



Council of the Faculty of Applied Science & Engineering Minutes of the Meeting of October 24, 2024

MEMBERS: Mark Bussman (Speaker), Chris Yip (Dean), Adam Abreha, Grant Allen, Justin Beland, Evan Bentz, Raymond Bhushan, Helen Bright, Trevor Carey, Abigail Cave, Alan Chong, Shair Cohen, Liyang Day Hattrick, Oluwatobi Edun, Natalie Enright Jerger, Greg Evans, Evelyn Fallah, Jennifer Farmer, Diane Giang, Omer Gulder, Marianne Hatzopoulou, Angela Henshilwood, Jane Howe, Anthony Bowman, Tulgar Ilhan, Kat Jia, Dawn Kilkenny, Inho Kim, Don Kirk, Deepa Kundur, Ethan Mao, Katherine Mezei, Jonathan Rocheleau, Lisa Romkey, Tess Seip

SECRETARIAT: Caroline Ziegler (Secretary), Alex Schroen (Moderator), Silvia Delgado (Governance Administrative Assistant)

GUESTS: Rodney Gensell, Devin Gobson, Rocky Petinakis, Zeeshan Rayees, Frank Scornaienchi, Alex Tichine, Alistair Vaz, Nefeteria Wickham

1. Speaker's Welcome and Approval of Agenda

Acting Speaker Markus Bussman called the first Faculty Council meeting of 2024-2025 to order at 12:10 pm, welcoming new Council members in GB202 and online.

The Speaker acknowledged the land on which the University of Toronto operates, reviewed protocols for the hybrid meeting and encouraged members to review the orientation slides on the Faculty Council webpage.

The agenda and reports were distributed on October 11. There was no discussion and on a regular motion duly moved, seconded and carried, the agenda was approved.

2. Introduction of New Faculty Members

New faculty members Benjamin Sanchez of the Department of Chemical Engineering & Applied Chemistry; Trevor Carey of the Department of Civil & Mineral Engineering; Fiona Coll of the Institute for Studies in Transdisciplinary Engineering Education and Practice; Nicholas Rhinehart of the University of Toronto Institute for Aerospace Studies; Liyang Dai-Hattrick of the Department of Materials Science & Engineering; and Justin Beland of the Department of Mechanical & Industrial Engineering, were introduced by their respective chairs and directors.

3. Adoption of the Minutes of Previous Meetings

No errors or omissions were noted in the minutes of the April 15, 2024 Council meeting and on a regular motion duly moved, seconded and carried, the minutes were approved.

4. Memorial Tributes

a) Keigo Iizuka

Deepa Kundur, chair of The Edward S. Rogers Sr. Department of Electrical & Computer Engineering, read the following memorial tribute in honour of Professor Emeritus Keigo Iizuka.

Be it resolved –

THAT the Council of the Faculty of Applied Science & Engineering record with deep regret the death on June 4, 2024 of Professor Emeritus Keigo Iizuka.

Professor Keigo Iizuka was born in Kobe, Japan, on August 29, 1931, into modest means. He learned early on the importance of perseverance and diligence and dedicated himself to his studies.

Keigo completed his undergraduate studies at Kyoto University, where he held a prestigious scholarship before pursuing a PhD in Applied Physics at Harvard University on a Fulbright scholarship, graduating in 1961. Following his doctoral studies, he served as a Research Fellow and later as a Lecturer at Harvard. He joined the University of Toronto's then-named Department of Electrical Engineering in 1968, where he would make a significant name for himself.

Over his many years with ECE, Keigo explored a broad spectrum of areas, from antennas and microwave holography to optical measurement, sensor technology, fibre optics, and 3D displays. He authored a number of impactful publications including three significant books on photonics and engineering optics. Among his most notable achievements was the invention of the "Omni-focus Video Camera," which solved the fundamental challenge of achieving equal focus for elements in both the background and foreground of an image. This innovation integrated an array of colour video cameras with different focal distances and a unique distance mapping technique that allowed for perfect clarity across the entire field of view, a remarkable feat in the field of optics.

Keigo received the Fujio Frontier Award and the ATR Excellence Research Award for his research, and he was named a Fellow of the Optical Society of America. Keigo's dedication to teaching left an indelible mark on generations of students. Professor Li Qian, once his student and later his colleague, recalled her experience in his Optical Communication course as "exhilarating and eye-opening." She shared that while the course started with engaging videos and demonstrations, it soon transitioned into rigorous mathematical challenges, teaching students the balance between fascination and discipline that defined optics. "He lightened our hearts even as he

lightened our coursework," Li noted, reflecting on Keigo's ability to combine humour, creativity, and deep technical insight.

Beyond his impact in the classroom, Keigo was recognized for his resourcefulness and continued passion for research even after his retirement. Despite limited funding, he remained active, often developing ingenious experiments with simple materials, such as using a compact disc as a spectrometer. Professor Al Leon-Garcia described him as "always cheerful... and busy," recalling how the fourth floor of the Sandford Fleming Building was often a hub of activity around his experiments.

Professor Micah Stickel, a former student, remembered Keigo's "effortless enthusiasm" and the joy he brought to his teaching. He noted that his "Fundamentals of Optics" course was enriched with hand-drawn cartoons that helped students understand complex ideas. Professor George Eleftheriades described his Engineering Optics textbook as "full of insight and practical wisdom – a treasure to have."

Beyond academia, Keigo was a multi-talented individual with passions that extended to his family, dance, and creative writing. Professor Khoman Phang fondly recalled seeing him on Friday nights at the Ballroom Dance Club, a reminder of how much more there was to him than his academic achievements. Keigo even co-authored a children's book, "Kuro," with his daughters, a testament to his creativity and dedication to his family.

Professor Keigo Iizuka's legacy will undoubtedly live on through his research and teaching. However, Keigo taught us that the most significant impact you can have is how you treat others. His gentle mentorship of students, his kind friendship and collaboration with colleagues, and his inspiring way of seeing the world have positively impacted all who knew him. It is not lost on us, then, that Keigo's research involved bringing multiple things to focus!

Keigo is survived by his daughters Nozomi, Izumi, Megumi, and Ayumi, who lovingly cared for him throughout his life and in his final years.

Be it further resolved –

THAT this tribute to Professor Emeritus Keigo Iizuka be inscribed in the minutes of this Council meeting, and that copies be sent to his family as an expression of the respect and gratitude of the members of this Council.

b) Kenneth Selby

Marianne Hatzopoulou, chair of the Department of Civil & Mineral Engineering, read the following memorial tribute in honour of Professor Emeritus Kenneth A. Selby.

Be it resolved –

THAT the Council of the Faculty of Applied Science & Engineering record with deep regret the death on August 15, 2024 of Professor Emeritus Kenneth Selby.

Professor Selby was an accomplished scholar, holding a Bachelor of Civil Engineering and an MBA from the University of Toronto, and a PhD in Civil Engineering from the University of Illinois.

Professor Selby joined the faculty of the University of Toronto as an Assistant Professor in 1964, was promoted to Associate Professor in 1967 and full professor in 1988. Since 1997, he has been Professor Emeritus. He supervised numerous undergraduate, masters and doctoral students over this time and taught construction-related courses. Well-known for his enthusiasm, creativity and positive disposition, he was voted “Professor of the Year” in Civil Engineering several times by his students. In 1992 he received a University-wide award for excellence in teaching in the professional faculties (sciences) from the Association of Part-time Undergraduate Students and the Students’ Administrative Council. From 1994 to 1996, Professor Selby represented Civil Engineering and Geological Engineering on the UTFA council. He dedicated his career to education and had a passion for teaching and mentoring young minds. In the 1980s, when student employment was hard to find, he formed Ken Selby and Associates providing students with opportunities in the construction industry.

In 1973 Professor Selby, along with Professor Emeritus John Timusk, launched U of T’s first concrete canoe in Toronto Harbour, marking the beginning of the popular student club. The use of a popular breakfast cereal in the initial concrete mix allowed for the watercraft to float – the cereal was later replaced with a manufactured product.

Ken had a lifelong passion for and excelled in many sports, including swimming, football, hockey, downhill skiing, and tennis, among others. He coached numerous youth sports, particularly hockey, and supported his children and grandchildren in their activities. In the '60s, he built his family a tennis court at the cottage and later in his life you could often find him on the tennis courts at the Toronto Cricket Club, participating in many leagues, well into his 80s.

He enjoyed following news, politics, and world affairs, and was a particular champion of women and girls in all their pursuits. His last summer was spent in Muskoka, surrounded by loved ones, marking 90 consecutive summers spent in his happy place, where he has created a wonderful family legacy. Ken's kindness, intellect, enduring love for his family, and support of his friends will be remembered and celebrated by all who knew him.

Professor Selby is survived by his wife of 66 years, Anne; three children and seven grandchildren. He was predeceased in 2007 by his daughter Pam.

Be it further resolved –

THAT this tribute to Professor Emeritus Kenneth Selby be inscribed in the minutes of this Council meeting, and that copies be sent to his family as an expression of the respect and gratitude of the members of this Council.

The Speaker assumed concurrence with these resolutions and Council observed one minute of silence in honour of Professors Emeriti Iizuka and Selby.

5. Report of the Dean

Dean Chris Yip welcomed all to Council and acknowledged new chairs and directors, namely Evan Bentz, Vice-Dean Undergraduate; Hani Naguib, chair of Materials Science & Engineering; and Deepa Kundur, reappointed chair of Electrical & Computer Engineering. He thanked them for serving in their roles and looks forward to their leadership.

a) Recruitment and Admissions

The Faculty's incoming class remains strong with an average of 95%, similar to last year, and 39% women. Domestic enrollment exceeded expectations due to an increase in applications and a higher yield. However, despite a rise in international applications and strong acceptance rates, the yield from international students dropped, causing the Faculty to miss its international enrollment target.

b) Accreditation

The CEAB accreditation visit is scheduled to take place in 2025-2026.

c) External Reviews

The 2024-2025 external reviews are scheduled as follows: UTIAS in January or February, ECE in April and ISTEP in May.

d) Graduation Breakfast and Convocation

The Graduation Breakfast and Convocation are scheduled for Thursday, October 31. The Graduation Breakfast, hosted by Advancement, will take place from 7:30 to 9:30 am at the Faculty Club. Convocation will follow from 10:00 to 11:30 am at Convocation Hall, where degrees will be conferred, including Doctor of Philosophy, Master of Applied Science, Master of Engineering, and various other specialized master's and bachelor's degrees.

e) Annual Report

The By the Numbers 2024 and Impact Report 2024: Bold Solutions for a Better World are now available on the FASE website. All members are encouraged to review them when possible.

The Speaker thanked the Dean for his report. There was no discussion.

6. Information Reports

The following reports were approved by the Executive Committee of Faculty Council at its October 4 meeting and are being presented for Council's information.

a) Annual Report of the Academic Appeals Board (Undergraduate)

Don Kirk, chair of the Academic Appeals Board (Undergraduate), presented Report 3970, a summary of appeals and dispositions for the 2023-2024 academic year, and commented on updates, trends, and observations within the academic appeals.

The report was received for information.

b) Teaching Methods & Resources Committee 2023-2024 Activity Report and 2024-2025 Goals

David Steinman, chair of the Teaching Methods & Resources Committee, presented Report 3768, a summary of the activities undertaken by the committee during the 2023-2024 academic year. The report also references committee goals for 2024-2025, based on the outcomes of these activities.

A question was raised about the focus of the first working group, specifically regarding the Annual Activity Report, and whether it primarily addresses teaching for both tenure-stream and teaching-stream faculty. It was clarified that the group is focusing on the teaching section of the report, particularly the narrative summaries, and aims to provide clearer guidance for faculty across departments.

A suggestion was made to develop separate activity report guidelines for teaching stream and research stream faculty, as some departments already distinguish between the two. This was noted as a consideration for the working group to explore further.

The report was received for information.

c) Standing Committee and Academic Appeals Board (Undergraduate) Appointments, 2024-2025

The Speaker presented Report 3769, membership lists for the Academic Appeals Board (Undergraduate) and the eight standing committees of Council for the current academic year. These lists are posted on the Faculty Council webpage and updated as required.

d) Annual Report of the Engineering Alumni Network Awards Committee

Liane Catalfo, president of the Engineering Alumni Network, presented Report 3971, recommendations for the 2024 Distinguished Alumni Award, Malcom McGrath Service Award, Research & Innovation Award, and the Rising Star Award.

7. Other Business

The Iron Ring Ceremony is confirmed for Saturday, March 15 at 10:00 am, marking the 100th anniversary of Camp One Iron Ring. An alternate date, March 6, is available for those who request it. Those who have their PEng designation but do not have an Iron Ring are welcome to receive one and can contact Chirag Variawa for arrangements. The ceremony will be held at the Metro Toronto Convention Centre.

8. Engineering Science Major in Transportation Systems Engineering

Marianne Hatzopoulou, chair of the Department of Civil & Mineral Engineering, and Natalie Enright Jerger, director of the Division of Engineering Science, presented on a proposed major in Transportation Systems Engineering for discussion and feedback.

The proposed major is set to launch in September 2025, with a focus on transportation and energy electives. There are no immediate plans to phase out the Energy Systems Engineering major, but efforts are underway to enhance and market the program more effectively. Industry consultations, including alumni feedback, have been crucial in shaping the curriculum. The target for the program is 30-35 students, with a smaller cohort considered unfeasible.

Concerns were raised about the program's alignment with other Core 8 disciplines, particularly industrial engineering and civil engineering, but the unique structure of EngSci which offers a two-year specialization is seen as a strength.

Questions were raised about how the program will be marketed to first- and second-year EngSci students, with alumni involvement seen as a key strategy. There is also interest in potential pathways for students to transfer into the major later on, though this is not expected to be a common occurrence. Some discussion centered around the overlap with graduate-level transportation courses and the unique programming that the EngSci model offers.

The proposal will be presented to the Undergraduate Curriculum Committee (UCC) on December 10 for approval and will be voted on at the Faculty Council meeting in February. New courses are expected to be introduced in September 2025 but will require regular UCC and governance approval before proceeding.

9. Date of Next Meeting

The next Faculty Council meeting is on December 18, 2024.

10. Adjournment

The meeting was adjourned at 2:00 pm.

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