FACULTY OF SCIENCE
Meeting of Faculty
3 November 2020 at 3:00 p.m.
Held via Zoom Conference Application

ATTENDANCE: As recorded in the Faculty Appendix Book

DOCUMENTS: **S-20-10, S-20-11**

Dean Lennox called the meeting to order at 3:00 p.m., and welcomed members to the third Faculty of Science meeting of the 2020-2021 academic year.

1) ADOPTION OF AGENDA

Prof. Hurtubise **moved**, seconded by Prof. Roulet, that the Agenda be adopted.

The motion carried.

2) AWARENESS OF FOREIGN INFLUENCE

Dean Lennox introduced Vice-Principal (Research and Innovation) Martha Crago, and Brian Bauer, Director of International Engagement, Office of the Provost and Vice-Principal (Academic), and said that she would give a presentation on foreign influence.

Vice-Principal Crago provided some background information on foreign influence on research and highlighted key points of her presentation, which is available below. She said that the main purpose of the presentation was to inform researchers that there was a growing concern of the potential inappropriate interference by foreign entities.

Click here to view the presentation

Following the presentation, there was a lengthy discussion on the necessity for concrete guidelines or directives or reporting processes, which would be more productive and less potentially stigmatizing than steps that could easily build a climate of distrust. Mr. Bauer informed members that if there were specific questions, members could contact him.

Dean Lennox thanked Vice-Principal Crago and Mr. Bauer for their informative and very important presentation, and looked forward to the next update on this topic.

3) RESOLUTION ON THE DEATH OF EMERITUS PROFESSOR JOHN CRAWFORD, DEPARTMENT OF PHYSICS

Prof. Sangyong Jeon read the following resolution on the death of Prof. Crawford, which Faculty subsequently unanimously approved:

> It is with great sadness that I inform you of the passing of Dr. John Crawford, Emeritus Professor in the Department of Physics at McGill University, on September 19, 2020.
>
> John was born in Montreal. He attended the University Schools of Toronto high school and graduated with both a B.A. and M.A. from the University of Toronto in Mathematics and Physics. His Ph.D. in Physics was from McGill for which he designed a medical linear accelerator. This accelerator was built and installed at the Royal Victoria Hospital in 1962, the same year he received his degree. After

his Ph.D., John remained at McGill as a Lecturer, then becoming a Professor in the Department of Physics in 1964 where he stayed for the rest of his life.

John's research was on experimental nuclear physics. At McGill's Foster Radiation Laboratory, he designed and installed new instruments to carry out cutting edge science. His expertise in laser spectroscopy and isotope separators was instrumental in measuring the properties of many important nuclear isotopes. He was also instrumental in constructing the Test Isotope Separator On-Line, or TISOL, at TRIUMF, which laid the foundation of TRIUMF's very successful ISAC facility. He remained an active researcher even after his retirement in 2008, contributing critically to experiments at the Canadian Penning Trap Mass Spectrometer at the Argonne National Lab and the Collinear Fast-Beam Laser Spectroscopy instrument at TRIUMF.

John was a great teacher and mentor. In his long career, he supervised numerous undergraduate and graduate students many of whom he kept in touch with long after their graduation. The two Physics courses that John created out of pure love of teaching physics, the Physics of Music, and the Planets, Stars and Galaxies (now evolved into two popular courses, Our Evolving Universe, and The Milky Way Inside and Out) are still thriving and will long remain as his legacy.

In his more than 60 year's career at McGill, he has touched the lives of a great many students and colleagues in the Department. We will remember and miss his gentle humour, his quiet but always reassuring presence in the Department and its many events, enthusiasm for all things science, lively lunchtime discussions, and sage advice. We will remember and miss John as a great colleague, an innovative researcher, a caring mentor, but most of all, a true friend.

We extend our heartfelt condolences to his wife Elva, daughters and sons-in-law Cathy, Martin, Susan, Neil, Nancy and Ralph, and also grandchildren Kyle, Trevor, Gemma, Erik, Lindsay, Sara, and Anna, as well as to his extended family members, his many friends and colleagues, and to all those whose lives he touched. He will be deeply missed.

4) <u>RESOLUTION ON THE DEATH OF EMERITUS PROFESSOR VANAMAMALAI SESHADRI, DEPARTMENT OF Mathematics and Statistics</u>

Prof. Jacques Hurtubise read the following resolution on the death of Prof. Seshadri, which Faculty subsequently unanimously approved:

Vanamamalai Seshadri, Professor Emeritus of Statistics at McGill University, died peacefully at his daughter's home on March 8, 2020, in Sunnyvale, California. He was 91 years old. Sesh, as he was informally called, was born on April 25, 1928, in Kizhanatham, India. After studying mathematics at Loyola College in Madras, he taught in Sri Lanka and Myanmar before moving to the United States to pursue doctoral studies in mathematical statistics at Oklahoma State University, under the supervision of the eminent statistician Franklin Graybill, finishing in 1961. He then moved his family to Montréal, where he began his career at McGill. He was tenured in 1964 and became a Full Professor in 1970. He retired in 1997.

Sesh's research specialization was distribution theory. His name is permanently associated with the inverse Gaussian distribution, the long and fruitful study of which he began in 1981. His two masterly expositions of the topic, published by Oxford University Press and Springer respectively, are still the go-to references

on the subject. Sesh's research contributions covered a much wider spectrum, however, covering estimation problems and multivariate analysis, as well as touching on questions of probability theory. While at McGill, Sesh authored over 50 research articles, many of which appeared in journals of the highest caliber such as *The Annals of Statistics*, the *Journal of the American Statistical Association*, and *Biometrics*, supervising a good number of graduate students, three of whom went on to join the faculty of McGill.

Within the Mathematics and Statistics Department at McGill, Sesh was known as an incurable traveler. His reputation and his enthusiastic talks, delivered in English and French, earned him invitations from around the world and fed his wanderlust. In his retirement, he spent many years teaching at prestigious universities all over the world as Professor Emeritus, enjoying bridge games with his friends and spending time with his dear departed wife, Champa Seshadri. Sesh is survived by his sister Leelavathi Seshadri, his children Srinivasan Seshadri and Usha Seshadri, and his seven grandchildren. We are all the poorer for his departure but the discipline of statistics is richer for his exceptional research contributions. The Department expresses its deepest sympathies to his family for their loss.

On behalf of the Faculty of Science, Dean Lennox expressed condolences to the families of Prof. Crawford and Prof. Seshadri, and said that a letter of condolences would be sent to the families.

5) Minutes of 5 October 2020 **S-20-10**

Mr. Mekhanik **moved**, seconded by Prof. Lydon, that the Minutes be approved.

The motion carried.

6) BUSINESS ARISING FROM THE MINUTES

There was no business arising from the Minutes.

7) REPORTS OF COMMITTEES

- **Academic Committee** **S-20-11**

Associate Dean (Academic) Axel Hundemer described the following proposals that were reviewed and approved at the Academic Committee meeting on 27 October 2020.

I. New Course:

Biology

BIOL 610	Scientific Manuscript Writing 3 credits	**AC-20-7**

Associate Dean Hundemer **moved**, seconded by Prof. Fussmann, that the course be adopted.

The motion carried.

II. Course Revisions:

1. Geography

GEOG 417	Urban Geography	**AC-20-2**

Change in prerequisite
3 credits

Associate Dean Hundemer **moved**, seconded by Prof. Roulet, that the changes be approved.

The motion carried.

2. Physics

PHYS 359 — Honours Laboratory in Modern Physics 1 — **AC-20-6**
Change in prerequisite
3 credits

Associate Dean Hundemer **moved**, seconded by Prof. Jeon, that the changes be approved.

The motion carried.

3. Mathematics & Statistics

MATH 125 — Mathematical Techniques for Economics — **AC-20-3**
Changes in restrictions
3 credits

Associate Dean Hundemer **moved**, seconded by Prof. Hurtubise, that the changes be approved.

The motion carried.

MATH 222 — Calculus 3 — **AC-20-4**
Changes in restrictions
3 credits

Associate Dean Hundemer **moved**, seconded by Prof. Hurtubise, that the changes be approved.

The motion carried.

Program Revisions:

- Major Statistics & Computer Science — **AC-20-5**

Associate Dean Hundemer **moved**, seconded by Prof. Hurtubise, that the program changes be approved.

The motion carried.

III. Other:

1. Courses on Dean's Multidisciplinary Undergraduate Research List (DMURL) **AC-20-1**

Associate Dean Hundemer described the DMURL and said that on an annual basis the list is updated by Mr. Victor Chisholm in the Faculty of Science. Document AC-20-1 represents an updated list of courses eligible for the DMURL. Members may direct any comments or changes to Mr. Chisholm

(victor.chisholm@mcgill.ca) or Associate Dean Hundemer (axel.hundemer@mcgill.ca).

2. Assessment Policy for Winter 2021 **AC-20-8(Rev)**

Associate Dean Hundemer introduced the Fall 2020 Science Assessment Policy and gave some background information. He would like members to consider extending the Policy to the winter 2021 semester, including potential remote learning in subsequent semesters.

Minor Revisions:

- Page 2, under Remark, the Crowdmark feature is now available
- Page 2, Regulations 2.2 and 2.2.9, "subconscious bias" should be replaced with **"implicit bias"**

There was some discussion concerning the students registered with the Office for Students with Disabilities (OSD) being given the same number of hours (6.5) to complete their exams as other students, which could lead to inequality. Other issues raised were that OSD students may also be living in difficult physical environment or that there may be students in low-socioeconomic status, and 6.5 hours would not be sufficient to complete their exams. In response to the first comment, Associate Dean Hundemer replied that the OSD had recommended 6.5 hours and that it would not discriminate against these students. In reply to the second issue, Associate Dean Hundemer said that it is impossible for instructors to determine which of their students are working in difficult environments, and therefore, the Committee decided to give all students 6.5 hours to complete their exams. The Faculty will continue to be in contact with the OSD over these issues. A student member, speaking on behalf of all student members attending the current meeting, said that the extra timing has been greatly appreciated by students. In response to another member, Associate Dean Hundemer said that some professors did not apply the extra timing simply because they were unaware of the Policy in the fall 2020 semester, and he does not foresee the same issue in the winter 2021 semester. With this Policy in place, students should never have to approach professors in requesting OSD accommodations.

Associate Dean Hundemer **moved**, seconded by Prof. Jeon, that the Science Assessment Policy will apply to the winter 2021 semester, as well as potential remote learning in subsequent semesters be adopted, with the above minor modifications.

The motion carried.

8) DEAN'S BUSINESS

- Announcements and Updates

(i) Dean Lennox welcomed **Anthony Mittermaier** who will assume the role of Associate Dean (Student Affairs), a new appointment in the Faculty of Science. Anthony Mittermaier is an Associate Professor in the Department of Chemistry. He brings a great deal of experience in teaching and student affairs, including discipline, as well as a world-class researcher. Associate Dean Mittermaier will be overseeing the Science Office for Undergraduate Student Advising (SOUSA) and will be a key representative on behalf of the Faculty.

(ii) **Student Town Hall –** Dean Lennox provided some updates on the Student Town Hall that was held on 9 October 2020. There were approximately 30 students in attendance and it allowed for exchanges of information, concerns, and different

approaches. Since the situation is frequently changing, Dean Lennox said that it was very important to stay connected with the students.

(iii) **Student Survey -** Martine Gauthier, Executive Director of Student Services at McGill, conducted a student survey asking them about their experience in remote learning, their satisfaction or dissatisfaction, etc. As a result of the survey, the Provost later announced (29 September 2020) that remote learning would continue throughout the winter 2021 semester, and wherever possible, in-person activities would take place. However, following this announcement, the Government of Québec announced that Montréal was declared a COVID-19 red alert zone and the plan for in-person activities was postponed until further notice. Dean Lennox said that in the last several weeks, the Faculty has been immersed in the planning of the winter 2021 (W21) courses that would be most feasible for in-person teaching, provided that all safety measures were in place. He said that it was a developing situation and that more information would be made available to students and members of the Faculty of Science in the coming weeks.

(iv) **FRezCa** – FrezCa is a tutoring and help-desk environment for freshman students. Dean Lennox said that plans were underway to ramp up activities for W21.

9) SCIENCE UNDERGRADUATE SOCIETY (SUS) REPORT

Ms. Sydney Merritt, President of the Science Undergraduate Society, gave the following report:

Overall, all planned virtual activities were gaining momentum in both participation and attendance!

Regarding the V-P (Academic) portfolio, the Annual Graduate Fair officially will begin on 4 November 2020 in collaboration with the AUS and CAPS. The SUS winter Academia Week in February and the “study halls” were still in the planning phases and the SUS is working with the OSE in implementing these!

The Mental Health Committee hosted their first Peer Support Group on Friday, 9 October 2020. The turnout was relatively low and the Committee will now be partnering with different departments every other week to encourage participation. The next session is in collaboration with the Department of Psychology. Additionally, this Committee often hands out care packages during the final exams for students (often low cost snacks or coffee/tea) and were looking into a virtual or delivery option for the upcoming final exams session.

The SUS bi-annual Charity Week was also scheduled for the following week. All money raised will be donated to the Old Mission Brewery this year. Events include everything from trivia nights to “speed friending” with the SUS to more department-specific events such as cooking classes and Zoom exercise classes together with departmental student associations. The Environmental Committee was currently running an online “No Waste November” campaign in the hopes of creating a sense of eco-centered community and inspiring others to continue incorporating sustainable habits into their daily lives. All of these events have been heavily publicized and promoted on the new SUS Instagram pages!

The First Year Undergraduate Society (FUSS) has been established and has already planned the first event named, “Among (F)Us(S)” - an online gaming night with the popular mafia-inspired game Among Us. The V-P (Internal) and the Science Internal Committee were following first year engagement with smaller scale events such as the

week-long Halloween Instagram challenge and the upcoming Brunch Cooking Zoom Social.

Dean Lennox thanked Ms. Merritt for her report on the numerous and great activities of the SUS during these challenging times.

10) SCIENCE EQUITY AND CLIMATE COMMITTEE (SECC)

Associate Dean Nilson gave the following updates on the Science Equity and Climate Committee (SECC).

1. October meeting: One of the members put together a presentation about her experiences in launching an equity and climate committee in her own department. This provided useful information for units who are launching their own committees, and it was used as a starting point for a group discussion about how to organize and run such a committee, how to decide and prioritize the scope of activities, etc. Associate Dean Nilson pointed out that this type of conversation was productive in helping reach various objectives, but it was also a valuable in and of itself. Providing this type of community where people can exchange and develop ideas has always been a foundational goal of the committee, so it was great to see this aspect moving forward.

2. The Committee's priorities for the coming year were discussed. More information will be forthcoming. Associate Dean Nilson reminded members that they could reach out to her for information or with feedback or input.

3. One of the Committee's ongoing projects was a series of periodic meetings for pre-tenure faculty, designed with the twin goals of providing useful information and also providing opportunities for networking and peer peer mentorship. The first meeting of the 2020-2021 academic year was held on 22 October 2020, which was a workshop on graduate supervision in the remote context. A rich discussion ensued about practices and challenges in remote supervision. Members seemed to really value learning from each other and benefited from being able to share the obstacles during these challenging times.

4. A second workshop on remote supervision will be offered for all professors on 24 November 2020 at 3 p.m. An email will be sent out soon to all graduate supervisors in the Faculty.

11) Provost's Action Plan to Address Anti-Black Racism

Following the Provost's announcement at the end of September 2020 about McGill's Action Plan to Address Anti-Black Racism document, Associate Dean Nilson provided the following updates relevant to the implementation of the plan.

1. At the Senate Meeting on 21 October 2020, there was an open discussion structured around a number of prepared questions about the plan. The questions were designed to get people thinking actively about what actions need to be taken to advance the goals of the plan. Dave Stephens will be touching on this issue in his Senate report (below), and he will also read a more detailed summary of the discussion in the Minutes of the meeting. The full Senate Minutes will be published after the next Senate Meeting on 18 November 2020.

2. A memorandum was received from Angela Campbell, Associate Provost (Equity & Academic Policies), outlining some specific supports to Faculties:

a) Faculty Liaisons to help planning and implementation. **Voluntary** – but very important – no need to reinvent the wheel – the Equity Team has a lot of expertise in this area.
b) Financial Support in the form of a budget to each Faculty to support local initiatives that will advance the objectives of the plan.
c) New EDI Positions - The University has created a number of positions that will support work within the Faculties oriented toward anti-racism: **(1)** data analysis, **(2)** recruitment, **(3)** black student affairs liaison (will work directly with Black students and McGill administration), **(4)** student wellness advisor, and **(5)** pedagogy specialist that will advise faculty members and instructors on inclusive and anti-racist curriculum and pedagogy.
d) Consultant - McGill has retained the services of a consultant who will work with the Faculty throughout the 2020-2021 academic year to support the development and implementation of the Anti-Black Racism Plan.

12) The New Vic Project - Update

Dean Lennox gave a brief report on The New Vic Project. He said that the final version of the feasibility study document had been recently submitted to the Government of Québec. A decision on the funding level was anticipated by mid-December 2020. Presentations to alumni, finance, Faculties of Arts, Engineering, students, various McGill groups, and to relevant units in the Faculty of Science were ongoing. Dean Lennox said he will continue to provide updates on the progress of The New Vic Project at future Faculty meetings.

13) REPORTS OF VICE-DEAN AND ASSOCIATE DEANS

a) Associate Dean (Academic) Axel Hundemer

There was no report for the current meeting.

b) Associate Dean (Graduate Education) Laura Nilson

Associate Dean Nilson gave the following report on graduate education.

Graduate Research Trainees (GRTs):
GRTs are essentially visiting graduate students who are registered at another university and come to McGill for a short time. They may seem like graduate students, but for immigration purposes they are not and it is important to be aware of this. The travel restriction exemptions for international students issued by Immigration, Refugees and Citizenship Canada (IRCC), which went into effect last month, do **not** apply to students coming under the status of a Graduate Research Trainees. GRTs are not considered students but rather short-term graduate researchers and require a work permit to enter Canada. The processing time for GRTs is likely to be very long. All of this means that hosting these students is likely to be problematic and at the very least will require a lot of advanced planning. Members should reach out to Maxime Grenier, Immigration Advisor, in the Faculty of Science.

Graduate Student Mental Health:
Resources on mental health is available to undergraduate and graduate McGill students. The Keep.meSAFE program is a mental health counselling service that specializes in student mental health support and is free and unlimited for all McGill students. This is especially important to know during these times, where issues of isolation and mental health are on all of our minds.

c) Associate Dean (Research) John Stix

Associate Dean Stix presented the results of the combined Wares Science Innovation Prospectors Fund and Richard Tomlinson competition that took place during the summer 2020. The program funds high-risk and high-impact projects.

The winners were:

- Prof. Kim Berlo, Department of Earth & Planetary Sciences
  Project Title: Evaluation of Laser Induced Breakdown Spectroscopy as a fast method to detect antibodies to SARS-CoV-2

- Prof. Djordje Romanic, Department of Atmospheric & Oceanic Sciences
  Project Title: An analytical model of the interaction between thunderstorm downbursts and ambient Winds

- Prof. Matthew Harrington, Department of Chemistry
  Project Title: Mistletoe Viscin as a Biorenewable Adhesive for Advanced Biomedical Applications

- Prof. Kartiek Agarwal, Department of Physics
  Project Title: Engineering Majorana Fermions for Quantum Computing

- Prof. Guillaume Gervais, Department of Physics
  Project Title: Gas-flow based proteomics tool for covid-19 related Diagnostics

- Prof. Yajing Liu, Department of Earth & Planetary Sciences
  Project Title: Predictive modeling of earthquake slip using Bayesian inference

- Prof. Parisa Ariya, Departments of Atmospheric & Oceanic Sciences/Chemistry
  Project Title: Spotting lives in a blink of eyes

Associate Dean Stix congratulated all the above winners. He expressed thanks to the donors, Dr. Richard Tomlinson and Dr. Bob Wares, for their very generous support. Dean Lennox echoed Associate Dean Stix's sentiments.

d) Associate Dean (Student Affairs) Anthony Mittermaier

Associate Dean Mittermaier reported on the Virtual Open House event that took place on 25 October 2020. Overall, there were 70 different virtual activities, including 50 webinars, 20 virtual campus tours, and over 120 virtual booths. There were about 3700 students that were active on the platform during the day. The breakdown of the sources of Science students were: 45% from CEGEP, 18% from Ontario high schools, 11% were international students, 8% from the rest of Canada, 8% from US, and 10% other. Areas of interests were: 37% in health sciences, 17% in pure and applied sciences, 12% in computing and technology, 8% in mathematics, and 7% in agricultural or environment. There were 16 virtual booths in the Faculty of Science which included: B.A.&Sc. and B.Sc. SOUSA advisors, departmental advisors, internship office, as well as the Science wellness advisor. Depending on the booths, there were betweem 100 and over 500 visits, and the median number of visits was about 200. In general, the comments and feedback were positive with the virtual platform.

Dean Lennox thanked Associate Dean Mittermaier for the report. He also thanked all the staff in the Faculty of Science who took part in the 2020 Virtual Open House. The Faculty's highest priority is enrolment and recruitment.

14) <u>REPORT ON ACTIONS OF SENATE</u>

Senate Meeting of 21 October 2020 - Senator David Stephens

Three memorial tributes were presented, including the tribute to Professor Robert Lynn Carroll.

There was some discussion of the Minutes of the previous meeting of Senate, and some discussion of the role of the Chair in conducting the meeting.

In her remarks from the Chair, the Principal discussed the Red Zone restrictions in Montreal; a $15M gift to McGill's School of Environment, which will be renamed the Bieler School of Environment, was reported. The Principal also noted the recent appointment of a new Dean of students, Professor Robin Beech.

An open discussion on McGill's Action Plan to Address Anti-Black Racism took place in breakout rooms: key points included:

- the importance of ally-ship;
- the need for position of Black Student Affairs Liaison;
- outreach by McGill, to the local community and beyond to attract more Black students and academic staff;
- the need for clarity in hiring processes and practices.

The APC report and the Nominating Committee report were approved. A set of proposed amendments to the Senate Standing Rules of Procedure were presented to Senate both as a notice of motion and will return to Senate in November for adoption.

The annual reports from the Committee on Student Services and University Advancement, and as a report to Senate from the Board of Governors were received. Secretary-General Rogowska then presented for information the notice of the upcoming Joint Board-Senate meeting, which will take place on November 12.

Senate then went into confidential session to consider the report of the Honorary Degrees and Convocations Committee, and was adjourned shortly after 5pm.

15) MEMBERS' QUESTION PERIOD

There were no members' questions.

16) OTHER BUSINESS

Dean Lennox reiterated that discussions concerning awareness of foreign influence would continue in the Faculty. Also, the planning for the W21 courses will be ongoing while monitoring the COVID-19 situation and the directives from the government. Dean Lennox emphasized that the Faculty will not be engaging in risky proposals and that the planning will be done well, effectively and safely.

There being no further business, Prof. Stephens **moved,** seconded by Prof. Nilson, that the meeting be adjourned at 5:30 p.m.

The motion carried.