**University of Waterloo**  
**BOARD OF GOVERNORS**  
**Tuesday 7 April 2015**

**Tannery Event Centre**  
**151 Charles St. W., Kitchener**  
[See page 3 of the agenda for directions/parking information]

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<tr>
<th>Meeting</th>
<th>Tour of Velocity Garage</th>
<th>Reception</th>
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<tr>
<td>1:30 p.m.</td>
<td>5:30 p.m.</td>
<td>6:15 p.m.</td>
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Please convey regrets to Tracy Dietrich at (519) 888-4567, x36125 or tdietrich@uwaterloo.ca

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<tr>
<th>OPEN SESSION</th>
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<tr>
<td>1:30</td>
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<tr>
<td>1. Remarks from the Chair</td>
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**Part 1**

<table>
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<tr>
<th>1:35</th>
<th>Agenda/Additional Agenda Items</th>
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**Consent Agenda**  
**Motion:** To approve and/or receive for information by consent items 3-7 below.

<table>
<thead>
<tr>
<th>1:40</th>
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<th>Oral</th>
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<tr>
<td>3.</td>
<td>Minutes of the 3 February 2015 Meeting [enclosed]</td>
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<td>4.</td>
<td>Report of the President</td>
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<tr>
<td>a.</td>
<td>Recognition and Commendation</td>
<td>1-2</td>
<td>Information</td>
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<td>b.</td>
<td>Sabbatical and Administrative Leaves and Administrative Appointments</td>
<td>3-8</td>
<td>Decision/Information</td>
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<tr>
<td>5.</td>
<td>Report of the Vice-President, Academic &amp; Provost</td>
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<tr>
<td>a.</td>
<td>University Professor Designations</td>
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<td>6.</td>
<td>Report of the Vice-President, Administration &amp; Finance</td>
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<tr>
<td>a.</td>
<td>Incidental Fee Changes</td>
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<td>7.</td>
<td>Report from the Executive Committee</td>
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**Regular Agenda**

<table>
<thead>
<tr>
<th>1:45</th>
<th>Business Arising from the Minutes</th>
<th>Oral</th>
<th>Information</th>
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<tbody>
<tr>
<td>a.</td>
<td>Alumni Relations Update</td>
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<tr>
<td>1:55</td>
<td>Remarks from the Chair</td>
<td>Oral</td>
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**Part 2**

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<thead>
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<th>Report of the President</th>
<th>Oral</th>
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<tbody>
<tr>
<td>a.</td>
<td>President’s Update</td>
<td>12-15</td>
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<tr>
<th>2:35</th>
<th>Report of the Vice-President, Academic &amp; Provost</th>
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<tbody>
<tr>
<td>a.</td>
<td>Staff Salary Recommendations</td>
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<td>b.</td>
<td>2015-16 Operating Budget</td>
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<td>c.</td>
<td>Undergraduate Applications and Admissions Update</td>
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<td>2:55</td>
<td>12. Report of the Vice-President, University Research</td>
<td>Oral</td>
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<td>3:05</td>
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<td>4B Nanotechnology Engineering Student</td>
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<td>3:30</td>
<td>14. Remarks from the Incoming Chair</td>
<td>Oral</td>
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<td>3:40</td>
<td>15. Reports from Committees</td>
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<tr>
<td></td>
<td>a. Building &amp; Properties</td>
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<td>Decision/Information</td>
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<td>3:50</td>
<td>b. Finance &amp; Investment</td>
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<td>4:00</td>
<td>c. Governance [to be distributed]</td>
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<td>4:10</td>
<td>d. Pension &amp; Benefits</td>
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<td>Information</td>
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<td></td>
<td>Industry Canada, Executive Summary*</td>
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<tr>
<td>4:30</td>
<td>17. Other Business</td>
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<td>4:35</td>
<td>18. Next Meeting: Tuesday 2 June 2015</td>
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**CONFIDENTIAL SESSION**

4:40  
**Consent Agenda**

**Motion:** To approve by consent items 19 and 20 below.

19. Minutes of the 3 February 2015 Meeting [enclosed]  
Decision

20. Report of the President
   a. New Appointments with Tenure  
      CS1-CS2  
      Decision
   b. Tenure Recommendations  
      CS3-CS9  
      Decision

**Regular Agenda**

4:45  
21. Business Arising from the Minutes

4:50  
22. Report of the President  
Oral  
Information

5:00  
23. Report from the Governance Committee [to be distributed]

5:10  
24. Other Business

**IN-CAMERA SESSION**

5:15  
25. Minutes of the 3 February 2015 Meeting [enclosed]  
Decision

5:20  
26. Business Arising from the Minutes

5:25  
27. Other Business

5:30  
28. Adjournment
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.

Enclosed: information about Velocity; April University Affairs


JLA:tad
30 March 2015

Logan Atkinson
University Secretary & General Counsel
Secretary to the Board of Governors

Directions/Parking Information

Tannery Event Centre
151 Charles St. W. (at Victoria St.)
Kitchener ON N2G 1H6
http://www.kitchenerdowntown.com/community/bingemanstanneryeventcentre

Park in the University of Waterloo Health Sciences Campus parking lot Joseph St. (at Victoria St.), as noted below:
FOR INFORMATION

Recognition and Commendation

Maureen Drysdale, professor in the Department of Psychology and research associate with the Waterloo Centre for the Advancement of Co-operative Education (WatCACE), is the recipient of the 2015 James W. Wilson Award for Outstanding Contribution to Research in the Field of Cooperative and Work-Integrated Education. The award is presented by the Cooperative Education & Internship Association (CEIA), which is the American counterpart to Canada’s Association for Co-operative Education (CAFCE), to scholars who have made exceptional contributions through the promotion of research activity in the field of co-operative and work-integrated education (CWIE). Since being named the first WatCACE research associate in 2003, much of Drysdale’s time has been spent promoting CWIE research. She served on the CEIA Board of Directors as vice-president of research and surveys from 2008 to 2013. In 2012, she was elected to the Board of Directors for the World Association for Cooperative and Work-Integrated Education (WACE) and she became the founder and executive chair of WACE’s International Research Group. In 2008 and 2010, she spent time as a visiting scholar at the University of Gothenburg and University West in Sweden where she helped to advance their CWIE research. Drysdale received a SSHRC grant in 2004 to examine the role of co-op programs in post-secondary students’ transitions to the labour market. Since completing this study, she has received international recognition for her work and published a number of other CWIE research papers. Drysdale has also collaborated on numerous international CWIE research projects, spoken at various professional conferences around the globe, and supervised several CWIE-related theses. She will be presented with the award on 31 March at the 2015 CEIA Conference in Atlanta. [11 March 2015 Daily Bulletin]

Three Waterloo academics are named among Canada’s Top Natural Sciences and Engineering Researchers for 2015 by the Natural Sciences and Engineering Research Council of Canada (NSERC). The work of these researchers is advancing human brain research using computer models, decreasing the environmental impacts of mining and increasing our understanding of invasive species. Waterloo’s award winners are: Chris Eliasmith, professor in the Departments of Philosophy and Systems Design Engineering and the Cheriton School of Computer Science and Canada Research Chair in Theoretical Neuroscience, wins the NSERC John C. Polanyi Award that honours an individual or team whose Canadian-based research has led to a recent outstanding advance in the natural sciences or engineering; David Blowes, professor in the Department of Earth and Environmental Sciences and Canada Research Chair in Groundwater Remediation, wins a Synergy Award for Innovation recognizing examples of college- or university-industry collaboration that stand as a model of effective partnership; Michael McTavish from the Faculty of Environment wins the NSERC André Hamer Postgraduate Prize awarded to the most outstanding candidate in NSERC’s doctoral scholarship competition. “This University is where industries, institutions and governments turn to for answers to their most pressing challenges,” said Feridun Hamdullahpur, president and vice-chancellor. “These awards show that our colleagues here deliver on priorities that matter to Canadians and the world and I congratulate Chris, David and Michael on their achievements. Transformative research projects such as these are a key element of the unique Waterloo model that generates real-world impact with global reach.” NSERC is the primary funding agency supporting Canada’s science and engineering research community. The agency supports almost 30,000 post-secondary students and post-doctoral fellows in their advanced studies. NSERC promotes discovery by funding approximately 12,000 professors every year and fosters innovation by working with over 3,000 Canadian companies that are participating and investing in post-secondary research projects. [Waterloo Stories, 17 February 2015]
Professor Jim Walker of the Department of History is the recipient of this year’s Olivier le Jeune Trailblazer Award from the Ontario Black History Society. With this award and many other honours (such as being named a Fellow of the Royal Society of Canada), Walker is recognized for his trailblazing work to advance scholarship, education and action dedicated to black history and human rights in Canada. The award was granted in particular recognition of Walker’s work in creating the very first Canadian university courses in African-Canadian history at both the undergraduate and graduate level, which he did at the University of Waterloo during the early 1970s. [20 February 2015 Daily Bulletin]

Feridun Hamdullahpur
President
FOR APPROVAL

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

Besner, Derek, Psychology, July 1, 2015 to December 31, 2015, at 85% salary
I will write a review of the literature on attention as it relates to reading single words, intending to assert my view that the field is largely wrong in how they think about this issue. I will also prepare a paper challenging a major mathematical model of how words are perceived, for submission to Psychological Review.

Biedl, Therese, Computer Science, June 1, 2015 to November 30, 2015, at 51.94% salary
I plan to intensify my work on ongoing research projects by visiting my co-authors and collaborators. Specifically I want to continue with the work on straight skeletons that was started during my previous sabbatical at the University of Salzburg, and I want to explore planar graph algorithms with Profs. David Eppstein and Mike Goodrich at University of California at Irvine.

Boido, Mario, Spanish and Latin American Studies, July 1, 2015 to December 31, 2015, at 85% salary
I will concentrate on writing my second book, “The Art of Remembering,” under contract with Iberoamericana Vervuert on the construction of Argentine historical memory. I will study how recent literature, film, and visual arts in Argentina move away from dominant tendencies to
document the crimes of the last dictatorship and are focusing instead on trying to explain and understand them.

**Charbonneau, Benoit**, Pure Mathematics, July 1, 2015 to December 31, 2015, at 85% salary
As a visiting scholar at the Perimeter Institute for Theoretical Physics, I will be part of the mathematical physics group. I will be studying instantons in spaces of dimension 6, 7 and 8, study a filtration on the set of vector bundles coming from the Bergman kernel, and participate in a multi-disciplinary research effort on the physics of glass transition.

**Chausse, Pierre**, Economics, July 1, 2015 to December 31, 2015, at 100% salary
My main area of research deals with estimation methods that require regularization. During my sabbatical, I intend to work with a colleague at Université du Québec à Montréal on a joint-authorized paper that deals with testing the validity of instruments when they are defined on a continuum. I will also spend much time in my office, where the super computer that runs computationally sensitive simulations is located.

**Coutu, Joan**, Fine Arts, July 1, 2015 to December 31, 2015, at 85% salary
My research focuses on the ways in which the build environment shaped community, regional, and national identifies in early 20th century Canada. On sabbatical, I will be focusing this research as I work on my book, “Constructing Canada: Memory, Identity, and the Build Environment, 1900-1939.”

**Douglas, Heather**, Philosophy, July 1, 2015 to December 31, 2015, at 85% salary
As part of my ongoing research into what the rights of scientists in democratic societies should be construed to be, what responsibilities scientists have in democratic societies, and what institutional structures are need to help scientists meet their responsibilities, I will write several papers (which will serve as the heart of my next book).

**Gallupe, Owen**, Sociology and Legal Studies, July 1, 2015 to December 31, 2015, at 100% salary
I will continue three projects I am leading while on sabbatical. All are related to criminological peer influence: 1) a multi-site survey; 2) a meta-analysis of previous research; 3) an experiment (dependent on funding). Attending a conference in Washington, DC (November 2015).

**Gebotys, Catherine**, Electrical and Computer Engineering, September 1, 2015 to February 29, 2016, at 100% salary
This sabbatical will advance the field of secure embedded hardware by helping to create a testbed for chip level hardware hacking and countermeasure design. I will be working mainly at the University of Waterloo focusing on publishing research findings. I will also be collaborating with Kili Technologies, Defence Research and Development Canada, and European Space Agency, as well as attending international conferences and presentations in industry.

**Ha, Bae-Yeun**, Physics and Astronomy, September 1, 2015 to August 31, 2016, at 97.5% salary
I will focus on my research effort in understanding polymers in a confined and crowded space, as model bacterial chromosomes. Second, I would like to further develop my partnership with Dr. Y. Jung at Korea Institute of Science and Technology Information and Prof. H. Jeong at Korea Advanced Institute of Science and Technology in South Korea. Finally, I will look for new partnerships and funding opportunities there.

**Hardiman, Craig**, Classical Studies, July 1, 2015 to December 31, 2015, at 100% salary
I will be working on coalescing past research on ancient Greek domestic decoration into a book length treatment. In addition, I will be research in a new area – neuroarthistory – examining the
way the brain processes visual stimuli and situating this biology within the culturally specific context of ancient Greece.

Hirschkop, Ken, English Language and Literature, July 1, 2015 to December 31, 2015, at 85% salary
I will be completing my study of the linguistic turns that transformed the humanities and social sciences in the first half of the twentieth century.

Hughson, Richard, Kinesiology, May 1, 2015 to April 30, 2016, at 100% salary
I will contribute to the establishment of a new research facility in the North Campus Research Institute for Aging building. I also plan to visit colleagues conducting the Irish Longitudinal Study on Aging in Dublin and specialists in cardiovascular adaptations to spaceflight and aging in France to participate in collaborative research efforts.

Lam, Jean-Paul, Economics, July 1, 2015 to December 31, 2015, at 100% salary
During my sabbatical, I will complete some of the research I have been pursuing on the benefits of price level targeting and the interdependence between the stock market and monetary policy.

Leung, Kam Tong, Chemistry, September 1, 2015 to August 31, 2016, at 100% salary
I will be working on projects involving nanoscale fabrication using advanced ion beam and electron beam technologies; commercialization of hybrid solar cells; and size-selected nanoclusters for water splitting. I will also be managing the growth of the WATLab facility and put over 35 complex instrument clusters in a more sustainable basis.

Li, Ming, Computer Science, September 1, 2015 to August 31, 2016, at 100% salary
I will focus on my work on Natural Language Processing, and some research in applied bioinformatics.

Liang, Kun, Statistics and Actuarial Science, July 1, 2015 to December 31, 2015, at 100% salary
I plan to take a six-month sabbatical leave to conduct research on statistical methods applicable to modern complex data of high volume. More specifically, I will develop novel statistical methods to detect signals, which can be the changes of gene expression levels between cancer patients and healthy controls, or unusual high correlations between prescription drugs and adverse reactions.

Libby, Theresa, Accounting and Finance, July 1, 2015 to June 30, 2016, at 93.3% salary
I will prepare a volume for Routledge Academic Publishing entitled “The Routledge Companion to Behavioral Research in Accounting” (due to the publisher by January 2017). In addition, I have been invited to visit Brigham Young University (six weeks) and Michigan State, Boston College and the University of Central Florida (2 weeks each) to present current research and develop new research projects.

Lowry, Chris, Philosophy, July 1, 2015 to December 31, 2015, at 100% salary
I will prepare ongoing research in Global Health Ethics and bioethics for publication, including chapters for an already contracted book on international public health initiatives, and a journal article considering the recent well-publicized cases involving parental refusal of chemotherapy and the aboriginal right to pursue traditional medicine. I will also lay the groundwork and apply for funding for a new research project on constructivist theories of justice in political philosophy.

MacFarlane, Emmett, Political Science, July 1, 2015 to December 31, 2015, at 100% salary
The six months will be spent conducting research and writing for a SSHRC-funded Insight Development Grant. I will be looking at the impact of officers of Parliament (i.e. the auditor
general, the privacy commissioner, etc.) on policy and democratic accountability in Parliament.
I will be completing interviews in Ottawa and writing a book monograph based on the findings.

**Mair, Heather**, Recreation and Leisure Studies, July 1, 2015 to June 30, 2016, at 85% salary
My sabbatical will consist of the following: 1) Visiting Scholar position at the University of Guelph for a project investigating economic social and cultural impacts of rural theatres; 2) Principal Investigator on a National Crime Prevention Centre-funded project assessing women’s reintegration into community after incarceration; 3) completing a co-edited book on leisure and community development (Venture Publishing); and 4) preparing re-submission of a SSHRC IDG exploring sport and community development (2015).

**McAuley, Tara**, Psychology, July 1, 2015 to December 31, 2015, at 100% salary
I intend to use this time for manuscript preparation, grant preparation, conference attendance, and networking for the purpose of building future research collaborations. My research examines the antecedent and consequences of executive functioning during typical/atypical development.

**McGill, Stuart**, Kinesiology, July 1, 2015 to June 30, 2016, at 100% salary
I will write the third edition of my textbook “Low back disorders: Evidenced based prevention and rehabilitation,” and will also complete my next book “Back Mechanic.”

**Milligan, Ian**, History, July 1, 2015 to December 31, 2015, at 100% salary
During this sabbatical period I will complete the first draft of my third book, “Historians and Web Archives: How Web Archives will Challenge, Complement, and Enhance the Study of History.” I will travel to conduct research at the Library of Congress in Washington, DC. I will also finalize research into the longitudinal use of web-archived resources.

**Mitchell, Clare**, Geography and Environmental Management, July 1, 2015 to December 31, 2015, and July 1, 2016 to December 31, 2016, at 85% salary
I will be completing manuscripts resulting from my 2013/14 SSHRC Insight Development Grant, and preparing an Insight Grant to be submitted to the 2016 SSHRC competition. While the former allowed me to explore the relationship between heritage commodification and economic prosperity in rural Newfoundland and Labrador, the latter will extend the analysis to Canada’s northern territories.

**Momani, Bessma**, Political Science, September 1, 2015 to February 29, 2016, at 85% salary
My project’s core objective is to better understand and document the experiences, narratives, and practices of Arab Canadian youth with respect to diaspora engagement in transnationalism, political debates and conflicts in and about countries of origin, and sense of belonging and social integration in Canada, through workshops, focus groups, interviews and surveys.

**Mourtzakis, Marina**, Kinesiology, July 1, 2015 to December 31, 2015, at 100% salary
I will complete several manuscripts related to my research in protein metabolism and muscle atrophy of critically ill and cancer populations. I will prepare a NSERC on the role of glutamate in insulin signaling in muscle as well as a CBCF and CIHR grant on changes in glucose tolerance in breast cancer. Finally, I will be solidifying collaborative research studies in developing clinically expedient methods for measuring muscle atrophy and muscle function in critically ill and cancer patients.

**O’Connor, Daniel**, Sociology and Legal Studies, July 1, 2015 to June 30, 2016, at 91.3% salary
My sabbatical research involves the completion of manuscripts from two related projects and the development of a SSHRC grant for the Fall 2015 competition. One project focuses on the internationalization of the criminal justice standards. The other project involves border security as a form of governance oriented toward the maintenance of interstate competition.
Paré, François, French Studies, July 1, 2015 to December 31, 2015, at 100% salary
I will complete my ongoing research project on contemporary representations of first/second languages within minority cultures. The resulting monography, currently entitled “L’empreinte de la première langue.” will be sent to the publisher at the end of 2015. I will also be working on a collaborative publication, currently entitled “1974,” on late 20th-century Québec cultural and literary history with Prof. François Ouellet, Université du Québec a Chicoutimi.

Park, Robert, Anthropology, July 1, 2015 to June 30, 2016, at 100% salary
I will carry out the identification and analysis of finds from archaeological research in Sir John Franklin’s 1845 Northwest Passage expedition and from prehistoric sites from Baffin Island, excavated during my fieldwork in the summers between 2008 and 2014, and prepare those data for publication. In the late summer of 2015, I will also participate in further Franklin expedition fieldwork.

Ragde, Prabhakar, Computer Science, September 1, 2015 to August 31, 2016, at 85% salary
I will be based at the University of California (Berkeley) with short trips for collaboration and conferences, working on research in the areas of programming languages and algorithms/complexity.

Staines, Richard, Kinesiology, July 1, 2015 to December 31, 2015, at 100% salary
I will be participating in human neuroscience research. Studies will focus on mechanisms in the nervous system associated with experience-dependent adaptations (neuroplasticity).

Vetzal, Kenneth, Accounting and Finance, July 1, 2015 to June 30, 2016, at 85% salary
During my sabbatical I plan to conduct research in the area of financial risk management, with specific applications to banking, insurance, mutual funds, and long-term investment strategies. I also intend to work on a couple of projects on options trading related to information releases regarding significant corporate activities such as mergers.

Videkanic, Bojana, Fine Arts, July 1, 2015 to December 31, 2015, at 100% salary
I plan to rewrite and complete my PhD thesis “Non-aligned Modernism” into a book, and research on my new SSHRC-funded project “Scarborough Guild of the Arts.”

Wang, Ruodu, Statistics and Actuarial Science, September 1, 2015 to February 29, 2016, at 100% salary
I will visit the Department of Mathematics at Eidgenössische Technische Hochschule, Zurich, Switzerland and the School of Mathematical Sciences at Peking University, China. I will work on research projects in Quantitative Risk Management and Mathematical Finance in collaboration with various scholars in Europe and China.

Wu, Changbao, Statistics and Actuarial Science, September 1, 2015 to August 31, 2016, at 85% salary
My major research project during my sabbatical is to finish the writing of the research monograph and graduate textbook titled “Sampling Theory and Practice” (co-authored with Mary Thompson) to be published by Springer in August 2016.

• Administrative Leaves
Coutu, Joan, Fine Arts, January 1, 2016 to April 30, 2016, at 100% salary [see sabbatical information]

McGill, Stuart, Kinesiology, January 1, 2017 to April 30, 2017, at 100% salary [see sabbatical information]
McWebb, Christine, French Studies, September 1, 2015 to December 31, 2015, at 100% salary. Completion user testing of image annotation software (imagemat.org); conference traveling; editing of guest issue for the Scholar & Feminist Online Journal, Barnard College, Columbia University.

FOR INFORMATION

2. Administrative Appointments

Lawson, Kate, Chair, English Language and Literature, Faculty of Arts, July 1, 2015 to June 30, 2019.

Skuterud, Mikal, Acting Chair, Economics, Faculty of Arts, July 1, 2015 to December 31, 2015.

Feridun Hamdullahpur
President
FOR INFORMATION

University Professor Designations
The 2015 University Professor designations: William Cook (combinatorics and optimization) and William Coleman (political science).

Waterloo has awarded this distinction to 20 other individuals: Garry Rempel (chemical engineering), Mary Thompson (statistics & actuarial science) and Mark Zanna (psychology) in 2004; Terry McMahon (chemistry), Cam Stewart (pure mathematics) and Robert Jan van Pelt (architecture) in 2005; Phelim Boyle (accountancy) and Ian Munro (computer science) in 2006; Ken Davidson (pure mathematics), Keith Hipel (systems design engineering) and Jake Sivak (optometry) in 2007; Roy Cameron (health studies & gerontology) and Flora Ng (chemical engineering) in 2008; Ellsworth LeDrew (geography & environmental management) and Ming Li (computer science) in 2009; Stuart McGill (kinesiology) and Janusz Pawliszyn (chemistry) in 2010; Robert Le Roy (chemistry) in 2011; François Paré (French studies) in 2012; and Douglas Stinson (computer science) in 2013.

UNIVERSITY PROFESSOR
The University of Waterloo owes much of its international reputation and stature to the quality of its eminent professors. UW recognizes exceptional scholarly achievement and international pre-eminence through the designation “University Professor.” Once appointed, a faculty member retains the designation until retirement.

Not counting retirees, it is anticipated there will be one University Professor for approximately every 60 full-time regular faculty members, with at most two appointments each year. Such appointments are reported to Senate and the Board of Governors in March and April respectively, and are recognized at convocation.

Selection Process
1. Annually, nominations will be sought from Faculty deans, directors of schools and department chairs, as well as from the University community generally. A nominee shall have demonstrated exceptional scholarly achievement and international pre-eminence in a particular field or fields of knowledge. The individual who nominates a colleague is responsible for gathering the documentation and submitting it to the vice-president, academic & provost before the December break. The University Tenure & Promotion Committee will act as the selection committee; its decisions are final.

2. A nomination must be supported by at least six signatures from at least two UW departments/schools and must be accompanied by a curriculum vitae and a short, non-technical description of the nominee’s contributions.

3. A nomination must also be accompanied by letters from the nominee’s dean, and from at least two and no more than five scholars of international standing in the nominee’s field from outside the University. The scholars are to be chosen by the nominee’s chair/director in consultation with the dean and the nominator. The letter of nomination should explain why these particular scholars were chosen.

4. Letters soliciting comments from scholars shall be sent by the chair/director. Scholars shall be asked to comment on the impact and specific nature of the nominee’s most influential contributions, addressing their responses directly to the vice-president, academic & provost.

5. The dossiers of unsuccessful nominees remain in the pool for two additional years. The appropriate dean should provide updated information each year.

Ian Orchard,
Vice-President Academic & Provost
FOR APPROVAL

Incidental Fee Changes

1. Student Services Fee
   It is recommended that the compulsory Student Services Fee, assessed and collected each term from all full-time and part-time undergraduate and graduate students, be changed effective spring term 2015.

<table>
<thead>
<tr>
<th>Current</th>
<th>Proposed</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014/15</td>
<td>2015/16</td>
<td></td>
</tr>
<tr>
<td>Undergraduate full time</td>
<td>$134.00</td>
<td>$152.00</td>
</tr>
<tr>
<td>Undergraduate part-time (on campus)</td>
<td>40.20</td>
<td>45.60</td>
</tr>
<tr>
<td>Graduate full time</td>
<td>118.00</td>
<td>140.00</td>
</tr>
<tr>
<td>Graduate part time (on campus)</td>
<td>35.40</td>
<td>42.00</td>
</tr>
</tbody>
</table>

   Comments:
   - The fee is developed in accordance with the Student Services Protocol approved by the Board of Governors in April 1994
   - Services include Athletics & Recreation Services, Health Services, Centre for Career Action, Counselling Services, Student Success Office, Student Security Service, Art Gallery, OHD – Student Leadership Program, AccessAbility Services – Accessible Transportation
   - The majority of the members on the Student Services Advisory Committee are students; the committee unanimously recommended the fee changes

2. Imprint Fee
   It is recommended that the compulsory undergraduate student newspaper (Imprint) fee be increased from $3.30 per term to $4.30 per term (30% increase), effective spring term 2015.

   Comments:
   - The fee is compulsory for all full-time undergraduate students but refundable during the first three weeks of the term
   - The fee was last increased in September 2001 and in May 1991
   - The Imprint held its Annual General Meeting on February 23, 2015 where the membership voted in support of the fee increase

   Dennis Huber
   Vice-President,
   Administration & Finance
This report is submitted following the committee’s teleconference meeting of 24 March 2015.

FOR INFORMATION

Nominating Committees: Dean of Applied Health Sciences and Dean of Environment
As prescribed by it terms of reference*, the Executive Committee approved, on behalf of the board, that James Rush be appointed dean of the Faculty of Applied Health Sciences for an initial five-year term commencing 1 July 2015 and ending 30 June 2020, and that Jean Andrey be appointed dean of the Faculty of Environment for an initial five-year term commencing 1 July 2015 and ending 30 June 2020.

About Jim Rush: Jim Rush completed his BSc (1992) in human kinetics and his MSc (1993) at University of Guelph, and his PhD (1998) at State University of New York Upstate Medical University, Syracuse. A faculty member since 2000, he currently holds the position of professor in the Department of Kinesiology. Prior to joining the university, he was postdoctoral fellow in the Department of Veterinary Biomedical Sciences and Dalton Cardiovascular Research Center, University of Missouri-Columbia (1998-2000). His past administrative service includes appointments as interim dean (July 2014 to present), associate dean (2013-14), chair of the Department of Kinesiology (2009-13), associate chair of the department (2008-09) and associate dean, graduate studies and research (2006-07). His research interests are in vascular and skeletal muscle physiology, and from 2003-13 he held the CIHR-Canada Research Chair in Integrative Vascular Biology. His research program (as principal or co-investigator) has secured 30 grants totalling nearly $7 million, and he has supervised or co-supervised 21 graduate students or postdoctoral fellows. In addition to his university responsibilities, he has served as a journal editor or associate editor for a variety of publications, has sat on a variety of external grant allocation/review committees, and is a member of the Board of Directors of the Schlegel-University of Waterloo Research Institute for Aging and with the Waterloo Regional Cardiac Rehabilitation Foundation.

About Jean Andrey: Jean Andrey completed her BA (1977) at Wilfrid Laurier University, her MSc in physical geography (1980) at University of Calgary, and her PhD (1989) in geography at University of Waterloo. A faculty member at Waterloo for 25 years, she currently holds the position of professor in the Department of Geography and Environmental Management. Her past administrative service includes her appointment as interim dean (August 2014 to present), associate dean of graduate studies (2006-08, 2012-14), associate dean of graduate studies and research (2005-06), director of the joint graduate program in geography (2008-10), and graduate officer and associate chair of the Department of Geography (1991, 1998-2002). Her research expertise spans a variety of fields including climate resilience, weather-transport interactions, natural hazards and risk assessment, and sustainable transportation. Her work has been recognized with her election as fellow of the Royal Canadian Geographical Society in 2011, the university’s Outstanding Performance Award which she received in 2006 and 2007, and numerous teaching awards. She has acted as principal investigator on 25 research projects. In her career she has taught 10,000 students at the undergraduate and graduate levels, which demonstrates her formidable imprint on a Faculty that has approximately 13,000 alumni. She has supervised or co-supervised over 36 graduate students in addition to a considerable number of undergraduate student researchers and activity on master’s and doctoral committees. In addition to her university responsibilities, she has served as president of the Canadian Association of Geographers (2012-14) and also vice-president (2011-12), and she has served on the Board of Governors for St. Jerome’s University (2005-11).

*To exercise all the powers held by the Board of Governors, within the limits of the University Act, between regular meetings of the Board except to repeal, amend or modify the University Act or bylaws or to appoint a President or to appoint Governors.

Kevin Lynch
Chair
Dear Governors,

I am pleased to provide you with this brief update on the major accomplishments and events that have taken place since the last BOG meeting in February 2015.

As articulated in the Strategic Plan, we continue building a comprehensive university of global stature offering superior undergraduate and graduate education in a rich, innovative, and high-quality research and teaching environment. We are steadily and systematically implementing the plan towards our goal of being recognized as one of the world’s top innovation universities and we are proud to be recognized as the intellectual engine of one of North America’s richest innovation ecosystems. I was very pleased to circulate among my colleagues a recent *New York Times* op-ed, which gave an excellent testimony about the University of Waterloo’s “entrepreneurial nature,” comparing us favourably against even the best institutions in the United States.

(http://www.nytimes.com/2015/03/15/opinion/sunday/frank-bruni-how-to-survive-the-college-admissions-madness.html?_r=0)

**AAAS and Global Innovation Summit Events in San Jose, California**

On Feb. 12, the University of Waterloo celebrated our innovative spirit and deep connections to Silicon Valley and the Bay area. We hosted the “University of Waterloo Innovation Showcase and Reception,” at which several Waterloo student and faculty start-ups were present.

From Feb. 12 to 16, top Waterloo researchers took the stage at the American Association for the Advancement of Science (AAAS) annual meeting, helping to establish the University as a leader in quantum information and next-generation battery technology.

As sponsors of the Global Innovation Summit, from Feb. 17 to 20, the University hosted a special breakfast event featuring David Fransen and Iain Klugman, who shared their perspectives on how Waterloo plays — and wins — in the high-impact, contact sport of innovation ecosystems.

**Presidential Lecture by Nobel Laureate Edmund Phelps**

Edmund S. Phelps, who was awarded the Nobel Memorial Prize in Economic Sciences in 2006, gave the annual resident’s lecture on Thursday, March 5 at the Mike & Ophelia Lazaridis Quantum Nano Centre.

Phelps, the celebrated McVickar Professor of Political Economy at Columbia University, has contributed many major publications in his career as an economist. His recent book, *Mass Flourishing: How Grassroots Innovation Created Jobs, Challenge, and Change*, has received wide-spread global recognition.
Entrepreneurship - Waterloo Start-ups (Student and Faculty)

Over the past few months, we witnessed more entrepreneurial successes coming out of our University. Here is a quick summary of some successes for existing start-ups, formation of new ones and, new initiatives at Waterloo:

Funding

*Voltera*, a current Velocity company that builds a printer that prints circuit boards in minutes, recently surpassed their Kickstarter goal to reach $500K. Their team consists of mechatronics and nanotechnology engineering grads, two of which are now in China to manage production.

*Pebble* launched a new smartwatch and broke Kickstarter records. Pebble was founded by a systems design engineering student (Eric Migicovsky) in the Velocity Residence. Their Pebble Time smartwatch campaign has shattered Kickstarter records with over $19.5 Million in sales on the first day - their goal was only $500K.

*Kik* was founded by a Velocity alumnus and former mechatronics student (Ted Livingston). Kik is a chat app that recently raised $38M and passed 200 Million users, and claims 40% of American youth (age 13-25).

*Vidyard*, founded by two systems design engineering graduates, is a leading video marketing platform that provides hosting and analytics. It recently raised $18 Million in funding and the founders (Michael Litt and Devon Galloway) were recently awarded the Ernst & Young Entrepreneur of the Year award.

Company Updates

*Perceptiv Labs* develops technology to enable robots to visually perceive their environment. The founders are mechatronics engineering graduates and were accepted into the winter 2015 class at Y Combinator, a prestigious incubator in Mountain View, California. They are the 13th Velocity company to be accepted at YC.

*Kitematic*, founded by UWaterloo engineering grads, was acquired by Docker for an undisclosed amount in March 2015. Kitematic essentially built a platform that allows Mac users to use the open source platform Docker more easily.

*Suncayr* is developing UV-responsive marker ink that tells you exactly when to reapply sunscreen. It is founded by four current nanotechnology undergraduate students. They won the prestigious James Dyson Award as international runner-up. They were also recently one of the winners of the Velocity Fund Finals and received a $25K cheque and a spot at the Velocity Foundry to further develop their product. (Suncayr will be presenting at the BOG meeting.)

Velocity Programs

Velocity launched its fifth program in January 2014 - Velocity Science. This is a partnership between Velocity and the Faculty of Science. The lab allows students to develop, test and implement their startup ideas. More than 10 companies are currently in that program.
The Velocity Foundry opened August 2014. It is a free co-working space dedicated to hardware and life sciences startups. About 25 startups currently develop, test and implement their ideas at the Velocity Foundry.

Engineering Students Showcase Innovations

Senior-year students in the Faculty of Engineering showcased projects ranging from a hockey bag that dries itself, a diabetic foot monitor to a low-cost prosthetic hand, as part of the annual Capstone Design symposia.

Capstone Design is a degree requirement for undergraduate engineering students. During the symposia, students in 11 programs will present more than 150 projects they have spent months designing and building. Held during National Engineering Month, it takes place over five days.

Research Accomplishments

Canada First Research Excellence Fund (CFREF) Proposal

In response to a call for proposals, a group of University of Waterloo researchers prepared the largest research proposal in our history and, on March 2, submitted it to the federal government for funding. The proposal, entitled “Seizing Canada’s Leadership in Information and Communications Technologies,” further builds on our combined strengths to pioneer disruptive “Internet of Things” innovations, advance Cybersecurity/Privacy, and deploy Quantum Technologies. The total funding request is $120M.

NSERC Awards

- **NSERC Andre Hamer Postgraduate Prize:** Michael McTavish, PhD Candidate, Env & Resource Studies
- **Synergy Awards for Innovation Large Companies:** David Blowes, Earth Sciences, with Carleton University, University of Alberta, UBC and Diavik Diamond Mines Inc. (A 10 year collaboration involving a multidisciplinary team from three Canadian universities and engineers at the Diavik Diamond Mine.)
- **John C. Polanyi Award:** Chris Eliasmith, Depts of Philosophy and Systems Design and School of Computer Science. The award honours an individual or team whose Canadian-based research has led to a recent outstanding advance in the natural sciences or engineering.

University of Waterloo and Grand River Hospital Research

Grand River Hospital and the University of Waterloo announced their partnership agreement to enhance health services research on a global scale and in the Waterloo Region.

Studies to date have included stroke, cancer treatment, traumatic brain injury, and nutrition and aging. As growing experts in these fields, together we are looking forward to using this opportunity as a tool to enhance ground breaking global and local impact.
UW/Technion Research Projects

Building on a Co-operative Research and Education Agreement formalized in 2014 between UW and the Technion-Israel Institute of Technology, both parties have jointly announced the funding of 10 collaborative research projects totaling $600K to support priority research and innovation projects. These will be related to the multi-faceted aspects of quantum computing and technology, water and nanotechnology. Both universities have identified the other as a strategic partner to collaborate in these three sectors through bi-national and international programs.

Research Commercialization (WatCo)

Working in conjunction with University researchers and partners, WatCo is focused on enhancing the opportunity to commercialize innovations. By taking on this role, WatCo makes the commercialization process smoother allowing researchers to focus on research. Some highlights from the WatCo office include:

AC Jumpstart program (FedDev funded and partially co-funded by UWaterloo) launched with a first call for startup company proposals. There were 26 proposals submitted and five projects funded at $60K. Subsequent calls for proposals to occur in May 2015.

- NanoQuan, a WatCo supported startup involving technology co-invented by Dr. Shesha Jayaram (ECE.), was one of the winning proposals that secured $60K funding under the first round AC JumpStart program competition.

A licensing deal with Amorchem, a Quebec based VC firm, was completed granting exclusive rights to a nano-drug delivery technology co-invented by Dr. Frank Gu (Chem Eng.) and Dr. Lyndon Jones (Optometry). The license specifies a range of royalty sharing scenarios and included a companion research contract of $1M (over three years) to develop the first drug application.

Two WatCo projects were selected for funding under a Canadian-US Embassy program to pay for professional marketing materials for promotion of Canadian technology in the U.S.

WatCo also supported and funded five commercialization projects for various faculty members during the last quarter.

Conclusion

Overall, the reporting period represents growing momentum for the University of Waterloo. I am particularly pleased with the excellent progress we have made towards meeting key objectives of the strategic plan. I am looking forward to hearing from you at the meeting on April 7th.

Feridun Hamdullahpur
President and Vice-Chancellor
This report is submitted following the Provost’s Advisory Committee on Staff Compensation (PACSC) meetings of 9 February 2015 and 27 February 2015. These recommendations, subject to ratification by the Board of Governors, will come into effect on 1 May 2015.

FOR APPROVAL

Staff Salary Recommendations

As a result of detailed discussions and with consideration of information from a combination of sources (including Mercer compensation data, the Hay Group compensation trends, annual Consumer Price Index for 2014, and comparative data from employers and universities in Ontario) and in accordance with Policy 5, Salary Administration, University Support Staff, the committee unanimously submitted the following recommendations on staff compensation packages:

1. Salary Increase. PACSC recommends a three (3) year salary agreement for USG staff from the period of 1 May 2015 to 30 April 2018 with increases to the salary ranges for USG staff (as defined in Policy 54, Definition of Staff) in each fiscal year as follows:
   a. 2015/2016 → 1.95%
   b. 2016/2017 → 1.95%
   c. 2017/2018 → 1.50%

   In addition, PACSC recommends the application of the normal merit program for regular USG staff members in each year; with merit funds distributed based on staff members’ performance and position in the range according to the stated performance goals of the salary program.

2. Staff Excellence Fund (SEF). PACSC recommends that:
   a. The University of Waterloo maintains the SEF.
   b. For each fiscal year PACSC will provide a financial summary of the previous year and a recommendation to the provost for any resources, over and above the base funding, necessary to achieve the principles of the fund.
   c. The SEF be documented and considered as part of the review in recommendation # 3, below.

3. Total Compensation Review. In support of the University of Waterloo strategic plan and the Robust Employer Employee Relationship Theme Group, the University of Waterloo and the University of Waterloo Staff Association cooperate to complete a full and comprehensive compensation review in the fiscal year 2015/2016.

4. Salary Increase in Lieu of Vacation. PACSC notes that the Salary Increase in Lieu of Vacation providing staff with the option to exchange one week of vacation for a one-time 2% increase in salary when within three years of retirement will remain in place as noted in the previous Staff Salary Recommendation dated 3 December 2010.
The membership of the committee is as follows:

Marilyn Thompson, Associate Provost, Human Resources (Chair)
Nadia Singh, SOGC (Committee Secretary)
Beth Jewkes, Associate Provost, Resources
Carlos Mendes, President, UWSA
Dennis Huber, Vice President, Administration & Finance
Kenton Needham, Director, Human Resources
Michael Herz, President-Elect, UWSA
Stephen Markan, Past President, UWSA
Tim Ireland, Director, UWSA

Ian Orchard
Vice-President, Academic & Provost
## UNIVERSITY OF WATERLOO
### 2015/16 Operating Income Budget

**Board, 7 April 2015**

<table>
<thead>
<tr>
<th></th>
<th>2014/15 Base</th>
<th>Estimated 15/16 % Increase</th>
<th>Estimated 15/16 $ Increase</th>
<th>2015/16 Base $</th>
<th>Notes</th>
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<td><strong>INCOME</strong></td>
<td></td>
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<tr>
<td>Operating Grant</td>
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<td>Basic Grant</td>
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<td>209,572</td>
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<td>Policy Levers</td>
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<td>(4,431)</td>
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<td>International Student Recovery</td>
<td>(2,241)</td>
<td>(978)</td>
<td>(3,219)</td>
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<td>Graduate Growth</td>
<td>6,666</td>
<td>1,166</td>
<td>7,832</td>
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<td>Undergraduate Growth</td>
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<td>(1,451)</td>
<td>12,339</td>
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<td>Quality Improvement Fund</td>
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<td>(21)</td>
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<td>Transfers to Colleges</td>
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<td>12</td>
<td>(13,451)</td>
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<td>292</td>
<td>2,107</td>
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<td>14</td>
<td>1,598</td>
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<td>Clinical Programs</td>
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<td>Access for Disabled</td>
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<tr>
<td><strong>Total Income</strong></td>
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<td>(966)</td>
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<td><strong>Tuition</strong></td>
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<td>Undergraduate</td>
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<td>321,444</td>
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<td>701</td>
<td>54,744</td>
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<td>(614)</td>
<td>(17,865)</td>
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<td>Student Services Fee</td>
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<tr>
<td>Interest</td>
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<td>8,000</td>
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<tr>
<td>Services to Colleges</td>
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<td>69</td>
<td>3,667</td>
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<tr>
<td>Grant in lieu of Taxes</td>
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<td>(18)</td>
<td>2,144</td>
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<tr>
<td>Miscellaneous Income</td>
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<td>11,170</td>
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<td><strong>Total Income</strong></td>
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<td>2,228</td>
<td>60,897</td>
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<td><strong>Total Income</strong></td>
<td>612,817</td>
<td>5.0</td>
<td>30,513</td>
<td>643,330</td>
<td></td>
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</tbody>
</table>

### NOTES TO 2015/16 OPERATING INCOME

1. This decrease applies to the basic grant and the graduate growth funds per the 2012 Ontario Budget. At this time, we do not expect further reductions from the 2014/15 Policy Levers.
2. Increase in undergraduate international enrolment in first, second and third year contributed to the $978K International Student Recovery increase.
3. The allocation is based on projected Fall 2015 FTE growth over the Fall 2007 FTE base. We assume that the Ministry of Training, Colleges and Universities (MTCU) will fund all growth up to the graduate enrolment growth targets.
4. The Undergraduate Growth reduction is due to a forecasted decrease in undergraduate domestic enrolment in 2015/16. Undergraduate growth up to and including 2010/11 is included in the Basic Operating Grant.
5. The $29.2M increase in undergraduate tuition results from continued international growth and modest domestic growth. Under the current tuition framework, maximum tuition rate increases for new domestic students are: 3% in regulated programs and 5% in deregulated programs, with an overall average increase of 3%. Tuition rate increases for international undergraduates is 8% plus an additional 1.2% to offset International Student Recovery and the reduction to the Grant in lieu of Taxes.
6. The $0.7M increase in graduate tuition reflects an average 1.5% rate increase for domestic students and 3.3% rate increase for international students.
7. Miscellaneous income estimates include: Health Services and Optometry OHIP and professional services income, application processing fees, non credit tuition, other student related fees, rental income, and other general revenues. Many of these items have offsetting expenses.
## 2015/16 Operating Expense Budget

### Salary and Wages

<table>
<thead>
<tr>
<th>2014/15 Base 15-02-03</th>
<th>2015/16 Estimated Incr (Decr)</th>
<th>2015/16 One-Time</th>
<th>2015/16 Total</th>
<th>% of Income</th>
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</thead>
<tbody>
<tr>
<td>$000</td>
<td>$000</td>
<td>$000</td>
<td>$000</td>
<td>$000</td>
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<tr>
<td>Salary and Wages</td>
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<tr>
<td>Current salaries and wages</td>
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### Student Support

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<tr>
<th>2014/15 Base 15-02-03</th>
<th>2015/16 Estimated Incr (Decr)</th>
<th>2015/16 One-Time</th>
<th>2015/16 Total</th>
<th>% of Income</th>
</tr>
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<td>$000</td>
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<td>$000</td>
</tr>
<tr>
<td>Student Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate incentive fund</td>
<td>401</td>
<td>1,666</td>
<td>1,666</td>
<td>0.1</td>
</tr>
<tr>
<td>Graduate student support</td>
<td>8,701</td>
<td>8,701</td>
<td>8,701</td>
<td>1.3</td>
</tr>
<tr>
<td>Senate matching scholarships</td>
<td>160</td>
<td>160</td>
<td>160</td>
<td></td>
</tr>
<tr>
<td>Support for international graduate students</td>
<td>6,922</td>
<td>7,051</td>
<td>7,051</td>
<td>1.1</td>
</tr>
<tr>
<td>Tuition set aside</td>
<td>20,413</td>
<td>21,262</td>
<td>21,262</td>
<td>3.3</td>
</tr>
<tr>
<td>Undergraduate scholarships/bursaries</td>
<td>8,117</td>
<td>8,720</td>
<td>8,720</td>
<td>1.4</td>
</tr>
<tr>
<td>Total student support</td>
<td>44,714</td>
<td>1,581</td>
<td>46,295</td>
<td>7.2</td>
</tr>
</tbody>
</table>

### Income Sharing

<table>
<thead>
<tr>
<th>2014/15 Base 15-02-03</th>
<th>2015/16 Estimated Incr (Decr)</th>
<th>2015/16 One-Time</th>
<th>2015/16 Total</th>
<th>% of Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>$000</td>
<td>$000</td>
<td>$000</td>
<td>$000</td>
<td>$000</td>
</tr>
<tr>
<td>Income Sharing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Differential tuition</td>
<td>1,666</td>
<td>1,666</td>
<td>1,666</td>
<td></td>
</tr>
<tr>
<td>Graduate growth</td>
<td>249</td>
<td>249</td>
<td>249</td>
<td></td>
</tr>
<tr>
<td>Graduate international growth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate course based masters</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>International tuition</td>
<td>8,493</td>
<td>8,493</td>
<td>8,493</td>
<td></td>
</tr>
<tr>
<td>Undergraduate enrolment expansion</td>
<td>2,249</td>
<td>2,249</td>
<td>2,249</td>
<td></td>
</tr>
<tr>
<td>Total income sharing</td>
<td>12,657</td>
<td>12,657</td>
<td>12,657</td>
<td>2.0</td>
</tr>
</tbody>
</table>

### Sub-total

<table>
<thead>
<tr>
<th>2014/15 Base 15-02-03</th>
<th>2015/16 Estimated Incr (Decr)</th>
<th>2015/16 One-Time</th>
<th>2015/16 Total</th>
<th>% of Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>$000</td>
<td>$000</td>
<td>$000</td>
<td>$000</td>
<td>$000</td>
</tr>
<tr>
<td>Sub-total</td>
<td>479,218</td>
<td>34,754</td>
<td>513,972</td>
<td>79.9</td>
</tr>
<tr>
<td>Notes</td>
<td>Academic development fund</td>
<td>Access for disabled</td>
<td>Base budget adjustment to reflect overhead costs</td>
<td>Contingency reserve</td>
</tr>
<tr>
<td>-------</td>
<td>---------------------------</td>
<td>---------------------</td>
<td>-----------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td>5,668</td>
<td>1,026</td>
<td>4,364</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>0.9</td>
<td>0.2</td>
<td>0.6</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
NOTES TO THE 2015/16 OPERATING EXPENSE BUDGET

[1] The increase to salary and wages includes funding for new faculty and staff positions and estimated salary increase costs based on salary settlements effective 2015/16.

[2] The 6.0% increase in current benefits costs include: benefits costs for new faculty and staff positions - 1.7%; rate and premium changes in employer contributions for extended health coverage, dental coverage, life insurance, CPP, employment insurance and workplace safety insurance – 1.8%; and, costs associated with salary increases – 2.5%.

[3] The ongoing income sharing balances represent additional amounts available in 2015/16 for distribution. Income sharing for existing programs is allocated to the faculties on a slip-year basis. Graduate growth allocations are funded on a calendar-year basis. The ongoing cumulative income sharing amounts, including additional amounts for 2015/16, from inception to date, are as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>$000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Differential tuition</td>
<td>18,529</td>
</tr>
<tr>
<td>Graduate expansion/growth</td>
<td>8,650</td>
</tr>
<tr>
<td>Graduate international growth</td>
<td>3,147</td>
</tr>
<tr>
<td>Undergraduate enrolment expansion</td>
<td>40,488</td>
</tr>
<tr>
<td>International tuition</td>
<td>43,321</td>
</tr>
<tr>
<td>Graduate course based masters</td>
<td>7,397</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>121,532</strong></td>
</tr>
</tbody>
</table>

To accommodate growth, academic support units receive supplemental budget increases.

[4] Undergraduate and graduate programs holdback is a portion of the grant and tuition related to growth and held at the centre to support new initiatives and to generate the university fund necessary for transition to the new budget model.

[5] Supplies and expenses is the total of non-salary budgets in faculties and academic support units that are not specifically identified elsewhere in the budget. Based on 2013/14 actual expenses, included in this number are the following items:

<table>
<thead>
<tr>
<th>Description</th>
<th>$millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment, maintenance and rentals</td>
<td>19.5</td>
</tr>
<tr>
<td>Travel and hospitality</td>
<td>11.3</td>
</tr>
<tr>
<td>Supplies</td>
<td>10.5</td>
</tr>
<tr>
<td>Contracted services</td>
<td>7.3</td>
</tr>
<tr>
<td>Computing, including software</td>
<td>6.5</td>
</tr>
<tr>
<td>Purchases for resale</td>
<td>4.0</td>
</tr>
<tr>
<td>Telephone</td>
<td>3.1</td>
</tr>
<tr>
<td>Consulting</td>
<td>2.8</td>
</tr>
<tr>
<td>Printing</td>
<td>2.5</td>
</tr>
<tr>
<td>Postage</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>69.5</strong></td>
</tr>
</tbody>
</table>

[6] A 2.5% expenditure reduction is allocated across all academic units resulting in a savings of $6.6M.
This report is submitted following the committee’s meeting of 12 March 2015.

FOR APPROVAL

________________________

1. Hagey Hall Courtyard Infill

Motion: To approve the award of a stipulated price contract (CCDC2) to Harbridge + Cross Limited for $5,183,000 plus HST for the Hagey Hall courtyard infill project.

Background: At its meeting of 3 February 2015, the board approved a project budget of $8.35 million to design and construct a 13,825 square foot infill addition to Hagey Hall. The project is intended to provide student study and social space as a key element in attracting and retaining outstanding graduate and undergraduate students.

Seven bids were received from general contractors pre-qualified to bid the project. Harbridge + Cross Limited submitted the low bid; the three lowest bids were within a range of 5%, and the lowest five bids were within a range of 11%. The project will be funded by the Faculty of Arts through a combination of the Faculty’s allocation of the provincial capital growth funding, donated funds, and current operating funds. In addition, the student-funded Arts Endowment Fund has made a $200,000 financial commitment to the capital component of the project and a further $100,000 toward its operating costs.

FOR INFORMATION

________________________

2. 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
- its terms of reference

Huber presented a thorough summary of the steps ordinarily undertaken in major construction projects at the University, and this summary was well received by the committee. The committee discussed orientation plans for the next cycle of meetings, and it was decided that, among other things, the new committee will receive a similar briefing on the execution of major construction projects, and will visit Plant Operations, all at the time of its May 2015 meeting.

13 March 2015

Murray Gamble
Chair
This report is submitted following the committee’s meeting of 9 March 2015.

FOR INFORMATION

1. **2015-16 Operating Budget**
   Following a review of the operating budget for 2015-16, the committee passed a motion endorsing the proposed budget for approval by the Board of Governors.

2. **General Oversight**
   **Investment Fund Performance.** The committee reviewed the performance of the registered pension plan, endowment fund, IQC trust fund, and payroll pension plan portfolios as at 31 December 2014. The registered pension fund managers are generally performing as expected given the value investment philosophy and current market conditions, and the aggregate fund is meeting its return target of CPI+3.75%. The endowment fund’s performance remains below its target on a year-to-date and fiscal year basis; the committee is comfortable with the current managers and performance, although it will be reviewing the Canadian equity weighting given concerns re: the price of oil and commodity markets. IQC trust fund was recently reorganized, so there are no meaningful performance numbers to report at this time. The payroll pension plan, which is fully indexed, is tracking closely to the policy benchmark.

   **Endowment and Pension Funds Asset Mix.** The committee reviewed and confirmed its comfort with current asset mixes in the endowment and pension funds.

   **Value for Money/Efficiency Measures.** The committee received this report from the provost and notes that on many measures the University performed as well or better than last year. The provost will be revisiting the report over the next year to ensure that it is properly aligned with the University’s strategic plan.

   **Annual Workplan.** The committee approved its workplan for 2015-16.

/rw

Prem Watsa
Chair
This report is submitted following the committee’s meetings of 27 February 2015 and 27 March 2015.

FOR INFORMATION

1. 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 University’s pension plan and takes the information into account when making decisions on matters including plan design, funding and administration. During the reporting period, this included: the Ontario government’s legislation to create the Ontario Retirement Pension Plan, in particular, how it may impact University employees; the progress of the Council of Ontario Universities-Ontario Confederation of University Faculty Associations joint working group on an Ontario University sector plan.

2. Annual Actuarial Valuation
The committee received and reviewed the actuarial valuation results for the Registered Pension Plan and Payroll Pension Plan as at 1 January 2015, including the demographic and economic actuarial assumptions and impact of adjusting these assumptions. Final valuation results will be reported for information to the Board of Governors in June; the University is not required to file the valuation this year, so the report is for planning and funding purposes only.

Based on claims experience and following a negotiation process with the carrier, the LTD premium will increase by 3.7%. The large amount pooling rate under the extended health plan will increase by 11.8%, and the life insurance premium (contract rate) will decrease by 15%, effective 1 May 2015. The resulting changes to the premium rates for the extended health and life insurance do not affect the employer or employee paid rates at this time.

Note: the LTD premium is 100% employee paid. Large amount pooling insurance covers health claims totalling over $50,000 per individual claimant per calendar year. The life insurance premium is paid by the University up to one times annual salary. The premium for life insurance for two and three times annual salary is shared between the University and the employee. The premium for life insurance in excess of three times salary is 100% employee paid, as is the premium for spousal life insurance in any amount.

/rw

William Watson, Chair
Pension & Benefits Committee
INSTITUTE FOR QUANTUM COMPUTING
CORPORATE PLAN
2015-2016

EXECUTIVE SUMMARY

To be Submitted to Industry Canada
April 3, 2015
EXECUTIVE SUMMARY

The Institute for Quantum Computing (IQC) has grown to one of the top-five quantum institutes in the world, conducting leading research in areas of quantum computing, quantum communication, quantum devices and quantum materials. Over the last year, IQC has made tremendous progress towards its objectives as outlined in the 2014-2015 Corporate Plan – meeting or exceeding expectations in many areas.

In the coming year, IQC will continue its aggressive research agenda, attract the world’s best faculty, students and postdoctoral fellows to Waterloo and position Canada as a leader in the next great quantum technology revolution. Targeted outcomes have been set for each of IQC’s strategic objectives – all working towards IQC’s overall mission 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.

Plans for 2015-16

A. Increase knowledge in the various fields and sub-fields of quantum information, thereby positioning Canadians at the leading edge of quantum information research and technology.

IQC will continue its research program while continuing to grow towards its steady-state goal of 33 IQC faculty (currently at 22 faculty). IQC’s state-of-the-art headquarters and research facilities provide the ideal environment for quantum information research.

B. Create new opportunities for students to learn and to apply new knowledge to the benefit of Canada, spurring innovation, and investment in R&D activities through highly qualified personnel development.

IQC will continue to attract the world’s best talent to Waterloo and continue the growth of its graduate programs from 114 students today to its goal of 165 graduate students. Additionally, IQC will host, sponsor and participate in lectures, colloquia, workshops and conferences with leading researchers from around the world to share knowledge and research and spur innovation and development of quantum technologies.

C. Brand Canada as the destination of choice for conducting research in quantum technologies and attract the best in the world to Canada, creating partnerships with the international quantum information community and promoting a world-class excellence in quantum information science and technology.

Canada is among the world’s leading countries for quantum information research and technologies. It stands among the top five research hubs with the opportunity to shape the next great technological revolution. Through IQC, Canada will attract the best
research talent to Waterloo, collaborate in leading-edge research activities and share the world-class research excellence that has accelerated the country to the forefront of this critical area of research.

D. **Enhance and expand the Institute’s public education and outreach activities to effectively promote science and quantum information science and demonstrate how the research from quantum information science can be applied for the purpose of sustaining and attracting world-class talent.**

2015-16 will see an expansion of IQC’s public education and outreach activities. The institute will take its award-winning programs to new venues such as local museums, the Stratford Shakespeare Festival and the National Arts Centre. IQC will launch a new teacher workshop that will enable educators to incorporate quantum information into their programs, as well as a new program for senior high school students to design and build quantum experiments. 2015 will also see a major open house event to showcase the research and outreach activities ongoing at IQC.

E. **Position Canada to take advantage of economic and social benefits of research through seizing opportunities to commercialize breakthrough research.**

IQC will continue to develop commercialization activities, partnerships and opportunities for the realization of the economic and social benefits of quantum technologies. In 2015, IQC will launch a new industry workshop that will see senior executives come to Waterloo to experience quantum technologies first hand and better understand the transformational opportunities they present.
### 2015-2016 Expected Activities Highlights

<table>
<thead>
<tr>
<th>Month 2015/2016</th>
<th>Activity Highlights</th>
</tr>
</thead>
</table>
| April           | Continued research activities  
Continued recruiting activities  
CERC Summit – April 13-14  
IQC Scientific Advisory Board Meeting |
| May             | Continued research activities  
Continued recruiting activities  
Quantum Industry Lecture Series  
Quantum: Music at the Frontier Of Science in Ottawa  
USEQIP – May 25-June 5, 2-week undergraduate level school |
| June            | Continued research activities  
Continued recruiting activities  
Stratford Shakespeare Festival Forum Lecture – Raymond Laflamme  
Quantum Programming and Circuits Workshop - June 8-11 |
| July            | Continued research activities  
Continued recruiting activities  
NanoMRI Conference - July 27-31  
Catalyst Program visit  
Einstein Plus visit  
ISSYP visit |
| August          | Continued research activities  
Continued recruiting activities  
QCSYS summer school – August 7-14th |
| September       | Continued research activities  
Continued recruiting activities  
Quantum Frontiers Distinguished Lecture |
| October         | Continued research activities  
Continued recruiting activities  
Quantum Innovators workshop |
| November        | Continued research activities  
Continued recruiting activities |
| December        | Continued research activities  
Continued recruiting activities |
| January 2015    | Continued research activities  
Continued recruiting activities |
| February        | Continued research activities  
Continued recruiting activities |
| March           | Continued research activities  
Continued recruiting activities |
2015-2016 Forecasted Financial Highlights

The following table outlines IQC’s proposed spending for the period April 1, 2015 - March 31, 2016.

<table>
<thead>
<tr>
<th>Industry Canada Funding</th>
<th>IQC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>April 1, 2015 - March 31, 2016</strong></td>
<td><strong>Proposed Spending</strong></td>
</tr>
<tr>
<td><strong>Research, HQP Development</strong></td>
<td><strong>2016</strong></td>
</tr>
<tr>
<td></td>
<td><strong>2016</strong></td>
</tr>
<tr>
<td>3,000,000</td>
<td>20,015,000</td>
</tr>
<tr>
<td><strong>Pre-Commercialization</strong></td>
<td><strong>200,000</strong></td>
</tr>
<tr>
<td><strong>200,000</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Outreach and Communications</strong></td>
<td><strong>1,000,000</strong></td>
</tr>
<tr>
<td><strong>2,095,000</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Management, Admin &amp; Support</strong></td>
<td><strong>800,000</strong></td>
</tr>
<tr>
<td><strong>2,365,000</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,000,000</strong></td>
</tr>
<tr>
<td></td>
<td><strong>24,675,000</strong></td>
</tr>
</tbody>
</table>

IQC has secured additional funding for activities as outlined in the Contribution Agreement. The Province of Ontario has provided IQC with $5M per year for five years starting in 2014.

The University of Waterloo has no amounts owing to the Federal Government under legislation, under this agreement or any other agreement.