at their General Meeting on March 29, 2017.
- The fee is refundable through the Federation of Students; students seeking a refund are required to request the refund prior to the start of frosh week.

Federation of Students Administered Fee
It is recommended that the Federation of Students Administered Fee be increased to reflect an increase for the U-Pass component effective September 2017 (fall term).

<table>
<thead>
<tr>
<th></th>
<th>Dental</th>
<th>Health</th>
<th>U-Pass</th>
<th>SRP</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular</td>
<td>$45.00</td>
<td>$ 55.00</td>
<td>$89.45</td>
<td>$1.00</td>
<td>$190.45</td>
</tr>
<tr>
<td>Co-op</td>
<td>$83.63</td>
<td>$103.13</td>
<td>$89.45</td>
<td>$1.00</td>
<td>$277.21</td>
</tr>
</tbody>
</table>

Comments:
- SRP = Student Refugee Program
- The Federation of Students has contracted with Studentcare for the health and dental components and Grand River Transit for the bus pass component.
- The University assesses the fee on behalf of the Federation of Students and transfers the funds to the Federation of Students for disbursement.
- Payment of the fee is a requirement of registration; the health and dental components are refundable through the service provider; the bus pass is non-refundable; the student refugee program is refundable directly through the Federation of Students.
- The Federation of Students will be monitoring the potential impacts of Ontario’s proposed PharmaCare+ program.
- The bus pass fee is assessed to all full-time undergraduate students on-campus within the Region of Waterloo.
- During the winter term, regular students pay twice the rate for health and dental to ensure continuous coverage from May to August.
- The U-Pass component reflects an increase of $4.25 per term (4.99%).

Graduate Student Association (GSA) Administered Fees

It is recommended that the compulsory GSA Administered Fees, assessed and collected from active full-time and part-time graduate students, be increased for the dental, health, and U-Pass components effective September 2017 (fall term).

<table>
<thead>
<tr>
<th></th>
<th>Dental</th>
<th>Health</th>
<th>U-Pass</th>
<th>Grad House</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td>$81.00</td>
<td>$62.00</td>
<td>$89.45</td>
<td>$18.00</td>
<td>$250.45</td>
</tr>
<tr>
<td>Part-time</td>
<td>$81.00</td>
<td>$62.00</td>
<td>N/A</td>
<td>$18.00</td>
<td>$161.00</td>
</tr>
</tbody>
</table>

Comments:
- Payment of the fee is a requirement of registration.
- The Graduate House fee is refundable directly through the GSA.
- The health and dental components are refundable through the service provider.
- The U-Pass fee pays for a universal bus pass with the Grand River Transit; the fee is assessed to all full-time graduate students on-campus within the Region of Waterloo; the fee is not refundable.
- The proposed fee changes were approved by the GSA Board of Directors on May 19, 2017.
- The U-Pass component reflects an increase of $4.25 per term (4.99%).

Dennis Huber
Vice President, Administration & Finance
This report is submitted following the committee’s email poll concluding 29 May 2017.

FOR INFORMATION

Committee Memberships
Acting on authority vested in it pursuant to a resolution of the Board of Governors, passed 6 June 2006, as amended by resolution of the Board of Governors passed 5 June 2007, the Executive Committee approved by email polls, on behalf of the Board of Governors, appointments to Board committees as described below.

Executive Committee
Antonio Brieva as undergraduate student representative, term 1 June 2017 to 30 April 2018.
Robert Bruce as graduate student representative, term 1 June 2017 to 30 April 2018.

Pension & Benefits Committee
Ted Bleaney as staff representative appointed by the University of Waterloo Staff Association president, term 1 June 2017 to 30 April 2020.

/kjj

Cindy Forbes
Chair
FROM THE EXECUTIVE DIRECTOR

Over the past 15 years, I have had the privilege to have a front row seat to the creation of a Canadian success story. The growth and impact of the Institute for Quantum Computing (IQC) displays the power of incredible vision, sustained commitment and collective efforts to build something truly unique right here in Canada. Thanks in large part to the continued support of the Government of Canada, IQC now stands among the top research institutes globally.

Beyond research discoveries, the past year has brought new people, new space and new opportunities to IQC. I am delighted that our Institute continues to grow with 50 new graduate students, twelve new postdoctoral fellows and three new faculty joining this past year. We welcomed new faculty members K. Rajibil Islam from MIT’s Center for Ultracold Atoms, Crystal Senko from Harvard University and Jon Yard from Microsoft Research. Major renovations meant an increase of over 2,000 square feet in lab space this year alone, with plans for continued lab expansion. IQC faculty member David Cory leads the largest research grant in the University of Waterloo’s history - $76.3 million from the Canada First Research Excellence Fund for the Transformative Quantum Technologies initiative, which will focus on commercializing quantum devices and technologies. This year also marked the launch of the first-ever travelling exhibition on quantum information science and technologies. QUANTUM: The Exhibition celebrates Canada’s excellence in quantum information research as part of the Canada 150 celebrations.

As we look to the next year, Canada and IQC are presented with tremendous opportunity. I am excited by the research that continues to emerge from our labs and how quickly new ideas are moving toward commercialization. Together with the Perimeter Institute, the Lazaridis School at Wilfrid Laurier University, Quantum Valley Investments and the many startups emerging from IQC research, the University of Waterloo is playing a critical role in building the Quantum Valley. New IQC members will open up new areas of research and expand our community in exciting and interesting new ways. As well, a new Director will also set a path forward for IQC that will continue to shape and impact our quantum research agenda nationally and internationally.
I am continually humbled by the generous support IQC has received over its lifetime. The Government of Canada, the Province of Ontario, the University of Waterloo, Mike Lazaridis and the many industry and research partners from every corner of the globe have contributed to IQC’s success in immeasurable ways. It is with this continued support, commitment and vision that Waterloo will continue to be a global leader in quantum information research.

Thank you to the Government of Canada and all our supporters for believing in the quantum vision, encouraging excellence in all that we do and for providing me with a front row seat to an incredible journey that has only just begun.

Raymond Laflamme
Executive Director, Institute for Quantum Computing
University of Waterloo
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ABOUT THE INSTITUTE FOR QUANTUM COMPUTING

IQC was created in 2002 to seize the potential of quantum information science for Canada. IQC’s vision was bold: position Canada as a leader in research and provide the necessary infrastructure for Canada to emerge as a quantum research powerhouse. Today, IQC stands among the top quantum information research institutes in the world. Leaders in all fields of quantum information science come to IQC to conduct research, share knowledge and encourage the next generation of scientists.

IQC is leading the next great Canadian technological revolution – the quantum revolution. Quantum technologies and applications developed in IQC labs create the foundation for next generation technologies based on quantum information research conducted right here in Canada.

None of this would be possible without the visionary leadership and investments of Mike and Ophelia Lazaridis, the Government of Canada, the Government of Ontario and the University of Waterloo. This strategic private-public partnership has accelerated the advancement of quantum information research and discovery, not only in Canada, but around the globe.

Vision & Mission

IQC’s vision is to harness the power of quantum mechanics for transformational technologies that benefit society and become the new engine for economic growth in the 21st century and beyond.

IQC’s mission is to develop and advance quantum information science and technology at the highest international level through the collaboration of computer scientists, engineers, mathematicians and physical scientists.

Strategic Objectives

IQC is guided by three strategic objectives developed in partnership with the Ministry of Innovation, Science and Economic Development:

1. To establish Waterloo as a world-class centre for research in quantum technologies and their applications.
2. To become a magnet for highly qualified personnel in the field of quantum information.
3. To be a prime source of insight, analysis and commentary on quantum information.
PRESIDENT’S UPDATE TO THE BOARD OF GOVERNORS
June 6, 2017

Dear Governors,

I am pleased to provide you with a brief summary of major achievements, initiatives and updates since our last meeting in April along with an update on our Strategic Plan implementation. I will be happy to discuss any of these items in further detail.

CONGRATULATIONS/ACHIEVEMENTS

- Research Income (2016-17) $205M – first time in our history breaking $200M

- Times Higher Education (THE) names UW one of the 55 global “technology challengers” (institutions who have innovation at the core of their strategy, strong industry links and research that excels in technological areas

- Through partnership with Compute Canada and Compute Ontario (including a $17M investment from the Canada Foundation for Innovation and the Government of Ontario), UW unveiled the largest supercomputer at any Canadian university in May. This supercomputer has 33,000 CPUs (a typical desktop has 4 CPUs) which allows the generation of more research results at one time. This will significantly help increase our ability to meet researchers’ demand for computational resources.

- Waterloo Start up Fund – MOU signed with Nova LVX Capital experienced in university-venture fund models. The goal is to develop a $100M fund invested over 5 years open to all UW community (ie., WatCo, Velocity, likely AC). It will be used to provide significant seed investment to startups and beyond (up to a total of $5M) based on achieving defined milestones. Waterloo would have equity in the fund management company and possibly in selected startups.

- Business Council of Canada – Tom Jenkins helped organize the visit of over 80 CEO’s associated with the Business Council of Canada to UW and Waterloo Region on April 24th. Rat opportunity to showcase ecosystem.

- FedDev will contribute $8.9M to UW for the establishment of a Multi-Scale Additive Manufacturing Lab (Professor Ehsan Toyserkani, Mechanical and Mechatronics Engineering Department) designed to make it easier for manufacturers to adopt additive metal manufacturing processes

STRATEGIC PLAN UPDATE

With the current strategic plan in its final year, discussions occurred at the Deans’ Council/Group and at Executive Council Retreat in May to begin to set the stage for the development of the next strategic plan. There was general agreement at the Retreat
that Innovation, Internationalization and Interdisciplinarity resulting in Impact are principles that will inform the conceptual framework for the next strategic plan, subject to feedback/advice from an extensive consultation process. In addition, the faculties and the Academic Support Units (ASU’s) will develop their own plans guided by the University’s plans.

The University has begun the preparations for the development of the next cycle of the University’s Strategic Plan, 2020-2025. In spring 2017, Faculty Deans are being engaged to discuss the optimal overall Strategic Plan development process, including the development of a clear leadership structure and identifying vital University strategic issues by 2017. Next, a robust research process will begin and continue over the next year to best inform the development of the Strategic Plan. Coupled with the Strategic Plan 2013-2018 summative report, this information will be used as part of a dynamic stakeholder engagement and consultation process beginning in fall 2018. During winter 2019, the Strategic Plan will be developed, with governance approval slated for fall 2019. Over the winter of 2019/2020, an implementation plan and an accountability framework will be developed, ensuring the launch in the spring of 2020.

A final draft of an internal audit of the University’s strategic planning process was received in April 2017. The purpose of the audit was to analyze the University’s strategic planning process from strategy development to implementation, communications and monitoring of action plan results and to provide recommended suggestions for the next cycle of the strategic planning process. Various stakeholders were interviewed including individuals within IAP, Faculty Deans (present and past), Theme Leads and Board Chairs (present and past).

a) The audit highlighted that the University has a well-defined strategic planning process that outlines the goals, process, consultation and data to execute the planning process. Communication with the Board, as well as broad campus communication and engagement through the strategic plan website and Mini Town Halls were also highlighted as strengths. Lastly, the University’s demonstration of results through annual accountability reports and Faculty supplements using both quantitative and qualitative results was strong.

b) In order to strengthen the process for the next cycle of the strategic plan, the audit recommended that the Faculties be more engaged, and that the roles and responsibilities for Faculty Deans, Senate and administrative leadership should be clearly articulated and understood for increased transparency. The audit also recommended that, in the next cycle of the strategic planning process, a process for analyzing opportunities and risk tolerance should be incorporated according to the University’s Risk Management framework.

**WATERLOO BUDGET MODEL (WBM)**

Following a series of interactive information sessions with key stakeholders, the Waterloo Budget Model (WBM) has entered into its first year of implementation as of May 1, 2017. A one-page summary of the WBM accompanied a modified institutional
operating budget that was approved by the Board in April. During this initial year, accountability and reporting processes will continue to be developed and refined to support the model, including those associated with the new Strategic Budget Advisory Committee.

**STRATEGIC ENROLMENT MANAGEMENT**

**Enrolment Planning** – In late April, Waterloo submitted to the Ministry its preliminary draft of the new Strategic Mandate Agreement (SMA). The document outlines Waterloo’s differentiated role in Ontario’s post-secondary system and includes enrolment projections for both domestic and international students. As part of the process, an initial meeting was held with the Ministry’s SMA Special Advisor to discuss all aspects of the SMA including enrolment growth aspirations and associated funding in future years. A follow-up meeting will take place in the next two months before the SMA is finalized during summer 2017.

**Measuring Student Outcomes** – The first ever survey measuring the post-graduate outcomes of graduate students is currently in the field.

**Measuring Student Engagement** – The latest NSSE survey administration completed in April with an all-time high response rate of over 50%. The high response rate was due in part to a Waterloo-specific promotional campaign highlighting the importance of the survey and communicating institutional and Faculty-based actions that have been undertaken since 2014 to improve student engagement.

**STRATEGIC PLAN THEME UPDATES**

**Outstanding Academic Programming**

- **National leadership in high quality online courses and programs:** The Canadian Association for University Continuing Education (CAUCE) has recognized Waterloo with a 2017 Program Award in the ‘Non-credit Programming under 48 hours’ category for its Opioid Education Partnership online program, developed by the School of Pharmacy in partnership with CEL.

- **Business at Waterloo:** The report of the working group was received in January 2017 and the AVPA presented it at Executive Council in February 2017 for feedback. The provost and AVPA sent out a memo and made the report available to the Waterloo community in early May 2017.

**Vibrant Student Experience**

- In response to the outreach from our committed University of Waterloo community after the sudden loss of two students in the winter semester, the President’s Advisory Committee on Student Mental Health was initiated. The Director of Campus Wellness is leading the development of the project with close consultation with the President and other key stakeholders that deliver the many
supports already in place around campus and in the larger Waterloo community. This project will provide a variety of opportunities for our campus community to be engaged through smaller panel discussion, town halls, etc. The detailed terms of reference for this Committee are outlined separately.

- It has been identified that more student study space was needed on campus to meet our growing student population. Beyond all of the new spaces created for students over the last couple of years (Science Teaching Complex, Arts Hub, Engineering, etc.), there has been a project that has identified underutilized spaces within existing buildings and outfitted them with tables and chairs designed specifically for students (i.e. power built-in, a variety of configurations to accommodate individual or group settings). During the first 2 years of this 4 year project, nearly 200 seats have been added in 7 buildings across campus.

- Delivered conference presentation at National Institute for the Study of Transfer Students (NISTS), outlining Waterloo’s successful transfer credit database project to streamline and enhance transfer student credit assessment process.

Global Prominence and Internationalization

- As of April 2017, Fall 2017 application volumes through our international agent program includes more than 800 applications; diversity in source countries continues to grow.

Robust Employer-employee Relationship

- The Library has attained Silver certification in Excellence Canada’s Excellence, Innovation and Wellness (EIW) program.

SEARCHES

I am pleased to report that after a thorough search process, Karen Jack has been appointed to the position of University Secretary.

We are now beginning the search for a Vice President, Academic and Provost. This position is governed by Policy 48 and as a result, we have begun that process. I am very grateful for Ian Orchard’s contributions over the last three years. He was instrumental in leading the budget model project, and the accountability framework for the strategic plan. George Dixon has agreed to accept the role of Interim Vice-President Academic and Provost for one year or until a new Provost has been hired for this role.

Beth Namachchivaya (University of Illinois at Urbana-Champaign) has accepted the role of University Librarian; she will take up her position on August 1, 2017.

A nominating committee for the Dean of Engineering is currently active, along with a search for a University Registrar.
NEW GOVERNMENT OPPORTUNITIES

Innovation Superclusters

Work continues to identify potential partnerships in response to the call for proposals around the $950M Federal Innovation Clusters and Networks program, launched on May 24. Up to 5 superclusters will be funded. Entries must be made by a Canadian or international company with Canadian operations. The industry-led consortia must include companies of all sizes and post-secondary institution(s) or not-for-profit(s). The successful consortia must be incorporated as a not-for-profit with a governing board, must commit to matching dollar for dollar and letters of intent are due by July 21, 2017.

Government Relations is working with several internal and external partners in support of partnership building and proposal writing. Waterloo is actively engaged on three potential proposals:

- Artificial Intelligence - Waterloo is working with three other universities (UofT, UofAlberta, and UdeMontreal) as part of a pan-Canadian AI proposal.
- Advanced Manufacturing - Waterloo is working with multiple partners within the Toronto-Waterloo corridor including the Ontario government in preparations for a proposal focused on advanced manufacturing technology development (both software and hardware).
- Quantum - Waterloo will work with our regional partners in preparing a potential quantum supercluster proposal with pan-Canadian partners.

Global Entrepreneurship & Disruptive Innovation (GEDI)

GEDI remains a future-focused priority to reimagine how the University of Waterloo connects with industry and other partners across all priority assets: research, talent (co-op students and graduates) and startups.

In the last few months a major push was placed on 3 areas:
- Broadening public awareness on Waterloo as a home for disruptive technologies through paid media and political outreach, including a Parliament Hill day in Ottawa;
- Outreach to internal campus partners to continue building strong support for the initiative; and
- Securing industry endorsement and support with 2 leading firms indicating early “investor” interest.

As more details have emerged around the criteria for super-cluster funding, primarily that they will be led by industry consortia and not PSE institutions, we are looking for complementary and alternative public sources of funding support.
COMMUNITY RELATIONS

University of Waterloo 60th Anniversary

A full year of 60th anniversary celebrations have continued with great interest from campus and community alike. Some highlights include:

- The Beyond 60 Community Lecture series kicked off in March. This series of lectures are hosted in public libraries in Waterloo, Kitchener, Cambridge and Stratford and engage our community in future oriented themes. In March, the Beyond 60 lectures focused on Fake News (March 16) and Autonomous Vehicles (March 29). These lectures augmented additional University lectures and panels in the month of March including U.S. Politics (March 9), and the annual TD Walter Bean and Hagey lectures.

- A special 60th anniversary convocation lecture will kick off spring convocation week. On Monday, June 12, the University will host Roberta Jamieson, the first First Nation woman in Canada to earn a law degree; the first non-parliamentarian appointed an ex-officio member of a House of Commons Committee; the first woman Ombudsman of Ontario; and the first woman elected Chief of the Six Nations of the Grand River Territory.

- The President hosted his 2017 President’s Community Breakfast on April 28, 2017. Over 80 guests received an update from the University, focusing on the interconnections between Waterloo and the regional community. At the breakfast, President Hamdullahpur launched the University’s President’s Community Impact awards, which will recognize Waterloo students, faculty and staff who make an impact in the Region, and local residents and partners who champion the work of the University. The Breakfast also featured the debut of two 60th anniversary videos, featuring community and government leaders reflecting on the importance of the University in the community.

Celebration 2017 Legacy Project

Celebration 2017 will establish an enduring and symbolic legacy that provides a visual connection between the 60th and 150th milestone celebrations. A campus steering committee led by co-chairs Peggy Jarvie and Jeff Casello has kicked off a student design competition that will create a lasting monument or gathering place on campus in the arts quad. The winning team will receive $10,000. Team registrations are being accepted until May 15, with the first stage of a three phase competition due on June 15. The finalist will be announced at the President’s Townhall on November 14, 2017.

Business Council of Canada Visit

The University hosted a visit by Business Council of Canada members on April 24 at the Sedra Design Centre in Engineering 5.
Over 80 Canadian CEOs had the opportunity to interact with student and research teams, take part in a panel discussion, and experience a Velocity pitch competition, featuring four diverse student founders.

**Waterloo Innovation Summit 2017**

Building on a highly successful September 2016 event, planning is underway for the 2017 Summit to be held September 13-15, 2017. Amanda Lang of Bloomberg News will return as co-chair.

The theme this year is “Hacking the Future” and the program will explore three themes:

**Disruptive technologies** - Disruptive technologies will transform how we work, travel, treat disease, communicate and how we learn. They also are serving as the platform technologies for emerging innovation clusters and networks across Canada.
  - Quantum computing
  - Artificial intelligence
  - Cyber security

**Adaptation** - The extreme future is here, and it’s not what we expected. Nature, economies and citizens need us to adapt and adopt faster than ever.
  - Learning from early adopters (investors and sectors including retail)
  - Impact on scaling up
  - The natural and built environment

**Policies and people** - How will smart companies and governments keep pace as we design, compete and regulate the future?
  - What are the new rules of the road?
  - What are the cultures and people strategies that the winners will use to navigate the future?

**Canada 150**

Throughout 2017, the University will also be engaged in celebrations for Canada 150. This will include:

- an enhanced 2017 Canada Day celebration at Columbia Lake Fields, in partnership with the Federation of Students. 2017 will include a special Canada 150 cultural stage, in partnership with the City of Waterloo, as well as a number of unique highlights and experiences for our audience of over 60,000
- events, including the annual Pow Wow, that celebrate our country’s aboriginal heritage;
- Canada 150 public lectures that highlight Canadian thought leaders and celebrate Canadian history, delivered in partnership with Wilfrid Laurier University, the City of Waterloo, and Waterloo Public Library;
- Innovation 150, a partnership between the University of Waterloo Institute for Quantum Computing, the Perimeter Institute, Actua, the Canadian Association of
Science Centres, and Canada Science and Technology Museum Corporation. Quantum: The Exhibition continues to be featured in museums across the country;

- Kelly McManus, Senior Director, Community Relations & Events, has been appointed by City of Waterloo Mayor Dave Jaworsky to act as a Canada 150 ambassador throughout the year.

**ADVANCEMENT UPDATE**

A strategic framework for re-structuring the Advancement teams at the University of Waterloo has been introduced to the faculty and centralized teams, with five key areas of focus:

1. Alumni and Donor-centred decision-making and strategy-setting
2. Faculty relationship orientation
3. Leadership engagement
4. Central Advancement optimization
5. Accountability and results

The underlying premise is that well-coordinated, collegial, partnership-driven pipelines that engage the Deans, the President, relationship managers and volunteers will build sophisticated, strategic, sustainable and fruitful relationships with current and potential donors that will yield a greater number of and more generous philanthropic gifts for the University of Waterloo.

Since the April board presentation, extensive consultations have taken place and the team is undertaking planning exercises for 2017-2018 to align with these key areas. This report is intended as an update on the planning and re-organization initiatives underway.

1) **Alumni and Donor-centred strategies:**
   a. Under the leadership of Sean Thomas, AVP Advancement Services, and Janelle Hraiki-Chalouhi, Director Major and Principal Giving, and with the full engagement of all six Faculty Advancement Directors, our team is engaged in building a university-wide pipeline that is transparent and shows growth and movement in donor relationships. Particular focus is on expanding the size, quality and strategic donor planning within the overall pipeline in close consultation with our research team, the faculty teams and through donor analytics.
   b. The new Alumni Relations and Development blended team, under the leadership of Jason Coolman, AVP Development and Alumni Relations, has initiated several planning reviews to align the alumni relations strategies with annual and leadership giving to gain advantages of shared messaging, activities and alumni engagement.
   c. On May 30th, a presentation will be made to the Alumni Council with recommendations on enhancing alumni and donor engagement in the following geographic priority areas:
i. Vancouver: The local chapter is currently engaged in driving a test model of alumni engagement to build new approaches and best practices for transfer to other key regions.

ii. Toronto (GTA): Several consultations have taken place with alumni in the GTA to lead to an improved suite of activities for this important constituency including networking events, learning activities, VIP gatherings, Co-op engagement and tailored communications.

iii. Kitchener-Waterloo region: Similar to the GTA region, a recommendation for increasing engagement will include networking events and VIP gatherings, but due to the proximity to campus, more emphasis will be on engaging the resources of the campus and focusing on the entrepreneurship ecosystem.

iv. Asia: A 2-week trip to Singapore, Hong Kong, Shanghai and Beijing will lead to recommendations for engaging the 3500+ alumni in this thriving economic region by focusing on innovation, commercialization, entrepreneurship, increasing the UW reputation and development of talent in the region. A suite of social media strategies, networking and learning events, faculty trips through the region, focus on Velocity companies, and active linkages with the entrepreneurship and business communities are being proposed.

2) Faculty engagement:

- Several meetings with the Deans and Faculty Advancement Directors are leading to agreements between each Faculty and the Central Advancement team to clarify roles and responsibilities, build the pipeline of major and principal current and prospective donors, and establish new ambitions for annual fundraising goals.
- A retreat with the Faculty Advancement Directors and the Central Advancement leadership is planned for late June to develop these shared goals and associated strategies.
- Joint donor calls are underway with the Faculties of Arts, Math, Environment and Science.
- The AVP Major and Principal Giving recruitment is expected to be completed by July to support the hybrid approach of Faculty-based/Centrally-supported fundraising.
- A new brochure that presents the shared vision of the President and 6 Deans is under development with External Relations to present a university wide vision that will then support the faculty-specific cases for support.

3) President and leadership engagement: A team is now in place to manage the President’s annual advancement schedule alongside the faculties, external relations and the international office. This is a major undertaking to develop a high quality pipeline involving many stakeholders. Key dates in May, June, September, October and November have been targeted for high-quality delivery.

4) Central Advancement resources optimization: Agreements with the faculties, being developed in May and June, are intended to increase efficiency and
effectiveness of all operations and emphasize clarity on roles and responsibilities. As the team is comprised of very dedicated, experienced and talented professionals, all re-alignment activities are oriented to maximize the impact of the existing team to elevate results and deliverables.

5) **Accountability, transparency and results:** A clear objective of the planning and re-organization initiatives as described above is increased ambition and sustainable growth in the University of Waterloo’s fundraising results in the next five years. Projections for the next 1, 3 and 5 years are targeted for September following the faculty consultations and retreats.

**FY 2016-17 Financial Results**

As of April 30, 2017, total new gifts and pledges were $40,457,311 a goal of $43,000,000. Details on the results and major and principal gifts will be presented at the June Board Meeting.

**RESEARCH UPDATE**

**International Research Project Highlights**

- **Jesse Hoey (Computer Science) – Digging Into Data Challenge (Joint SSHRC and NSERC Initiative)**
  Jesse has been awarded approximately $199K CAD from a combined contribution of SSHRC and NSERC funds for the Digging Into Data Challenge program. Jesse’s research aims to explore the social and psychological mechanisms of self-organized collaboration, focusing on the open, collaborative software development platform GitHub. He and his team will provide new data-driven theoretical insights into what motivates self-organized collaborations and what determines their success. The project will provide empirical validation of sociological theory and formal answers to important social science questions about collaboration. It will expose novel research questions by expanding a theoretical model of small groups to the network level.

- **Elizabeth English (School of Architecture) – Water Window Challenge (partnership between the Global Resilience Partnership (GRP) and Zurich Foundation of Zurich Insurance)**
  Dr. English was awarded $249K USD for a project entitled Development of Amphibious Homes for Marginalized and Vulnerable Populations in Vietnam. The project will pilot the use of low cost amphibious houses, used in flood-prone areas of Louisiana, USA for decades, by adapting the design for the local communities in the Mekong Delta.
• **Philippe Van Cappellen (Earth and Environmental Sciences) – WaterWorks2015 ERA-NET Cofunded Call (Canadian budget supported by NSERC)**
  Three Water Institute members – Philippe Van Cappellen (earth and environmental sciences), Nandita Basu (earth and environmental sciences and civil and environmental engineering) and Roy Brouwer (economics) – received $543K CAD to address persistent, long-term pollution created by excess fertilizers in the lakes, rivers and wetlands in several parts of the world. The interdisciplinary project entitled **Legacies of Agriculture Pollutants (LEAP)** is one of six international projects receiving a combined total of $1.84 million CAD over three years. The Natural Sciences and Engineering Research Council of Canada (NSERC) is the Canadian funding partner organization, alongside the International Development Research Centre (IDRC), supporting the international research collaborations through the European Commission Water Joint Programming Initiative.

**Research Partnership Highlights**

Research Partnerships reports the following funding updates:

• **David Blowes – Earth Sciences** – “Valuing Diversity in Agro-Ecosystems: The Interplay of Natural Habitat, Integrated BMPs and Field Cropping Systems on GHG Emissions and Carbon Stocks” – 5 year project Agriculture and Agri-Food Canada
  o Partners include: University of Ottawa, Carleton University and the University of British Columbia
  o Total Value: $1.8M cash and $560K in-kind

• **Sanjeev Bedi – Mechanical & Mechatronics Engineering** – “NSERC Chair in Immersive Design Engineering Activities (IDEAs)” – 5 year project
  o NSERC - $1M
  o Desire to Learn - $125K and $125K in-kind
  o Skyjack - $125K and $182K in-kind
  o ANSYS - $125K and $111K in-kind
  o Rockwell Automation - $125K and $125K in-kind
  o Quanser - $32K and $92K in-kind
  o Total Value: $1.5M cash and $635K in-kind

• **Amir Khajepour – Mechanical & Mechatronics Engineering** – ‘NSERC Industrial Research Chair – “Holistic Vehicle Control” – 5 year project
  o NSERC - $1M
  o General Motors - $1M cash and $3M in-kind
  o Total Value: $2M cash and $3M in-kind
• **Weihua Zhuang – Electrical & Computer Engineering** – NSERC CRD
  “Software-Defined Networking for Service-oriented 5G Networks” – 3 year project
  o NSERC - $386K
  o Huawei Technologies - $385K cash and $90K in-kind
  o Total Value: $772K cash and $90K in-kind

• **Duane Cronin – Mechanical & Mechatronics Engineering** – NSERC DND “Transparent Armour Ballistic Performance Modeling and Optimization” – 3 year project
  o NSERC - $326K
  o DRDC - $90K and $121K in-kind
  o General Dynamics Land Systems - $50K and $39K in-kind
  o NRC - $50K and $60K in-kind
  o Preclo Inc. - $50K and $45K in-kind
  o Total Value: $568K cash and $265K in-kind

• **Jonathan Blay – School of Pharmacy** – “Studies on botanical oils from Algae Dynamics” – 3 year project
  o Algae Dynamics Corp. - $390K and $140K in-kind
  o Kinesiology:
    o Lora Giangregorio: $25K for a SPOR (strategy for patient oriented research) collaboration grant

• **Insight Grants:**
  o Key takeaways: The amount awarded to Waterloo increased by $1,421,610 from last year and our average awarded total exceeds the national average by more than $40K

**Canada Research Chairs**

- 8 CRC applications for a total of $7.6M submitted on April 25, 2017
- 14 CRC from October 2016 application funded for total of $10.2M

**INTERNATIONAL ENGAGEMENT**

I had the pleasure of being invited by the Saudi Arabian Minister of Education – Dr. Ahmed M. Al-Eissa – to be a speaker at the 7th International Exhibition and Conference on Higher Education in Riyadh in April. It was a successful conference – a great opportunity for me to share Waterloo’s experiences in co-operative education and other ways of preparing students for the workforce. Saudi Arabia is in the midst of a national conversation on their prospects after oil. Their ‘Vision 2030’ is central to their planning, and it provides multiple opportunities for Waterloo to engage in collaborative research, teaching and other learning activities. I have already followed up on some connections I made there.
By the time you read this, I will have returned from Paris, where I will have attended a meeting of the Strategic Planning Committee – of which I am one of the international members. Sorbonne is a valued partner, and we have a lot of research activity with them. Recently, for instance, our Centre for Bioengineering and Biotechnology hosted a Sorbonne delegation and subsequently travelled with a delegation of eight researchers to France.

And soon after the Board of Governors meeting, I will depart for the 2017 Hamburg Transnational University Leaders Council. A gathering of global university leaders, the theme for this year’s conference is ‘Differentiation in the Post-Secondary Sector’. I am looking forward to participating in the final panel with leaders of outstanding universities from four other continents. We are charged with reflecting upon the next steps, and I am delighted that they selected us to be the spark for this important conversation.

Our Associate Vice-President, International, Ian Rowlands is also working to deepen and to broaden our international relationships. He travelled to China in May, representing me at Zhejiang University’s 120th Anniversary Celebration. He also was able to travel to Soochow University – a long-standing partner of ours – and other institutions. Later this month, he will travel to Europe and among his stops are King’s College London and Technical University of Munich – both world-class universities and both keen to further their collaboration with us.

**PRESIDENT’S ADVISORY COMMITTEE ON STUDENT MENTAL HEALTH**

As I mentioned earlier under the Vibrant Student Experience theme, we have been saddened by two on-campus student suicides since January 2017 which have raised concerns and suggestions for more effective support for student mental health. The terms of reference for the President’s Advisory Committee on Student Mental Health (detailed below) were recently developed and the first meeting of the Committee was held on May 24th.

The President’s Advisory Committee on Student Mental Health is tasked with ensuring the collection of a broad set of information on student mental health considering both the UW student body and the larger societal context. It will review the data/information collected and advise on the status of the progress of mental health initiatives across the university. It will examine root causes of student stress, anxiety and depression, and how to mitigate them proactively instead of reactively.

More specifically, the committee will:
- Ensure comprehensive information and data collection
- Utilize National College Health Assessment (NCHA) and other related analysis and research
- Make observations/recommendations to the President in the areas of:
  - General state of student mental health and UW’s current response to student need
• Support, education, and policy that have been found to be effective
• Barriers or gaps in support, education/policy related to student mental health
• Resource assessment relative to the identified priorities
• Effectiveness of service integration across the University
• Opportunities that may exist to strengthen University/community/industry partnerships
• Opportunities to use evidence-based research and campus expertise
• Identify innovative and effective practices that could be considered at UW

Structure and Process:

The President’s Advisory Committee (PAC-SMH) will be positioned as a central information collection, analysis, and recommendation body. The PAC-SMH will provide mandate questions for several topical expert panels and will support these groups to provide information needed to compile a final report. The panel groups and the PAC-SMH will gather information using methods such as research of current literature, interviews with key informants, focus groups and surveys.

The range of topics to be covered and membership of the panels will be determined in the early stages of the PAC-SMH’s mandate.

Proposed Structure – PAC-SHM:

Membership:

The (8-10) member committee will be appointed by the president based on expertise, stakeholder representation and expressions of interest. Student representation, consultation and participation is critical, and will be prioritized in the work of the committee. The Director, Campus Wellness, will chair the committee, which may include representation from the following stakeholders:

• Students (undergrad and grad)
• Faculty
- Staff
- Alumni
- Researchers in relevant fields
- Expertise in related clinical fields
- Ex-officio support roles to be determined (i.e., research, communications, etc.)
- Additional individuals/groups may be called upon from time to time to join the group for a specific number of meetings

Supporting Panel Groups

The membership parameters for the proposed panel groups will be finalized by the PAC-SMH early in its mandate. Membership will be invited through an on-line application process using the PAC-SMH website.

Meetings/Outcomes:

The committee will meet initially in Spring 2017 and determine an appropriate meeting schedule to ensure completion of a full report by the end of Fall 2017.

The committee will establish a variety of in-person and online mechanisms to engage with the campus community and to solicit input.

The committee will then recommend the optimal advisory committee format to ensure an effective, campus-wide and integrated strategy is being supported at the University of Waterloo.

IMPACT 10x10x10 MOVEMENT

Waterloo’s commitment to advance gender equity remains a top priority and is resulting in long term, comprehensive, sustainable changes. For example, we are entering our third year co-leading the global HeForShe IMPACT 10x10x10 movement, which continues to be robust and effective. Under our IMPACT commitments, we are meeting and exceeding our targets to increase the numbers of girls and women in our STEM outreach experiences and activities, increase the number of women in tenure-track positions, and increase the number of women in leadership positions. I am preparing to join my fellow HeForShe IMPACT Champions at the UN General Assembly in September 2017 to release the first-ever collective IMPACT Parity Report on how universities, global corporations, and heads of state are advancing gender equity on their campuses and in their sectors.

Moreover, I was invited to serve as the inaugural Chair of the UN Women’s forthcoming IMPACT lab alongside a head of state and CEO. Drawing on the collective capabilities of HeForShe IMPACT 10x10x10 Champions, the IMPACT Lab creates an enabling environment to pilot test innovative ideas; document lessons learned; and disseminate proven practices to a global audience, thus accelerating scalability of gender equality solutions.
The dissemination of HeForShe knowledge outputs and proven practices will be facilitated by the HeForShe IMPACT Lab through an annual HeForShe IMPACT Summit for private and public senior executives. This commitment involves two virtual meetings per year with the other Chairs plus attending the annual Summit tentatively scheduled for January 2018 in Paris, France.

I look forward to seeing you on June 6th.

Regards,

Feridun Hamdullahpur
President and Vice-Chancellor
Consistent with the Board of Governors Bylaw 1, Section I, Conflict of Interest for Governors, each governor shall complete a form congruent with his/her (re)appointment/(re)election to the Board and submit it to the secretary of the Board and annually each May thereafter.

Each governor is further required to submit a supplemental conflict of interest declaration to the secretary of the Board at such further time throughout the year that an actual, perceived, or potential conflict of interest may arise.

Please check the appropriate box below. If applicable, provide all information relating to an actual, perceived or potential conflict of interest in the space provided below.

Return the completed declaration to the secretary of the Board by 30 June 2017.

Upon submission of this declaration to the secretary of the Board of Governors, the governor acknowledges and confirms that:

The governor does not have any interest, and has not taken any action(s), that may constitute an actual, perceived, or potential conflict of interest.

The governor does have an interest, or has taken an action(s), that may constitute an actual, perceived, or potential conflict of interest as outlined below.

Details:

Signature: ________________________________ Date: ________________________________

Print Name: ________________________________
FOR APPROVAL

1. Delegation of Authority to Approve University of Waterloo Financial Statements, 2016-2017

Motion: That the Board of Governors delegate its authority to approve the university’s audited financial statements for the fiscal year ended 30 April 2017 (the “Financial Statements”) to the Board Executive Committee.

Background: The Financial Statements will be reviewed by the Audit & Risk Committee at its meeting on 26 July 2017. In the past, the Financial Statements were presented to the Board of Governors for approval at its October meeting. Due to changes in auditing standards, if the Financial Statements are not approved until the October meeting of board, the auditors will be required to perform a subsequent events review and bring any changes to an extraordinary meeting of the Audit & Risk Committee before the Financial Statements can go before the board. Approval of the Financial Statements before the October meeting of board will also allow the university to make certain filings and release information that is based on the Financial Statements earlier than in previous years.

15 May 2017

Thorsten Heins
Chair
This report is submitted following the committee’s meeting of 19 May 2017.

FOR INFORMATION

1. General Oversight
   The committee reviewed and accepted for information:
   - the capital financing commitments associated with capital projects and advises that these commitments fall within Waterloo’s Board-approved debt policy
   - the status of capital projects
   - its work plan
   - a report on the University’s maintenance program and energy conservation efforts
   - a report on the University’s environmental sustainability practices
   - discussion and review of the campus master plan, to identify areas of interest for the coming year

   For the purposes of orienting the committee to its responsibilities, the committee secretary circulated the committee terms of reference, and Dennis Huber presented a thorough summary of the various projects underway at the University. As well, it is planned that members of the committee will undertake a guided tour of certain facilities on campus in June.

2. SLC/PAC Tender Award
   The committee approved the awarding of the construction contract for the SLC/PAC Addition project via email on Friday 28 April, with the resulting award going to Bondfield Construction Ltd. for a total amount of $31,177,165 plus HST (grand total of $32.2 million including net HST). The authority to carry out this approval was delegated to the committee by the Board of Governors at its meeting on 4 April 2017. This approval followed a value engineering exercise where 45 potential items were identified to realize savings, and the estimated savings from these items (~$1.3 million) will be held in a contingency while further consultation takes place with undergraduate and graduate students on the facility’s programming requirements.

\[ /mg \]

Martha George
Chair
This report is submitted following the committee’s meeting of 18 May 2017.

FOR INFORMATION

1. General Oversight

**Investment Fund Performance.** The committee reviewed the performance of the registered pension plan fund, endowment fund, IQC trust fund, and payroll pension plan portfolios as at 31 March 2017.

Considering all managers across all funds, it is notable that many managers are providing value-added performance and are ahead of benchmarks, even with allowance for buoyant market conditions. The fund managers for the registered pension plan fund and the payroll pension plan are generally performing as expected, and the funds as a whole are each meeting policy benchmarks. The IQC trust fund is performing as expected. The endowment fund’s performance remains on target.

The Committee continued its discussion regarding the appropriate level of currency hedging. Further review of relevant information by committee members will occur at the next meeting, with the general aim to set a thoughtful and robust hedging policy as opposed to more tactical approaches that vary with market conditions.

/mg

James Schlegel
Chair
This report is submitted following the committee’s meeting of 25 May 2017.

FOR INFORMATION

1. **Board Self-Assessment Questionnaire**
   The Committee reviewed the results of the Board and committee self-assessment surveys done at the end of the 2016-2017 cycle. As a result of the surveys and comments received, the committee agreed that in future years, members will be asked for suggestions for improvement at each category of questions rather than at the end of the survey. They also agreed to consider ways to improve Board agenda packages such that synopses of issues and recommended courses of action are clearly articulated and concise while retaining necessary background material to inform sound decision making.

2. **Core Competencies of the Board**
   The committee was advised that the Board members’ skills matrix will be distributed to the full complement of external Board members for completion prior to the end of June, such that the results will be available as this committee gets ready to recruit additional Board members.

3. **Board Orientation**
   The Secretariat hosted a Board of Governors orientation session on 26 May 2017. The session was generally well attended by new members in particular and covered an introduction to the University of Waterloo Act, the way in which the University is funded, an update on the Strategic Plan, and how the University manages risk. Members unable to attend are welcome to contact the Secretary or the President for information.

4. **Work Plan**
   The committee reviewed its annual work plan, and subject to moving the performance evaluation of the President from May to March in years in which the Board Chair is stepping down, agreed to retain the status quo.

5. **Board Retreat**
   The committee was advised that the annual Board retreat will be held on Friday 1 December 2017. The committee discussed the merits of setting an agenda which will allow time for open discussion of key issues. All governors are encouraged to send ideas to Jack for consideration.

29 May 2017
/kjj

Cindy Forbes
Chair
FOR APPROVAL

1. Actuarial Valuation of the Pension Plan as at 1 January 2017

Motion: To approve the filing of the actuarial valuation report as at 1 January 2017 with the Financial Services Commission of Ontario (FSCO) and the Canada Revenue Agency (CRA).

Background: The University of Waterloo pension plan is an inflation-linked defined-benefit plan. The plan is funded by contributions from the employees and the University and by investment returns. The total annual contribution is determined by applying actuarial methods with assumptions about investment returns, mortality, inflation and salaries.

An actuarial valuation report is required to be filed at least every three years; notwithstanding this, the committee commissions a report on an annual basis for its planning and the University’s budgeting purposes.

The 1 January 2017 report shows that the registered pension plan (the “Registered Plan”) is in a deficit position; however, the going concern deficit position has improved since the 1 January 2014 report both in terms of overall deficit and deficit as a percentage of total plan assets. The University continues to make additional contributions to meet the unfunded liability.

The University has previously received approval for temporary solvency funding relief in connection with the 1 January 2014 actuarial valuation.

See Attachment #1 for a detailed summary of the actuarial valuation results for the Registered Plan. A complete copy of the report can be requested through the committee’s secretary at extension 38990.

FOR INFORMATION

2. Stage 2 Solvency Funding Relief Application

The University’s pension plan previously received Stage 1 approval for solvency funding relief for a three-year period as provided under Regulation 178/11 to the Pension Benefits Act and based on the filed actuarial valuation report of 1 January 2014. This funding relief allowed the University to make additional, significant special payments into the pension plan to address the solvency deficit in the plan at that time.

While the present solvency valuation is comparatively strong versus other plans within the sector and has improved since the 2014 filing year in terms of the deficit as a percentage of total plan assets, the current solvency deficit in the 1 January 2017 valuation will require that the University apply for Stage 2 solvency funding relief. If approved, the University (1) can elect to amortize the solvency deficit over ten (10) years starting 1 January 2018, or the University (2) may defer amortization for a three-year period from 2018-2021 with minimum interest-only payments over that period, then amortize the solvency deficit at 1 January 2021 over seven years. The committee will consider various funding scenarios at its meeting on 16 June 2017, and it is anticipated that a decision would be made at that meeting on the specific option that the university will elect to address the solvency funding deficit.
3. Payroll Pension Plan

The University of Waterloo payroll pension plan (the “Payroll Plan”) provides pension benefits (subject to plan caps) that cannot be paid from the Registered Plan because of the application of the Income Tax Act maximum pension. The Registered Plan and Payroll Plan are integrated from a benefits and financial management perspective. Assets are set aside within the University funds in respect of the obligations under the Payroll Plan. A going concern valuation of the Payroll Plan is performed in conjunction with the annual valuation of the Registered Plan, using the same actuarial assumptions.

As of 1 January 2017, the actuarial liabilities of the Payroll Plan were valued at $41.6 million, and the market value of the assets was $37.6 million, resulting in an unfunded liability of $4.0 million. The current service cost for 2017 is $1,750,204 or 0.41% of pensionable earnings, bringing the total University current service cost for the Registered Plan and Payroll Plan to 8.92% of pensionable earnings.

4. General Oversight

The committee receives regular reports from the consulting actuary on legislative and policy changes anticipated and in force that impact public sector pensions, as well as changes implemented by other public sector pension plans. The committee discusses implications for the pension plan and takes the information into account when making decisions on matters including plan design, funding and administration.

It is notable that, on the day of the committee meeting, the province announced plans to relax solvency rules for single-employer defined benefit plans. This proposal would prospectively make more lenient the solvency test that is required for the university plan, and may impact the approach taken by the University in addressing any solvency deficit in future years. This announcement has yet to be put into effect by the province.

/mg

Marilyn Thompson
Chair
Attachment #1 - Summary of the Actuarial Valuation Results as at 1 January 2017

1. Financial Position of the Registered Plan

   a. **Going Concern Basis.** A valuation conducted on a going-concern basis is to determine the relationship between the respective values of the Registered Plan’s assets and accumulated liabilities, assuming the Registered Plan will be maintained indefinitely.

<table>
<thead>
<tr>
<th></th>
<th>01.01.2015¹</th>
<th>01.01.2016²</th>
<th>01.01.2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actuarial value of assets</td>
<td>$1,272,144,692</td>
<td>$1,402,178,988</td>
<td>$1,518,958,822</td>
</tr>
<tr>
<td>Actuarial liability</td>
<td>$1,384,215,763</td>
<td>$1,463,929,240</td>
<td>$1,585,567,596</td>
</tr>
<tr>
<td>Funding excess (unfunded liability)</td>
<td>$(112,071,071)</td>
<td>$(61,750,240)</td>
<td>$(66,608,774)</td>
</tr>
<tr>
<td>Deferred asset gain (loss)</td>
<td>$44,365,045³</td>
<td>$44,365,045</td>
<td>$44,365,045</td>
</tr>
<tr>
<td>Market value of assets</td>
<td>$1,316,509,737</td>
<td>$1,402,178,988</td>
<td>$1,518,958,822</td>
</tr>
</tbody>
</table>

   b. **Solvency Basis.** A valuation conducted on a solvency basis is used to determine the relationship between the respective values of the Registered Plan’s assets and its liabilities assuming the Registered Plan was wound up and settled on the valuation date by the purchase of annuities or the payment of lump-sum values. In accordance with the Pension Benefits Act, solvency liabilities exclude certain contractual benefits (e.g., indexing) in order to limit the magnitude of additional funding requirements for solvency purposes. Ignoring these obligations for solvency funding purposes does not, however, alter the contractual obligation with respect to indexing in place under the terms of the Registered Plan (the liability for indexation benefits is reflected in the going concern valuation position and funding requirements).

<table>
<thead>
<tr>
<th></th>
<th>01.01.2015¹</th>
<th>01.01.2016⁴</th>
<th>01.01.2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market value of assets (net of wind-up expenses)</td>
<td>$1,316,009,737</td>
<td>$1,401,678,988</td>
<td>$1,518,958,822</td>
</tr>
<tr>
<td>Solvency liability</td>
<td>$1,521,313,344</td>
<td>$1,689,999,086</td>
<td>$1,744,213,228</td>
</tr>
<tr>
<td>Solvency excess/(deficiency)</td>
<td>$(205,303,607)</td>
<td>$(288,320,098)</td>
<td>$(225,754,406)</td>
</tr>
</tbody>
</table>

   The additional wind-up liability for indexation benefits is approximately $807.8 million at 1 January 2017, resulting in a hypothetical wind-up deficit of approximately $1,034 million at 1 January 2017 (including indexing). The solvency ratio has improved since January 1, 2016 due to increases in nominal government bond yields and asset gains during the year. The assumed interest rate for the solvency calculation is 3.12% and for the wind-up calculation, -0.09%.

2. **Funding Requirements.** Member contributions for 2017 are approximately $31.2 million, or 7.38% of pensionable earnings. The University’s current service cost is approximately $36.0 million or 8.51% of pensionable earnings. The University is also making mandatory special payments of $12.6 million and additional special payments of $2.3 million to amortize the unfunded liability of the Registered Plan. This brings the University’s total contribution to $50.9 million (163% of member contributions).

¹ The 2015 numbers reflect the adoption of alternate assumptions, which use a CPI rate of 2%. Note: this moves the discount rate to 5.75% from 6.00%.
² The 2016 figures reflect the reduction in the discount rate from 5.75% (CPI + 3.75%) to 5.70% (CPI + 3.70%)
³ This funding reserve represents the difference between the market value of assets and the actuarial value of assets of the real return bonds at the date of sale. It will be held in reserve and recognized over time.
⁴ 2016 Solvency Liabilities reflect the adoption of CPM 2014 Combined with Generational Improvements mortality tables.
3. Asset Mix

<table>
<thead>
<tr>
<th>Asset Mix (% of Total Market Value)(^5)</th>
<th>01.01.2014</th>
<th>01.01.2015</th>
<th>01.01.2016</th>
<th>01.01.2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Return Bonds</td>
<td>17%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Fixed Income, Cash</td>
<td>34%</td>
<td>57%</td>
<td>54%</td>
<td>51%</td>
</tr>
<tr>
<td>Equities</td>
<td>41%</td>
<td>35%</td>
<td>38%</td>
<td>39%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

4. Membership Data

<table>
<thead>
<tr>
<th>Membership Data</th>
<th>01.01.2012</th>
<th>01.01.2013</th>
<th>01.01.2014</th>
<th>01.01.2015</th>
<th>01.01.2016</th>
<th>01.01.2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Members</td>
<td>3617</td>
<td>3760</td>
<td>3891</td>
<td>3940</td>
<td>4169</td>
<td>4326</td>
</tr>
<tr>
<td>LTD Members</td>
<td>96</td>
<td>94</td>
<td>97</td>
<td>86</td>
<td>84</td>
<td>74</td>
</tr>
<tr>
<td>Suspended Members</td>
<td>10</td>
<td>15</td>
<td>11</td>
<td>12</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Current Pensioners</td>
<td>1480</td>
<td>1555</td>
<td>1603</td>
<td>1673</td>
<td>1745</td>
<td>1837</td>
</tr>
<tr>
<td>Deferred Pensioners</td>
<td>447</td>
<td>448</td>
<td>484</td>
<td>490</td>
<td>501</td>
<td>477</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5650</strong></td>
<td><strong>5872</strong></td>
<td><strong>6086</strong></td>
<td><strong>6201</strong></td>
<td><strong>6509</strong></td>
<td><strong>6724</strong></td>
</tr>
</tbody>
</table>

5. History of Asset Returns

<table>
<thead>
<tr>
<th>Year Ending</th>
<th>Return on Market Value(^6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 December 2008</td>
<td>-21.51%</td>
</tr>
<tr>
<td>31 December 2009</td>
<td>14.70%</td>
</tr>
<tr>
<td>31 December 2010</td>
<td>8.49%</td>
</tr>
<tr>
<td>31 December 2011</td>
<td>2.89%</td>
</tr>
<tr>
<td>31 December 2012</td>
<td>9.10%</td>
</tr>
<tr>
<td>31 December 2013</td>
<td>13.1%</td>
</tr>
<tr>
<td>31 December 2014</td>
<td>9.43%</td>
</tr>
<tr>
<td>31 December 2015</td>
<td>5.23%</td>
</tr>
<tr>
<td>31 December 2016</td>
<td>6.95%</td>
</tr>
</tbody>
</table>

\(^5\) Asset mix is based on the underlying assets excluding in-transit contributions and payments.

\(^6\) The returns (after expenses) on market value have been calculated assuming contributions and benefit payments take place in the middle of the year. Returns for 2008 – 2013 exclude the real return bonds.