



UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING

Minutes of the Faculty Council Meeting

Wednesday, May 26, 2010

12:10 – 2:00 p.m.

Michael E. Charles Council Chamber, Galbraith Building

Present:

Yu-Ling Cheng (Speaker)
Vanessa Abaya
J. Stewart Aitchison
Mohannad Al-Durgham
Dione Aleman
Cristina Amon (Dean)
J. Christopher Beck
Foued Ben Amara
Ridha Ben Mrad
Estina Boddie
Mireille Broucke
Sharon Brown
Phil Byer
Tim Chan
Will Cluett
Tom W. Coyle
Chris Damaren
Levente Diosady
Khoun Doan
Birsen Donmez
Catherine Gagne
Greg Jamieson
Gina John
Mark T. Kortschot
Ofer Levi
Barbara McCann
Liam Mitchell
Farid N. Najm

Jun Nogami
Graeme Norval
Austra Ozolins
Daman Panesar
Vladimiro Papangelakis
M. Jane Phillips
Doug W. Reeve
Lisa Romkey
Paul Santerre
Hamed Shalileh
Shamim Sheikh
Chris Yip
David W. Zingg
Jean W. Zu

Guests:

Erika Bailey
Estina Boddie
Adam Fox
Tom Nault
Dan Pettigrew
Geoff Wichert

Regrets:

Bryan Karney
Saminur Majumder
Heather McLean
Tony Sinclair
Lorna Wong

1. Welcome/Adoption of the Agenda

The Speaker, Professor Yu-Ling Cheng, thanked members joining the meeting and welcomed all present to the Faculty Council meeting. She noted that a revised agenda was distributed at the beginning of the meeting. On a motion duly moved and seconded, it was resolved

THAT the agenda be adopted.

The Speaker called upon Professor Jean Zu, Chair of the Department of Mechanical and Industrial Engineering, to introduce her new faculty members, Professors Birsen Donmez and Tim Chan. Professor Zu introduced Professors Donmez and Chan.

The Speaker called upon Professor Farid Najm, Chair of The Edward S. Rogers Sr. Department of Electrical and Computer Engineering, to introduce his new faculty member, Professor Ashish Khisti who, regrettably, cannot be present today. Professor Najm introduced Professor Khisti.

2. Memorial Tributes

The Speaker called upon Professor Jean Zu to read a memorial tribute to the late **Professor Arthur Porter**.

Moved by: Professor Jean Zu, Chair, Mechanical and Industrial Engineering

Seconded by: Ridha Ben Mrad, Professor, Mechanical and Industrial Engineering

Be it resolved that the Council of the Faculty of Applied Science and Engineering record with deep regret the death on February 26, 2010, of Dr. Arthur Porter, former Professor and Head, Industrial Engineering, University of Toronto, 1961-1976.

Born in Ulverston, England, in 1910, Arthur Porter was a pioneer in interdisciplinary research. As a third-year student at the University of Manchester, he worked with Douglas Hartree, one of the most influential computer pioneers of his day. He was also a colleague of Marshall McLuhan. In Canada, Dr. Porter was Head of Industrial Engineering at the University of Toronto, 1961-1968, 1973-1975, Academic Commissioner at the University of Western Ontario, 1970-1972, and Dean of Engineering at the University of Saskatchewan, 1958-1961.

Arthur Porter obtained his PhD at the University of Manchester in 1936 and was named a Commonwealth Fund Fellow at MIT, 1937-1939. He graduated in physics from Manchester University in the summer of 1933 and then proceeded to graduate studies under Douglas Hartree. As part of his PhD thesis he developed an analog differential analyzer, which he constructed from Meccano parts. From 1939 to 1946, he served with the Admiralty Research Laboratory and the National Physical Laboratory on war related work. Dr. Porter was Professor of Instrument Technology at Royal Military College, England, 1946-1949, Head of Research at Ferranti Ltd in Toronto, 1949-1955, and returned to the United Kingdom to become Professor in Electrical Engineering at Imperial College, London, 1955-1958.

In Canada, he spearheaded the start of modern biomedical engineering—his joint request for funding with Wendell Macleod in 1960 at the University of Saskatchewan marked the seminal moment in the start of modern biomedical engineering in Canada.

Dr. Porter's contributions to research were widely recognized. Among other things, he served on the Glassco Royal Commission in Canada. He was Chair of the Science Committee at the Ontario Science Centre, Chair of the science advisory committee for EXPO 67, Chair of The Royal Commission on Electric Power Planning for Ontario, 1977-1981, and was inducted as a Fellow of the Royal Society of Canada in 1970. His autobiography *So Many Hills to Climb: My Journey as a Computer Pioneer* is filled with vivid accounts of both his personal experiences and professional accomplishments.

Not only did Dr. Porter remain intellectually brilliant, creative, and involved, but his earlier work has ongoing relevance. The following statement made in 1978, in the Interim Electric Power Planning report, has astonishing contemporary relevance and could have been written today:

“The conditions during the period 1983-1993 and beyond will necessitate an expanding search for innovative and more sustainable sources of energy, a more efficient elegant and wise use of

energy and most importantly the realization that our energy balance may depend on a remodeling and reshaping of our institutions, organizations and value systems. Diversity, flexibility and resiliency should characterize our energy supply systems.”

Predeceased by his wife Patricia in 2007, Arthur Porter died peacefully at the age of 99 years, after suffering a stroke in Winston-Salem, North Carolina, on February 26, 2010.

Be it further resolved that a record of his service be inscribed in the minutes of this Council, and that a copy be sent to his family as an expression of the respect and gratitude of the members of Council.

The Speaker called upon Professor Charles Mims to read a memorial tribute to the late **Professor Boris Stoicheff**.

Moved by: Professor Charles Mims

Seconded by: Professor Paul Chow

Be it resolved that the Council of the Faculty of Applied Science and Engineering record with deep regret the death on April 15, 2010 of University Professor Emeritus Boris Stoicheff. Professor Stoicheff served as Chair of the Division of Engineering Science from 1972-1977.

Professor Stoicheff was born in Bitola, Macedonia in the former Yugoslavia, June 1, 1924 and emigrated to Toronto in 1931. In 1947, he earned his B.A.Sc. in Engineering Physics in the X-ray and Spectroscopy Option, and a Ph.D. in Experimental Physics in 1950, both from the University of Toronto.

From then until 1963 he undertook groundbreaking optical research at the National Research Council in Ottawa, carrying out high resolution Raman spectroscopy of simple molecules, discovering the generation of sound by light and the inverse Raman effect, and, together with colleagues, making the first laser in Canada. After a sabbatical year at M.I.T., Professor Stoicheff returned to the University of Toronto in 1964 as a Professor of Physics, where he developed one of the world's leading laser laboratories and supervised many PhD students who went on to become top researchers, and with whom he remained close to the end of his life.

Professor Stoicheff's work earned him fellowships in the Royal Societies of London, of Canada and many other academies. He held honorary degrees from many universities and was appointed an Officer of the Order of Canada in 1982 for his achievements in physics. He served as President of the Optical Society of America in 1976 and of the Canadian Association of Physicists in 1983. In 2002 he published a biography of his lifelong scientific mentor, Nobel Laureate Gerhard Herzberg, with whom he had worked at the NRC.

For the last 30 years he was a much-loved Senior Fellow at University of Toronto's Massey College. Extraordinarily generous with his time and energy, humorous, kind and gentlemanly, Professor Stoicheff was a leader in the Canadian and international scientific communities. Widely-read, insatiably inquisitive and always a privilege to be with, he will be missed by all who worked with and knew him.

He leaves his wife Joan, son Peter (Kathryn Warden), grandchildren Alixandra and Christopher, and sisters Anne Leigh, Dorothy Arnold, Margaret Stoicheff, and Jessie Channer.

Be it further resolved that a record of his service be inscribed in the minutes of this Council, and that a copy be sent to his family as an expression of the respect and gratitude of the members of Council.

Members of Council stood and observed one minute of silence in honour of the late members.

3. Report of the Dean

Dean Cristina Amon provided an update on the 2009-10 academic year, a year of reflection and progress. The first Annual Report was created to compile, synthesize and report data and performance indicators from as far back as 2000-01. These metrics help us evaluate and assess the Faculty's progress.

The Dean invited members to review the final Faculty Self-Study, a critical assessment of how our Faculty has evolved and strengthened, including opportunities to improve. She thanked all those who participated in this highly collaborative effort.

The Self-Study was provided to the External Review team who visited to assess the state of the Faculty. In their exit interview, the External Review team indicated that they were very impressed with the Faculty's progress and identified areas for further strengthening and improvement. We look forward to the final report and to act on their advice.

The Faculty's academic planning is underway. The Academic Planning Framework, developed by the Steering Committee and with Chairs and Directors, is now being used by administrative and academic units to respond and provide input to the Faculty's Plan. These responses, in conjunction with the External Review and the Self-Study, will be incorporated into the Academic Plan to be developed through the summer of 2010. This plan will guide the Faculty's efforts for the next five to seven years. Departments, institutes and administrative units are also working on their own plans, which are in various stages of renewal, within the Faculty's academic planning framework.

The Dean highlighted a number of initiatives from the year. The two new undergraduate minors in Sustainable Energy and in Environmental Engineering enjoyed great success with more than 400 students registered. The Engineering Business Minor is under development and it is expected to be proposed in the fall semester. Also in the fall the undergraduate certificate in Global Engineering will be brought for consideration.

The Faculty experienced growth in the graduate programs. The numbers of PhD students increased and the MEng program is also growing, especially with the ELITE and EPP certificates. Cross-Faculty initiatives included the establishment of the Centre for Sustainable Energy and the Institute for Robotics and Mechatronics.

The Faculty's New Budget Model, a hybrid of the University's 2006 budget model, had been developed in close consultation with Chairs and Directors. This new model gives departments and institutes incentives to increase revenues and contain costs, as well as provide transparency to the budget process. Our budget decisions continue to be driven by academic priorities. The new budget model unrolled in April and the Chief Administrative Officer is holding information sessions with business officers to familiarize them with this new method.

Dean Amon invited members to attend the June 16 convocation ceremonies and to share in the students' successes.

The Dean's report was received for information.

4. Approval of the Minutes of the Previous Meeting

On a motion duly moved and seconded, it was resolved

THAT the minutes of the meeting of February 24, 2010 be approved as circulated.

5. Proposal to amend the *Bylaws of Council of the Faculty of Applied Science and Engineering*

The Speaker advised members that the motion under consideration pertains to changes in the Faculty Council *Bylaws* and is, therefore, a special motion requiring approval by no less than two thirds of members present. The motion was distributed to Faculty Council members 14 days in advance of the meeting.

Dean Cristina Amon presented the amendments to the *Bylaws of Council of the Faculty of Applied Science and Engineering*, as outlined in Report 3248. The current *Bylaws* list four specific dates for Faculty Council meetings which were to accommodate class schedules so that members were able to attend meetings throughout the year. Article B3 currently reads:

Regular meetings of the Council shall be held as follows: the second Thursday in October; the last Wednesday in November; the last Monday in February and the last Wednesday in May.

These dates do not necessarily align with the University of Toronto governance cycles. In the past, governance items requiring University governance approval have been delayed due to this scheduling. In order to align the Faculty Council meeting dates to ensure efficient governance approvals at the University governance level, Dean Amon moved

THAT Article B3 of the *Bylaws of Council* be amended to read:

Regular meetings of the Council shall be held a minimum of three times per academic year and will align with the University of Toronto governance meeting schedule. Meeting dates will be confirmed with members of Faculty Council no later than the end of June of the previous academic year.

The motion was duly seconded. The Speaker invited discussion. No discussion arose.

The Speaker called the question. The motion was passed.

6. Proposal to Establish an Institute for Leadership Education in Engineering in the Faculty of Applied Science and Engineering at the University of Toronto as an Extra-departmental Unit C (EDU:C)

The Speaker said that the motion under consideration pertains to changes in organizational structure and is, therefore, a special motion. A special motion requires approval by no less than two thirds of members present. The motion was distributed to Faculty Council members 14 days in advance of the meeting.

Professor Doug Reeve presented the background on the evolution of leadership in engineering education and the Leaders of Tomorrow program. The increasing student interest and participation, a significant donation, and momentum building in other institutions for similar

programs of study made the establishment of an Institute for Leadership Education in Engineering (ILead) timely. It would be the first of its kind in Canada.

Dean Amon moved

THAT the Faculty establishes an Institute for Leadership Education in Engineering:

- a) with the mandate to provide and facilitate curricular, co-curricular and extra-curricular leadership development programming,
- b) to engage in research and scholarly work on engineering leadership education,
- c) that incorporates the ongoing functions of Engineering Leaders of Tomorrow, and
- d) to be an Extra-Departmental Unit – C (EDU-C).

Doug Reeve seconded the motion.

Members discussed the level of involvement of students and the integration of leadership within student curriculum.

The Speaker called the question. The motion was passed.

7. Report of Task Force on Engineering Leadership Education

The attached report (#3250) of the Task Force on Engineering Leadership Education was circulated in advance and was received for information.

8. Curriculum Committee Terms of Reference

Professor Cheng indicated that there are two motions to consider regarding the Terms of Reference of the Curriculum Committee as outlined in Report 3251. The first is to consider the revisions to the Terms of Reference. The second is to consider a name change to the Curriculum Committee. Council will vote on these separately.

8.a) Curriculum Committee Terms of Reference

Professor Graeme Norval presented the changes to the Terms of Reference to the Curriculum Committee, which had not been updated since 1998. The corrections and changes reflect the actual membership, processes and work of the Committee.

Dean Amon moved

THAT the revised Terms of Reference of the Curriculum Committee be approved.

Graeme Norval seconded the motion. The Speaker invited discussion. No discussion arose.

The Speaker called the question. The motion was passed.

8.b) Curriculum Committee Name Change

Professor Graeme Norval said that the proposed name, Undergraduate Curriculum Committee, more accurately reflects the nature of the Committee's work.

Dean Amon moved

THAT the name of the Curriculum Committee be changed to Undergraduate Curriculum Committee.

Graeme Norval seconded the motion. The Speaker invited discussion. No discussion arose.

The Speaker called the question. The motion was passed.

9. Proposal for Guidelines Governing Undergraduate Academic Certificates in Engineering

Professor Graeme Norval presented the recommendation for the Guidelines Governing Undergraduate Academic Certificates in Engineering in Report 3252 of the Curriculum Committee. To date no procedures are in place to establish and define undergraduate academic certificates in engineering. It is proposed that three courses in a defined field will allow students to earn a certificate. The proposal also provides certificate development and approval processes.

Dean Amon moved

THAT the Guidelines governing undergraduate academic certificates, as outlined in Report # 3252 of the Curriculum Committee be approved.

Graeme Norval seconded the motion. The Speaker invited discussion.

A member asked about the regularization of certificates and minors and indicated that the Faculty broaden the programs' perspectives beyond one faculty member's oversight. Professor Bryan Karney responded that it is beneficial to provide two levels of specialization, one for smaller course load commitment, and the second for broader learning within the Minors. Students interested in pursuing either can use the certificates as a way to test their interest and further develop if this field or area is of interest. They both allow for a degree of recognition. The certificates and minors are both coordinated by the Cross-disciplinary Programs Office.

The Speaker called the question. The motion was passed.

10. Retroactive Approval of Existing Undergraduate Academic Certificates in Engineering

Professor Graeme Norval presented the recommendation for the Guidelines Governing Undergraduate Academic Certificates in Engineering in Report 3253 of the Curriculum Committee. The motion is to approve the two pre-existing certificates under the approved guidelines: 1) Preventive Engineering, and 2) Social Development Entrepreneurship, Innovation and Small Business.

Dean Amon moved

THAT the two existing Undergraduate Academic Certificate Programs be approved, as they conform with the Guidelines Governing Undergraduate Academic Certificates in Engineering. The two programs are:

- Preventive Engineering and Social Development, and
- Entrepreneurship, Innovation and Small Business.

Graeme Norval seconded the motion. The Speaker invited discussion. No discussion arose.

The Speaker called the question. The motion was passed.

11. Supplement to Proposed Curriculum Updates for 2010/2011 Faculty Calendar

Professor Graeme Norval presented the recommendations as outlined in Report 3254 of the Curriculum Committee and noted that the fall term dates had been adjusted in accordance with a University policy regarding religious accommodation.

Dean Amon moved

THAT the proposed curriculum updates for the 2010/2011 Faculty Calendar be approved.

Graeme Norval seconded the motion. The Speaker invited discussion.

A member recognized that while the Faculty must accommodate Canadian Engineering Accreditation Board requirements, Governing Council policy, and the exam schedule within the University's term dates, he was concerned that Engineering Society had not been consulted in the decision regarding the start date of the fall 2010 semester. This change negatively impacts the student orientation where first year students and students are concerned. He asked that Engineering Society be involved in these discussions earlier.

Professor Grant Allen shared the member's concerns and responded that Engineering Society had been advised of this situation as soon as the Faculty had become aware of the religious accommodation requirements and the impact they make on the Faculty Calendar. The Faculty had been working on a solution to the scheduling compression to reduce the negative impact on the orientation. Also, the Faculty has asked the University's central administration to consider the accommodation policies to reduce the likelihood of this situation arising again.

The Speaker called the question. The motion was passed.

12. Teaching Methods and Resources Committee: Award Guidelines and Report

Lisa Romkey presented the recommendations as outlined in Report 3255 of the Teaching Methods and Resources Committee. The motion includes a new Teaching Assistant Award to recognize excellence in emerging educators, and revisions to the guidelines on the two Faculty Teaching Awards to increase nominations and better facilitation of the nomination process.

Dean Amon moved

THAT the proposed new Faculty Teaching Assistant Award and the revisions to the Faculty Teaching Award and Early Career Teaching Award Nomination Guidelines be approved.

Lisa Romkey seconded the motion. The Speaker invited discussion. No discussion arose.

The Speaker called the question. The motion was passed.

13. Composition of Standing Committees

Barbara McCann presented the appointments to Standing Committees.

Dean Amon moved

THAT faculty members named in the attached report and nominated by their respective constituencies be appointed to Standing Committees for 2010-2011.

Barbara McCann seconded the motion. The Speaker invited discussion.

Members indicated that the Committee membership was incomplete and that for the student positions that guidelines be provided for the appointment of members. Barbara McCann indicated that student membership cannot be confirmed until the fall semester when the class representatives and elections are finished.

The Speaker called the question. The motion was passed.

14. Dates of Faculty Council Meetings: 2010-11

Dean Amon presented the dates of the Faculty Council meetings for the 2010-2011 academic year for information, as outlined in Report 3256 and pursuant to the modified *Bylaws*. These are established based on the draft Governing Council Meeting Schedule for 2010-11 to align with the central governance system.

This report was received for information.

15. Reports of Standing Committees (for information)

15.a) Engineering Graduate Education and Research Committee Report

The attached report (#3257) of the Engineering Graduate Education and Research Committee was circulated in advance and was received for information.

15.b) Community Affairs and Gender Issues Committee

The attached report (#3259) of the Community Affairs and Gender Issues Committee was circulated in advance and was received for information.

15.c) Admissions Committee Report

The attached report (#3260) of the Committee on Admissions was circulated in advance and was received for information.

16. Report of Engineering Alumni Honours and Awards Committee

The report of the Engineering Alumni Honours and Awards Committee (#3258) was circulated with the agenda and was received for information.

17. Recognition of Service

Professor Shamim Sheikh spoke about the service to the Faculty of Professor Eva Kuhn of Civil Engineering, who was retiring on June 30, 2010. Professor Kuhn received her MASc in 1972 and in 1973 joined the Department of Civil Engineering. She has served the Faculty on the Faculty Admissions Committee, the Examinations Committee, and the Gender Issues and Community Affairs Committee. She has been a great citizen to the Faculty and he wished her well in her retirement.

Dean Amon gratefully acknowledged the service of the following academic administrators who have or will complete their terms of office in 2009-2010:

Professor Will Bawden, who served as Chair of the Division of Mineral Engineering, 1997-2005 and Director of the Lassonde Mineral Engineering Program, 2005-2009.

Professor Mo Mojahed, who served as the Director of the Emerging Communications Technology Institute, 2007-2009.

Professor Paul Young, who served as Director of the Lassonde Institute, 2002-2009.

Dean Amon recognized the contributions of the Faculty Council Speaker, **Professor Yu-Ling Cheng**, who has served since 2006.

The Speaker announced that Dean Amon has accepted to serve a second five-year term as the Dean of the Faculty of Applied Science and Engineering.

18. Other Business

There was no other business.

19. Next Meeting

The date of the next Faculty Council meeting will be Thursday, October 7, 2010.

20. Adjournment

The meeting adjourned at 1:15 p.m.