UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING

Minutes of the Faculty Council Meeting

Wednesday, May 27, 2009

12:10 – 1:40 p.m.

Michael E. Charles Council Chamber, Galbraith Building

Present:
Joseph C. Paradi (Acting Speaker)
Mahmoud Osman Abou-Beih
J. Stewart Aitchison
D. Grant Allen
Cristina Amon (Dean)
Jason Anderson
Sharon Brown
John Carter
Victor Castellino
C.E. Chaffey
Alan Chong
Rachel Chow
Will Cluett
Daniel Cooperman
Chris Damaren
Khoung Doan
Natalie Enright Jerger
Nikrooz Farsad
Catherine Gagne
Ike Goodfellow
Murray Grabinsky
Margaret Grisdale
D. Hatzinakos
G. Hibbard
A.K. Jardine
Michael L. G. Joy
Bryan Karney
M.T. Kortschot
Frank Kschischang
E. Kuhn
H. Kunov
David Lee
Ofer Levi
Jimmy Lu
Mike Marr
Barbara McCann
Elizabeth Munro
Farid N. Najm
Jun Nogami
Austra Ozolins
Jeffrey A. Packer
Doug D. Perovic
M. Jane Phillips
Kim D. Pressnail
Ampy Pural
Doug W. Reeve
Jonathan S. Rose
P. Santerre
Craig Simmons
A.N. Sinclair
Ronika Srdic
H.N. Tran
F.J. Vecchio
R. D. Venter
Ronald Victorino
Sandra Walker
Peter Weiss
Lorna Wong
Chris Yip
David W. Zingg
Jean W. Zu

Guests:
Vanessa Abaya
Johnathan Asmis
Mark Balson
Renzo Basset
Estina Boddie
Kate Brand
Daniel Chung
Jennifer Fabro
Carolyn Farrell
Adam Fox
Jen Hsu
Jane Joy
Myrtle Millares
Tom Nault
Anne Rose

Regrets:

B. J. Adams
Mohannad Al-Durgham
P. Anderson
Yu-Ling Cheng (Speaker)
John Curran
G.M.T. D'Eleuterio
Sonia DeBuglio
R.R. Farnood
B.A. Francis
Betty Hill
Albert Huynh
W. Janischewskyj
Charles Q. Jia
R.A. Kandel
Matthew Karabela
Olivera Kesler
Celine Komisar
R. Kwong
H.A. MacLean
M. Maggiore
Brenda McCabe
Susan McCahan
I. McCausland
Cheryl Misak
Liam Mitchell
David Naylor
Andrew Ngo
Daman Panesar
Susan Pfeiffer
K.N. Plataniotis
M. Radisic
Ted Sargent
Michael V. Sefton
K.A. Selby
W. Stanford
Pierre E. Sullivan
Deborah Tihanyi
W.H. Vanderburg
J.S. Wallace

1. Welcome, Adoption of Agenda and Introductions

The Acting Speaker, Professor Joe Paradi, welcomed all present for the last Faculty Council meeting of the 2008-2009 academic session.

> On a motion duly moved and seconded
>
> It was resolved
>
> THAT the agenda be modified by the deletion of a motion to dissolve the Division of Environmental Engineering and Energy Systems

At the invitation of the Acting Speaker, the Dean introduced Jun Nogami, who has filled the position of Chair of the Department of Materials Science and Engineering since January 1, 2009 and who was in attendance at a Faculty Council meeting for the first time in this capacity.

2. Report of the Dean

Dean Cristina Amon indicated that a full summary of 2008-2009 activities and accomplishments will be presented in the "Year in Review" issue of *The Engineering Newsletter*. In addition, a new undertaking this year is an Annual Report, similar to those produced by other U of T Faculties, which will provide metrics to track progress in achieving our goals. In the meantime, she presented some of the highlights of the past year.

2. Report of the Dean (continued)

2.a) Renovation of the Mining Building

We have received $11M under the first phase of the Federal/Provincial Infrastructure Program toward the renewal of the Mining Building and construction of the attic. Pierre Lassonde has signed a pledge for a gift of $5M, of which $1M will be applied to a fellowship for international graduate students and the remaining $4M will be applied to the Mining Building project. In addition, Goldcorp has committed $4M to the project, bringing funding secured close to the $20M total cost. Other options will be pursued to raise the remaining funds. Construction will begin almost immediately and must be finished by spring 2011. The Dean expressed her appreciation of the patience of Faculty members who will be temporarily relocated during construction, noting that the renovated building will be a great addition to Civil Engineering and the Lassonde Mining program.

2.b) Space

A comprehensive divisional space review and updating of our master plan is nearing completion. The space review was chaired by Professor Emeritus Ron Venter, and ably supported by Steve Miszuk, our Director of Planning and Infrastructure, and a hard-working committee, to all of whom the Dean expressed her thanks. The draft report identifies the need to upgrade much of our space with only 27% deemed adequate, 69% requiring attention and 4% identified as too poor to be renovated. Our ultimate goal is to provide the high-quality educational and research space our students and faculty deserve.

2.c) Faculty Rankings and Visibility

We have maintained our position as the premier Engineering school in Canada and rose to 10th place world-wide in the highly respected *London Times/QS* and *US News & World Report* rankings of world universities. We lead among our Canadian peer institutions in the number of scientific papers published (HEEAC and Thomson Reuters data) and rank sixth among Engineering schools in Canada and the US. We also lead among our Canadian peer institutions in the number of citations of our research and rank ninth among Engineering schools in Canada and US (Thomson Reuters data). Our share of NSERC funding is the highest among our Canadian peer institutions. These high rankings contribute to our success in recruiting highly qualified faculty and students.

2.d) Honours and Awards

We can be equally proud of the recognition of the Faculty through honours and awards this past year. Among our many achievements are nine Canadian Academy of Engineering fellowships. The Dean acknowledged with appreciation the efforts of Dean Emeritus Michael Charles, Faculty Director of Honours and Awards Carolyn Farrell and the Faculty Committee for Nominations for Honours and Awards for their efforts in this regard.

2. Report of the Dean (continued)

2.e) Budget

We are extremely mindful of the economic downturn and are fortunate to have entered it from a position of strength, having had no budget cuts in the last three years and benefiting from financial incentives to increase the number of graduate students. However, endowment income is zero this year and will be reduced to 50% next year. To deal with the resulting financial constraints, we have taken the following measures. About 100 more undergraduate students than last year (but fewer than the number admitted two to three years ago) will be admitted in fall 2009 without undoing our work to increase the retention rate from years one to two. We will continue our efforts to cultivate major donors, with a view to seeking private support until the economy improves and the Province increases its level of support for post-secondary education. We will also take advantage of opportunities to increase funding from our research endeavours, which will release funds now going toward graduate education from our operating budget.

2.f) Academic Leadership

We have created the new position of Associate Dean, Cross-Disciplinary Programs. Susan McCahan has accepted re-appointment as Chair of First Year for a second three-year term beginning July 1, 2009. And, two new Departmental Chairs have been appointed as of July 1, 2009: Jean Zu (Mechanical and Industrial Engineering) and Farid Najm (Electrical and Computer Engineering). The Dean noted that the outgoing Chairs would be honoured later in the meeting and expressed her gratitude to the Advisory Committees in this year's Chair searches.

2.g) New Faculty Budget Model

One of our priorities over the last two years has been developing a new Faculty budget model. This will align our fiscal management with that of the U of T, where all revenue is allocated to an academic cost centre, which is responsible for expenses. Under the proposed Faculty budget model, Departments will be similarly responsible for income and expenditure. The Dean acknowledged with appreciation the work of our Chief Administrative Officer, Catherine Gagne, in developing the Faculty budget model.

2.h) Academic Initiatives

A number of educational initiatives have been undertaken in the area of Globalization, with a proposal coming before Faculty Council today for the creation of a Centre for Global Engineering as an EDU:C.

Several new programs were developed or introduced this year. In Engineering Science, an Energy Systems Major was introduced and a new combined Electrical and Computer Major was approved for introduction in fall 2009. New minors in Sustainable Energy and in Environmental Engineering were approved for introduction in fall 2009, with enrolment to date of 145 and 95 respectively. Development of a minor in Globalization is well advanced and consideration is being given to developing minors in Engineering and Public Policy and Engineering and Business.

2. Report of the Dean (continued)

2.i) Recruitment, Admission and Retention

We have restructured the Engineering Student Recruitment and Retention Office, with one of our prime goals being improvement in the retention rate between first and second year. A number of programs to support our first year students were put in place with the result that 88% of first year students successfully transitioned to second year at the end of 2007-2008. This figure compares favourably with the 83% retention rate of the previous two years. Final figures for 2008-2009 are not yet available and we look forward to further improvement.

2.j) Diversity

Thanks to the commitment of Chairs and Directors to increasing the gender diversity of our faculty, 13 of the 25 new faculty appointments over the last two years were women. Our next goal is to put structures in place to help our junior faculty members flourish. There has been a small increase in the number of female undergraduate students, bringing it to 22.9% and female graduate enrolment remains steady at about 25%.

2.k) Student Experience

We continue to work to enhance student experience. Our computer labs have been improved and 24/7 access provided. Temporary accommodation for student clubs has been found at 245 College Street and we continue to work toward identifying permanent space. Also, thanks to the efforts of the Engineering Student Society, the first phase of the renovation of the Atrium of the Sandford Fleming Building will begin this summer.

2.l) CEAB Accreditation

An enormous effort was put into hosting the CEAB visit to Engineering Science and Mechanical and Industrial Engineering in November 2008, for which the Dean thanked all involved, especially Will Cluett and Grant Allen. The draft report of the visit cites a concern over an insufficient number of licensed engineers teaching Engineering Design and Engineering Science. This past year we worked successfully with Professional Engineers Ontario (PEO) to introduce the Specific Scope Licence as an alternative to the P.Eng. for faculty members without an undergraduate degree in Engineering. Thanks to the tremendous effort of Chairs and Directors, 54 faculty members wrote the PEO examination this spring to qualify for one or other of the licences. This results in the potential for 92% of our faculty to become licensed, which will be a significant benefit in meeting CEAB accreditation requirements.

2.m) Convocation

Our two convocation ceremonies will take place on Friday, June 19, 2009. The Dean encouraged all members to show our students how proud we are of them by participating in the convocation procession.

The Dean’s report was received for information.

3. 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 November 26, 2008 be approved as circulated.

4. Creation of a Centre for Global Engineering

Professor Bryan Karney presented the attached proposal for the creation of a Centre for Global Engineering as an EDU:C, which had been circulated 14 days in advance (Report #3228).

In response to an inquiry, it was explained that an EDU:C is the third of four levels of extra-departmental units within the U of T academic governance structure. The first two levels have authority to appoint faculty and admit students and require approval by the centre. An EDU:C is normally a multidisciplinary or multidepartmental research or academic unit with a defined research domain that exists to foster research and scholarly interest in the area. It can be created at the Faculty level.

On a special motion duly moved and seconded

It was resolved

THAT a Centre for Global Engineering in the Faculty of Applied Science and Engineering be established as an EDU:C.

5. Creation of a Cross-Disciplinary Programs Office

Professor Grant Allen presented the attached proposal for the creation of a Cross-Disciplinary Programs Office, which had been circulated 14 days in advance (Report #3229).

On a special motion duly moved and seconded

It was resolved

THAT a Cross-Disciplinary Programs Office be created to provide leadership, administration and initiation of programs that cut across the Faculty of Applied Science and Engineering effective July 1, 2009.

6. Creation of an Identity, Privacy and Security Institute

Professor Jonathan Rose presented the attached proposal for the creation of an Identity, Privacy and Security Institute, which had been circulated 14 days in advance (Report #3230).

On a special motion duly moved and seconded

It was resolved

THAT an Identity, Privacy and Security Institute (IPSI) in the Faculty of Applied Science and Engineering be established as an EDU:C.

7. Membership of the Academic Appeals Board

Registrar Barbara McCann presented the attached nominations, circulated in advance (Report #3231). In response to an inquiry, she explained that the Academic Appeals Board will meet approximately six to 10 times a year.

On a motion duly moved and seconded

It was resolved

THAT that the Faculty members named in the attached report and nominated by their respective constituencies be appointed to the Academic Appeals Board for the terms specified.

8. Curriculum Committee Composition

Registrar Barbara McCann presented a recommendation for a change in the composition of the Curriculum Committee, circulated in advance (Report #3231).

On a motion duly moved and seconded

It was resolved

THAT the membership of the Curriculum Committee be amended by replacing "Vice-Dean" with "Vice-Dean Undergraduate" and adding "Associate Dean Cross-Disciplinary Programs," it being noted that the latter position has been created and will be filled in the fall.

9. Membership of Standing Committees

Registrar Barbara McCann presented the attached nominations, circulated in advance (Report #3231). In response to an inquiry, it was clarified that the membership of the Teaching Methods and Resources Committee provides for one graduate student and that this position had been inadvertently left off the list presented to Faculty Council. Nomination of a candidate to fill this position will be sought.

On a motion duly moved and seconded

It was resolved

THAT Faculty members named in the attached report and nominated by their respective constituencies be appointed to Standing Committees for 2009-2010.

10. Reports of Standing Committees

10.a) Graduate Education Committee

The attached report (#3232) of the Graduate Education Committee had been circulated in advance and was received for information.

10.b) Teaching Methods and Resources Committee

The attached report (#3233) of the Teaching Methods and Resources Committee had been circulated in advance and was received for information.

11. Report of the Engineering Alumni Honours and Awards Committee

Professor Emeritus Ron Venter presented the attached report (#3234) of the Engineering Alumni Honours and Awards Committee, which had been circulated in advance. It was received for information.

12. Final Report of the Ombuds Committee

Registrar Barbara McCann presented the attached final report (#3235) of the Ombuds Committee, which was received for information.

13. Recognition of Service and Presentation of Awards

13.a) Retiring Faculty Members

John Curran (CivE)
Professor Murray Grabinsky read the following citation of Professor John Curran, who was unable to attend this meeting.

Professor Curran's academic career reads like a "hometown boy does good" success story. He completed both undergraduate and graduate degrees in Civil Engineering at the University of Toronto. His graduate work involved exploiting some of the first available computer graphics hardware to display finite element analysis results for frame structures. He later completed his PhD at Berkeley, working with some of the pioneers in nonlinear finite element analysis on computer codes that have continued to evolve and are still in use today.
He returned to the University of Toronto in 1977, initially as a NRC post-doctoral fellow and a year later as tenure-stream associate professor. At this point his numerical analysis interests expanded to include the rapidly evolving area of boundary elements, and his early students developed some of the first higher-ordered specialty elements including those used for fracture analysis. His work on boundary elements continued until recently with a seminal work that provided a unifying mathematical framework for the variety of boundary element formulations that have been proposed.

Since the development of the personal computer, Professor Curran has been on the forefront of technology transfer. In 1996 he founded Rocscience, a technology spinoff company that has synergized research and application of numerical analysis in civil and mining geotechnical and rock engineering problems. Today Rocscience distributes over a dozen programs used by more than 5,000 registered users in excess of 100 countries.

Professor Curran has also quietly worked behind the scenes to have a major impact on the face of the Department of Civil Engineering, the Faculty and the University. Over a decade ago, when the threat of closing the then-Geological Engineering program arose and the opportunity of new funding presented itself, Professor Curran was the person who understood the fundamental drivers and expressed the vision for a new program in Mineral Engineering – a program with a curriculum and an administrative structure unlike any other program in mining or geological engineering. It was also Professor Curran who recognized that the best person to lead this new program would be Professor Will Bawden, at that time Chair of Mining Engineering at Queen's University. Professor Curran actively recruited Professor Bawden to this new post. Building on the success of the undergraduate program, Professors Curran and Bawden convinced the Keck Foundation to make a significant investment in engineering geoscience research, including the establishment of the Keck Chair, which was eventually filled by Professor Paul Young, who later became a Chair of the Department of Civil Engineering and is now Vice President Research for the University. Collectively, these efforts represent over $15M of funding to support research infrastructure,

13. Recognition of Service and Presentation of Awards (continued)

13.a) Retiring Faculty Members (continued)

six endowed Chairs (including two fully-endowed Chairs) and many graduate student projects.

Clearly, Professor Curran has had a busy academic career and one does not expect to find such individuals spending much time behind desks. While it is true that his graduate students had to deliberately pin him down for consultations, such consultations had only start times and continued indefinitely until an issue was resolved. Once a meeting was arranged, he provided his full and undivided attention and the conversation ended only when the visitor decided to leave his office. His positive guiding influence has launched the careers of over 50 graduates students and post-doctoral fellows and these individuals have in turn made a significant impact in industry and in academia.

Professor Curran may be retiring from his University career, but he will remain active in industry. We look forward to ongoing interaction with him and wish him continued success.

Michael L.G. Joy
Professor Paul Santerre read the following citation of Professor Michael Joy before the Dean presented him with a memento of his service to the University of Toronto.

Professor Michael Joy is formally retiring from a career that has seen the development of the Institute of Biomaterials and Biomedical Engineering from its most early roots into one of the most proliferative BME programs in North America. During his undergraduate physics/mathematics training at the University of Toronto in 1963, one year after the birth of the Institute of Biomedical Electronics, the precursor to today's Institute, Michael had been drawn to the frontiers of a field by the Institute's founder, Dr. Norman Moody. After working on the Design and Construction of an Image Intensifier Gamma-Ray Camera for his PhD thesis, Michael's talents were sought for the education program that was developing in the Institute as it transformed from largely a department driven by electrical engineering to a revised entity called the Institute of Biomedical Engineering that reported directly to the President of the University.

Mike's knowledge of engineering design concepts in the medical field has been passed down to 48 graduate trainees and countless undergrad students over the years. While it is often easy to forget the privilege that we have of being able to work with the greatest minds of the future and the fact that our product is the shaping of the next generation of academics rather than the accumulation of personal research accolades, I can say that over the past decade since I have known Michael it has been my observation that his mission has never deviated too far from the University's ultimate mission of student and trainee experience.

13. Recognition of Service and Presentation of Awards (continued)

13.a) Retiring Faculty Members (continued)

I was reminded of his humble nature just recently as I read the comments that he gave to the TA of his BME595 course in Biomedical Imaging: "I want to thank you for all the work you did for me and even more for the students in the labs this term. They really appreciated your efforts and gave you an excellent score. Indeed it was higher than mine. I think the students had a good time in the course."

Michael, thank you for sharing your knowledge with generations of students and colleagues here at the University of Toronto. I want to personally than you for your assistance with the re-organization of BME595 this coming year. We wish you all the best! Congratulations on a great academic career.

13.b) Faculty Teaching Award – Professor John Carter

The Faculty Teaching Award is presented to an individual who demonstrates outstanding classroom instruction, develops and uses innovative teaching methods and goes above and beyond the call of duty to ensure the best possible learning experience for students.

Professor John Carter began his career as a high school teacher before joining the Edward S. Rogers Sr. Department of Electrical and Computer Engineering 10 years ago. He specializes in First Year courses and has taught three courses that are fundamental to Computer Engineering.

In presenting John Carter, Professor Kim Pressnail noted that he exemplifies the qualities it recognizes. His teaching evaluations have consistently been above average and his nominators for the award have expressed appreciation of his approachable and friendly manner, sense of humour and deep knowledge of his field. Professor Carter participates in the Engineering Strategies and Practice course, taking responsibility for project acquisition, and has written two textbooks.

13.c) Early Career Teaching Award – Professor Craig Simmons

The Early Career Teaching Award recognizes an instructor in the early stages of his or her career who has demonstrated exceptional classroom instruction and teaching methods.

Since joining the University of Toronto as an Assistant Professor in 2005, Craig Simmons has taught in the Department of Mechanical and Industrial Engineering and the Institute for Biomaterials and Biomedical Engineering. He is also cross-appointed to the Faculty of Dentistry where he teaches Biomaterials Science.

13. Recognition of Service and Presentation of Awards (continued)

13.c) Early Career Teaching Award – Professor Craig Simmons (continued)

In presenting Craig Simmons, Professor Kim Pressnail quoted several passages from his nominations that emphasize his success in balancing research and teaching and his enthusiasm for involving his students – including senior undergraduates – in his work.

13.d) Agnes Kaneko Award

This award was established in 1990 in memory of Agnes Kaneko, a staff member in the Department of Civil Engineering, who was known for the excellence of her work and her dedication to the Faculty. It is presented annually to a staff member who has made outstanding contributions to the Faculty over a long period of time. Dean Cristina Amon presented the award to Renzo Basset, who has been a staff member in Civil Engineering since 1982 when he took a position as a research associate after obtaining his Bachelor's and Master's degrees in the Department. She noted that he is now responsible for the operation and management of over 10 teaching and research laboratories and coordinates and teaches at the Civil and Mineral Engineering survey camp at Gull Lake. In his nomination, which was supported by faculty members, members of his staff and several students, Renzo was described as "supremely responsible, professional and ethical, a joy to work for and with, and someone who goes above and beyond the responsibilities of his job in his dedication to improving the student experience."

13.e) 3T5 Second Mile Engineer Award

The Class of 3T5 Second Mile Engineering Award recognizes that a successful engineer must not only be professionally competent, but must also be constantly aware of his or her responsibilities to humanity. The Award encourages undergraduates to participate fully in extracurricular activities and to recognize the true importance of the more liberal subjects of the curriculum with the ultimate objective, on entering the profession, of becoming worthy Second Mile Engineers. Recipients undergo a rigorous selection process.

Professor Frank Vecchio introduced this year's recipient, Jonathan Asmis. Jonathan has maintained high standing in the demanding Engineering Science program while participating in a number of extra-curricular activities that include serving as President of the Engineering Society this past year and tutoring high school students in a variety of subjects in his neighbourhood.

13.f) Academic Administrators

Dean Cristina Amon gratefully acknowledged the service of the following academic administrators who have or will complete their terms of office in 2008-2009:

Professor Doug Perovic, who served as Chair of the Department of Materials Science and Engineering, 1997-2008

13. Recognition of Service and Presentation of Awards (continued)

13.f) Academic Administrators (continued)

Professor Jonathan Rose, who served as Chair of the Edward S. Rogers Sr. Department of Electrical and Computer Engineering, 2004-2009

Professor Tony Sinclair, who served as Chair of the Department of Mechanical and Industrial Engineering, 2004-2009.

14. Other Business

There was no other business.

15. Next Meeting

The date of the next Faculty Council meeting was announced as being Wednesday, October 7, 2009.

16. Adjournment

The meeting adjourned at 1:40 p.m.