

**FACULTY OF SCIENCE
MEETING OF FACULTY
10 September 2019 at 3:00 p.m.
Leacock Building, Room L232**

ATTENDANCE: As recorded in the Faculty Appendix Book

DOCUMENTS: S-18-43, S-18-46, S-18-47, S-19-1, S-19-2

Dean Lennox called the meeting to order at 3:00 p.m. and welcomed members to the first Faculty of Science meeting of the 2019-2020 academic year.

As is the tradition in the Faculty of Science, Dean Lennox welcomed and congratulated new Assistant Professors. He said the Faculty of Science has attracted some exceptional new professors. The Faculty is privileged to attract these outstanding professors from around the world.

On behalf of the Faculty, Dean Lennox congratulated new Professors, recently tenured Professors, new Full Professors, and new Emeriti Professors for their outstanding contributions and accomplishments.

New Professors		
Department	Name	Rank
Biology	Mélanie Guigueno	Assistant Professor
Biology	Laura Pollock	Assistant Professor
Chemistry	Nathan Luedtke	Professor (tenured)
Chemistry	Lena Simine	Assistant Professor
Computer Science	Yue Li	Assistant Professor
Computer Science	William Hamilton	Assistant Professor
Computer Science	Blake Richards	Assistant Professor
Computer Science	Mohsen Ravanbakhsh	Assistant Professor
Earth and Planetary Sciences	Eric Galbraith	Professor (tenured)
Mathematics & Statistics	Brent Pym	Assistant Professor
Physics	Kartiek Agarwal	Assistant Professor
Physics	Eve Lee	Assistant Professor
Psychology	Jordan Axt	Assistant Professor
Psychology	Milica Miocevic	Assistant Professor
Tenured Professors		
Department	Name	Rank
Atmospheric and Oceanic Sciences	Andreas Zuend	Associate Professor
Biology	Michael Hendricks	Associate Professor
Biology	Rodrigo Reyes-Lamothe	Associate Professor
Geography & MSE	Kevin Manaugh	Associate Professor
Geography	Sarah Moser	Associate Professor
Geography	Brian Robinson	Associate Professor
Mathematics and Statistics	Jerome Vetois	Associate Professor
Physics	Lilian Childress	Associate Professor
Physics & EPS	Nicolas Cowan	Associate Professor
Redpath Museum	Rowan Barrett	Associate Professor

Full Professors		
Department	Name	Rank
Earth and Planetary Sciences	Galen Halverson	Full Professor

Emerita Professor		
Department	Name	
Psychology	Barbara Sherwin	

1. Adoption of Agenda

Under Dean's Business, item #9 (c), the Faculty of Science Strategic Plan, will be replaced by a presentation of the new Royal Victoria Project — The New Vic.

Prof. Mucci **moved**, seconded by Prof. Hurtubise, that the amended Agenda be approved.

The motion carried.

2. Resolution on the Death of Professor Laurie Hendren, Professor of Computer Science

Prof. Bettina Kemme, Director of the School of Computer Science, read out the resolution on the death of Professor Laurie Jane Hendren.

Prof. Laurie Jane Hendren passed away this May after a long struggle with cancer. She was only 60 years old.

Growing up in Ontario and studying at Queen's university, she did her PhD at Cornell. But being a true Canadian, she came back and joined McGill in 1990 where she quickly rose through the ranks becoming full professor in 2000.

Laurie was a brilliant researcher, an outstanding teacher, an incredible mentor, and just somebody who got things done.

Her research focus was on the various aspects of programming languages, and she was not just interested in developing algorithms but also in developing real software that is now in fact widely used by the research community. She led several major open source research projects, among them the Soot and SableVM projects focused on the Java programming language, and McLab which aims at improving dynamic languages used by data scientists, such as MATLAB. This is a project that is still active.

The impressive impact her work has had in this area is probably best shown by the fact that she was elected a Fellow of the ACM, the main professional society for computer scientists, and Fellow of the Royal Society of Canada in the Academy of Science. She has held a Canada Research Chair for Compiler Tools since 2011. And just this June, she was awarded the Dahl-Nygaard Prize for her pioneering contributions to object oriented programming.

Furthermore, when she was diagnosed with cancer in 2014 she started a completely different line of research, much more interdisciplinary in nature. She initiated this work because she didn't like the way she had to navigate the Health Care System as a patient, and she decided something had to change.

Together with colleagues from radiation oncology, she founded the Opal project which aims in leveraging electronic data for the benefit of clinicians and patients. Opal has received a number of awards, the most recent one a 2019 Prix d'excellence of the Ministry of Health of Quebec.

Laurie also excelled in teaching winning the Leo Yaffe Award for outstanding teaching in the Faculty of Science. She also was an amazing mentor not only to her many graduate and many many undergraduate students, but also to new Faculty members, in particular, the next generation of women who started in the School.

Finally, she served as Associate Dean Academics for the Faculty of Science for 5 years starting several initiatives.

Laurie was a fun-loving lively person with a legendary laugh, which will be missed by all. She enjoyed playing music and ice hockey. She was in fact the founder of women's ice hockey in Montreal West.

She will be missed by the numerous people whose lives she touched: friends, students and colleagues.

The School and the Faculty extends its condolences to Laurie's family: her husband Prakash Panangaden, who is also a faculty member in our School, her daughter Jane Panangaden, a McGill graduate, her brother Paul Hendren and her mother Jane Hendren.

There will a memorial service for Laurie, next week Wednesday, 18-September at 12:30 at the Birks Chapel.

Dean Lennox said that he would consider the resolution as being adopted unanimously.

Dean Lennox informed members that there will be a memorial service for Laurie on Wednesday, 18 September 2019 at 12:30 p.m. in the Birch Chapel.

3. **Resolution on the Death of Professor Godfried Toussaint, Emeritus Professor of School of Computer Science**

Prof. Bettina Kemme, Director of the School of Computer Science, read out the resolution on the death of Professor Godfried Toussaint.

Professor Godfried Toussaint died in July this year at the age of 75. He collapsed while giving a talk at the International Cartographic Conference in Tokyo, Japan, and died soon after.

Godfried joined the School of Computer Science in 1972, one year after its creation, and retired and became Emeritus Professor in 2007. In 2005 he also became a Collaborator at the Schulich School of Music.

After retiring from McGill he had several appointments before somewhat settling down in 2011 as Professor and Program Head of Computer Science at New York University Abu Dhabi in the United Arab Emirates, a position he held until he died.

Godfried was an immensely influential member of the School of Computer Science, significantly contributing to its becoming one of the leading computer science research departments in Canada. He is most known for his truly pioneering work in computational geometry and mathematical research in music, in particular music rhythm, but also did significant contributions in information theory, music information retrieval, and pattern recognition and analysis.

He has received many awards and prizes for his body of work, among them the Senior Killam Research Fellowship by the Canada Council, the Canadian Image Processing and Pattern Recognition Society's Service Award for his work in computational geometry, and the Lifetime Achievement Award by CS-Can (the Canadian Association of Computer Science).

Professor Toussaint was also a passionate teacher and an incredible mentor. He supervised or co-supervised sixteen Ph.D. students, eight of whom now hold tenured faculty positions at universities in Canada. One of his ex-students and then colleagues stated on a memorial page set up for him: "Godfried was a researcher who had an amazing ability to get people excited about problems. His flashes of intuition were spectacular and hard to resist. We all wanted to keep up and be part of this exciting adventure". No surprise that he received McGill's David Thomson Award for excellence in graduate supervision and teaching.

Also famous were the annual workshops on Computational Geometry that he organized at the Bellairs Institute in Barbados. They garnered an international reputation for being among the best collaborative research workshops in the world, and have spawned similar workshops in several other countries.

Godfried loved sports and music. His pleasure in rhythms led him to become a good hand drummer, and some rumors claim that he was in the group that essentially started the weekly drumming near the George-Étienne Cartier Monument on Mount Royal.

He will be sadly, but warmly and fondly, missed by colleagues and friends.

The School and the Faculty extends its condolences to his wife Eva and their daughter Stephanie.

Dean Lennox said that he would consider the resolution as being adopted unanimously.

4. Seating of Student Representatives S-19-1

Dean Lennox welcomed the student members to the Faculty of Science. He said that it is understandable that some students had course conflicts with Faculty of Science meetings, but that it was very important to have the students' perspectives. Dean Lennox encouraged students to meet separately with the SUS outside the Faculty meetings.

5. Minutes of 21 May 2019 S-18-46

Prof. Perepichka **moved**, seconded by Prof. Western, that the Minutes be approved.

The motion carried.

6. Business Arising from the Minutes

There was no business arising from the Minutes.

7. Motion to Amend the Constitution of the Faculty of Science S-18-43

Vice-Dean David Stephens said that a notice of Motion to amend the Faculty of Science Constitution was presented at the Faculty of Science meeting held on 21 May 2019. In document S-18-43, the key changes were: item 2.6.2, renaming the position of the Director of Advising Services (from the Associate Dean [Student Affairs]) on the

Committee on Student Standing; item 2.7, administrative reorganization of the Scholarship Committee (renamed Scholarships, Fellowships and Awards Committee); and item 2.9, the removal of the Animal Committee, which has been defunct for many years.

Vice-Dean Stephens **moved**, seconded by Prof. Hurtubise, that the revisions to the Faculty of Science Constitution, Document #S-18-43, be approved.

The motion carried.

8. Reports of Committees

a) Nominating Committee

S-19-2

1. **Science Nominating Committee (for information):**

The Nominating Committee consists of the Science Senate Representatives, and almost all are Chairs of the Faculty of Science; the Convenor is Vice-Dean David Stephens. The Committee approves and recommends memberships in Faculty of Science committees.

2. **Science Chairs' Council (for information):**

The Science Chairs' Council serves as an advisory committee to the Dean, and consists of the Dean, the Vice-Dean, the Associate Dean (Academic), the Associate Dean (Graduate Education), the Associate Dean (Research), the Director of Advising Services and the heads of all units in the Faculty of Science, including the MSE and the Redpath Museum.

3. **Tenure Committee (for information):**

The Tenure Committee consists of Faculty of Science representatives and Senate representatives from various faculties.

4. **Committee on Student Standing (for approval):**

The Committee on Student Standing (CSS) reviews student appeals of decisions made by the Director of Advising Services.

Prof. Western **moved**, seconded by Prof. Mucci, that the membership of the CSS be approved.

The motion carried.

5. **Academic Committee (for approval):**

The Academic Committee reviews and approves all academic content taught in the Faculty of Science.

Associate Dean Hundemer **moved**, seconded by Prof. Kirshbaum, that the membership of the Academic Committee be approved.

The motion carried.

6. **Scholarships, Fellowships and Awards Committee (for approval):**

The Vice-Dean or Associate Dean (Academic) or Associate Dean (Education) or delegate serves as the Chair of the Committee. The Committee is also made up of department representatives.

Prof. Kemme **moved**, seconded by Prof. Fussmann, that the membership of the Scholarships, Fellowships and Awards Committee be approved.

The motion carried.

7. Leo Yaffe & Principal's Prizes Committee (for approval):

The Leo Yaffe and Principal's Prizes Committee recommends candidates for these awards for excellence in teaching.

Prof. Western **moved**, seconded by Prof. Mucci, that the membership of the Leo Yaffe & Principal's Prizes Committee be approved.

The motion carried.

8. Council of Graduate and Postdoctoral Studies (for approval):

Representatives of all faculties sit on the Council of Graduate and Postdoctoral Studies.

Prof. Western **moved**, seconded by Prof. Fussmann, that the membership of the Council of Graduate and Postdoctoral Studies be approved.

The motion carried.

9. B.A. & Sc. Program Administration Committee (for approval):

The B.A. & Sc. PAC reviews changes to, and coordinates the administration of, the B.A. & Sc. degree programs. Only the Science membership is subject to approval by the Faculty of Science.

Prof. Western **moved**, seconded by Prof. Roulet, that the Science membership of the B.A. & Sc. Program Administration Committee be approved.

The motion carried.

b) Scholarships Committee

S-18-47

Associate Dean Hundemer gave the following Report on Undergraduate Scholarships based on academic merit for the 2018-2019 academic year. The Report consists of named awards provided by generous donors, as well as the Dean's contribution to top up these awards to ensure that all students with a 3.97 SGPA and above received awards. The departmental awards are selected by the relevant department. Dean Lennox added that the Faculty is grateful that generous donors have made these awards possible.

The SGPA cutoff for a Faculty award was 3.97, the same as the previous year. There were a total of 419 awards given out, compared to 388 awards in the 2017-2018 academic year.

The cutoffs for the Dean's Honour List (top 10% of students in the Faculty) were:

- 3.97 SGPA for B.Sc. students
- 3.92 SGPA for B.A. & Sc. students

9. Dean's Business

a) Announcements

There were no announcements.

b) IT Services Reorganization

Dean Lennox announced that **Mr. Carlos Aviles** has recently joined the Faculty as a Senior Manager, IT Systems. This new position is a result of the Faculty-endorsed IT Working Group's recommendations, which was launched to review the IT services in the Faculty and to develop a set of recommendations to improve the Faculty's IT services and structure. Currently, there are a total of 15 base-funded IT-associated staff members in the Faculty.

Dean Lennox pointed out that Mr. Aviles has extensive technical expertise and experience in infrastructure services management, project delivery and talent development. Mr. Aviles held positions at Hitachi Data Systems and prior to that had spent 12 years at CGI, holding various leadership positions. Dean Lennox informed members that Mr. Aviles will be reaching out to units to review their IT needs. In November or December, Mr. Aviles will put forward a plan to put into place.

c) Royal Victoria Project — The New Vic

The Academic Plan and Its Realization

Dean Lennox gave a PowerPoint presentation on the New Vic. The Dean serves as the Academic Lead and as the liaison between academic programming and those developing the physical space.

During the presentation, Dean Lennox described the various buildings and their purpose at the New Vic site. Some of the buildings will not be part of the New Vic project, but will be developed by group developers around research themes. The New Vic will provide benefits for the entire University. The current part of the mandate, in terms of developing the Functional and Technical Program (FTP), is that this will be a laboratory to explore how we can work in a university environment in a collaborative way, and in particular, how complex problems can be solved. Another important principle is to enable new approaches to teaching at the undergraduate and graduate levels. The classroom space will be devoted to experimental and sometimes avant-garde forms of teaching. It is important to emphasize that the New Vic will further enable McGill to attract the best students, faculty, idea makers, problem solvers and entrepreneurs from Quebec, Canada, and around the world.

The program development process began in September 2015 with the creation of the feasibility study for the RVH site. This was followed by the Principal's Task Force on the Academic Vision and Mission of the RVH site in December 2015. Subsequently, in May 2016, the Principal's Task Force selected two pillars for the Academic Plan: Sustainability Systems and Public Policy. The RVH Academic Plan was produced in December 2016 and revised in February 2017, and the final version was presented to the Quebec government in June 2018.

As mentioned above, the Academic Plan has two Pillars: (a) Sustainability Systems and (b) Public Policy. The departments involved in the first instance are: (i) Molecular/Materials Systems (Chemistry, Physics, Electrical, Mechanical, Chemical, Computer, and Materials Engineering); (ii) Earth Systems (Geography, Earth and Planetary Sciences, Atmospheric and Oceanic Sciences, Civil, Mechanical and Mining Engineering).

Urban Systems (Geography, Architecture, Urban Planning, Civil, Electrical & Computer Engineering) will unlikely be included in this phase due to a lack of funds. A number of departments and thematic institutes (not mentioned here) related to Public Policy are involved.

In the two Pillars, Dean Lennox said that approximately 180 professors and their research groups are to be housed in the New Vic. There will be (i) Discovery

Centre/Hubs (research, measurement, and fabrication facilities); (ii) institutes and centres; and (iii) learning, teaching, and library facilities, which will include active learning, classrooms, informal learning spaces, “collision spaces,” staffed e-resource facilities, and teaching labs. The New Vic will include space for undergraduate students, and will not be solely a research facility.

Dean Lennox said that the Quebec government and McGill provided matching funds to create a preliminary Functional and Technical Program (FTP). The conclusions of the preliminary FTP indicated that the project could not support all activities (e.g., undergraduate teaching laboratories) given the space allocation of 50,533 gross square metres (27,458 net square metres). The FTP merges all project information and needs into one document. Following an international competition, the architectural firm that won the contract is a consortium of two prominent Canadian companies, Diamond Schmitt/Lemay Michaud Architects. Since 1 May 2019, the Committee has been working with user groups for more in-depth information and understanding. In the initial FTP, some members of two departments associated with Materials (Physics and Electrical and Computer Engineering) were expected to be accommodated in the New Vic site; however, this will not be possible during the first phase of the project due to space and budget constraints. The initial space in the plan was reduced from 70,000 gross square metres to 50,533 gross square metres. The final FTP report should be completed by November 2019, and is then submitted for McGill's approval in December 2019. The next step of the FTP will be the design process. The space that will be vacated in the various buildings will be addressed in the McGill Master Plan. The Board of Governors has already approved funding to repurpose the released space. The released space includes the following buildings: Otto Maass, Burnside Hall, Frank Dawson Adams, and a great deal of the Wong Building and others. Therefore, it is very important that the design for the released space be as innovative as for the new Royal Vic site.

A Town Hall status report and discussion on the New Vic will be held on **13 September 2019 at 3:00 p.m.** in the Stewart Biology Building, Room S1/4. Dean Lennox encouraged members to attend this very important event. Members will have a chance to ask questions during the question period.

In reply to a member, Dean Lennox said that the members of departments that will not be housed in the New Vic site (but had been earmarked in the preliminary FTP) are those members associated with Materials in the Department of Physics, and Electrical and Computer Engineering. The composition of the user groups involved members from a number of the departments (e.g., Chemistry, Earth and Planetary Sciences, and Geography). The various working groups include academic representatives, Indigenous representatives, Library representatives, Teaching & Learning, etc. Dean Lennox emphasized that mistakes of the past, such as the limited space at the entrance and exit to Leacock Building Room #132, will not be repeated.

Dean Lennox said that he will continue to update members at future Faculty meetings, after the final FTP Report.

10. Reports of Director & Associate Deans

- a) Director (Advising Services) Nicole Allard
- b) Associate Dean (Academic) Axel Hundemer
- d) Associate Dean (Graduate Education) Laura Nilson

There were no reports for the current meeting.

- e) Associate Dean (Research) John Stix

(i) CRC Chairs—Spring 2019 Recipients

On behalf of the Faculty, Associate Dean Stix congratulated the latest CRC Chair recipients in the Faculty of Science:

Prof. Karine Auclair (Chemistry)	CRC Tier 1
Prof. Rosemary Bagot (Psychology)	CRC Tier 2
Prof. Nicolas Cowan (Physics, Earth & Planetary Sciences)	CRC Tier 2
Prof. Daryl Haggard (Physics)	CRC Tier 2
Prof. Jessica Lin (Mathematics & Statistics)	CRC Tier 2
Prof. Yajing Liu (Earth & Planetary Sciences)	CRC Tier 2
Prof. Maureen McKeague (Chemistry)	CRC Tier 2

Associate Dean Stix announced the following upcoming competitions. He informed members that there are three types of **New Frontiers in Research Fund**:

(ii) New Frontiers in Research Fund (NFRF)—Anticipated launch in October 2019

(a) NFRF Exploration Stream

The Faculty of Science was extremely successful in last year's first-time competition. The Exploration Competition is now open, and it is an interdisciplinary or transdisciplinary fund.

(b) NFRF International Stream

The NFRF International Stream fund will allow Canadian academics to participate more fully in international ventures. There will be **two streams**: one stream is for general international ventures that are cutting-edge and high-level, and the second stream, dedicated to European funding, has been renamed Horizon Europe (previously named the "European Union Horizon 2020 Framework Programme).

Associate Dean Stix emphasized that there are great opportunities for Canadian researchers to get involved with these funding schemes.

(c) NFRF Transformation Stream

Individual programs of research are funded up to \$24M over six years. The Transformation stream is designed to support large scale, interdisciplinary research projects. It is expected that, for the inaugural Transformation competition, a few projects will get funded across Canada, and it would be great if McGill received one of these grants.

Dean Lennox encouraged members to start planning and preparing for these NFRF competitions as soon as possible.

11. Members' Question Period

There were no members' questions, and none were submitted for the current meeting. Dean Lennox said that members should submit their questions in writing to Josie D'Amico (josie.damico@mcgill.ca) in advance of the meetings.

12. Other Business

There being no further business, Prof. Roulet **moved**, seconded by Prof. Perepichka, that the meeting be adjourned at 4:20 p.m.

The motion carried.