

**THE UNIVERSITY OF WISCONSIN-MILWAUKEE
College of Engineering and Applied Science**

FACULTY MEETING

Friday, February 27, 2015 1:45 P.M. EMS E190

AGENDA

I. ANNOUNCEMENTS

- A. Update on Research Policy and Advisory Committee Activities – Prof. Campbell-Kyureghyan
- B. Other

II. INTRODUCTIONS

A. Faculty

- 1. Xiao Qin, Associate Professor, Civil and Environmental Engineering
- 2. Deyang Qu, Professor, Mechanical Engineering
- 3. Mohammad Rahman, Assistant Professor, Mechanical Engineering

III. INFORMAL REPORTS – See Attachment 1

- A. Opportunity for Questions regarding Informal Reports

IV. AUTOMATIC CONSENT BUSINESS

- A. Minutes of November 21, 2014 meeting

V. NEW BUSINESS

- A. Ph.D. Qualifying Examination Requirements – See Attachment 2
- B. Renaming of Center for Advanced Computational Imaging – See Attachment 3
- C. Export Control and Effort Reporting – Matt Richter
- D. Data Management at the Library – Svetlana Korolev, Kristin Birney
- E. Resolution to endorse the UWM Faculty Senate Resolution on the Future of the UW System - See Attachment 4

VI. GENERAL GOOD AND WELFARE

VII. ADJOURNMENT

John R. Reisel, Secretary
CEAS Faculty

JRR
Attachments

INFORMAL REPORTS

Office of Student Services – Todd Johnson

No Report

Career Services – Juli Pickering

No Report

Curriculum Committee – Prof. Tabatabai

No Report

Graduate Program Subcommittee – Prof. Li

No Report

Academic Planning Committee – Prof. Misra

CEAS ACADEMIC PLANNING COMMITTEE

INFORMAL REPORT

February 16, 2015

APC has been meeting every month for over two hours. A major part of each meeting was devoted to understand the CEAS budget status. The following is a summary of the meetings.

- The committee advised Dean Peters against setting of a college-wide committee for promotion and tenure considerations.
- The committee has decided to move forward with the climate survey that will include e-questionnaire as well as face-to-face meeting.
- The committee has been trying to learn the impact of investment made in recruiting new faculty members, start-ups, and also the salary adjustments.
- Dean Peters shared the enrollment trends and instructional expenses etc. of departments, plans to move instructional budget at the department level, and our plans for good (let's be optimistic) days ahead.
- As asked by Dean Peters, the committee is working on the metrics for assessment of programs and also on the expectation of chairs.

CEAS Academic Planning Committee

Nidal Abu-Zahra

Ryoichi Amano

Sam Helwany

Hossein Hosseini

Devendra Misra, Chair

Hamid Seifoddini

Biomedical and Health Informatics – Prof. McRoy

No Report

Faculty Senate – Prof. Reisel

In its January 2015 meeting, the Faculty Senate engaged in a long discussion regarding the proposed budget cuts and the creation of a public authority for the University of Wisconsin System. The Senate passed a resolution expressing its strong concern over the size of the budget cuts. In addition, a study on the parking and transit situation on campus was received.

In the February 2015 meeting, Regents Farrow, Pruitt, and Vásquez were present to discuss with the Faculty Senate the proposed budget cuts and the possible transition of the UW System into a public authority. These three regents indicated that it was their understanding that Chapter 36 of the Wisconsin Statutes will be encapsulated into Board of Regents policy and that subsequent discussion of modifications will then occur with input from the various governance groups. The regents also stressed that it is still early in the budget/legislative process. Many unknowns remain as to what the future of the UW System and its employees would be under a public authority.

Minutes of the Faculty Senate meetings can be found at <http://www4.uwm.edu/secu/faculty/senate/minutes/> .

In addition, the University Committee is providing more frequent information regarding the budget situation and its other activities at <http://UCNews.uwm.edu>.

Graduate Faculty Committee – Prof. Campbell - Kyureghyan

UPDATES FROM THE GRADUATE FACULTY COMMITTEE

The UWM Graduate Faculty Committee (GFC) met four times since the last report - Oct 20, Nov 17, Dec 15, and Jan 26. A brief summary of the items of most interest to CEAS from the meeting is presented below. Full details can be found at: <http://graduateschool.uwm.edu/faculty-staff/governance/graduate-faculty-committee>

- Three very highly qualified finalists for the Associate Dean of the Graduate School position were selected and interviewed. Tracey Heatherington was announced to be a finalist.
- The Certificate group is finalized the language of the modified document, and it was sent out to the Grad Reps and GCC for comments.
- Parking rates will increase. The Student Association will not be paying for student parking in the NWQ.
- S/U grading for Thesis and Dissertation was discussed. No action was taken.
- The Grad School has purchased a system for online admission application that includes the ability to track program-specific requirements, e.g online LOR.
- Composition of the Master's and Doctoral Committees was discussed. The main points raised were concerning academic staff members serving on the committee, as well as what is the minimum number of members to serve. The final revised document was approved by the GFC on Nov 17th, 2014.
- On January 26th the GFC discussed the budget cuts and especially Chapter 36 being a top concern.
- The Grad School now has NSF data on past degrees awarded by UWM historically, that will help with alumni relations and publicity.
- UWM is one of the 15 US universities chosen to participate in a pilot project with ProQuest to use Thesis and Dissertation submission data to enhance alumni relations.
- Fall 2015 grad applications are up - 3021 in comparison to 2914 last Fall. Spring numbers are also up.
- About 100 applicants have used the application fee waiver distributed at the November Grad School Open House.

Proposed Changes and Approvals:

- ✓ Reduce dissertation committee size from 5 to 4 (GFC document 1173). Effective as of Spring 2015.
- ✓ The proposed changes to the MS in Biomedical Sciences were approved.
- ✓ Exempt the requirement for new program to be evaluated by outside reviewers.
- ✓ Comp Sci 469 Changes (prereq) - approved
- ✓ Comp Sci 753 - Discontinued

- ✓ Comp Sci 767 - Discontinued
- ✓ Comp Sci 804 - Discontinued
- ✓ Elec Eng 715 - Discontinued
- ✓ Elec Eng 720 - Discontinued

Other Proposed Changes

- ✓ Definition of residency was discussed and the proposed changes were suggested as follows:
 1. Change policy to require 18 credits over 4 semesters
 2. Change policy from the current 8-12 cr to 6-12 cr and allow SU enrollment to count.
 3. Discontinue the policy entirely.
 4. Do nothing.

ATTACHMENT 2

MODIFICATION OF THE Ph.D. QUALIFYING EXAMINATION REQUIREMENTS

Motion (from GPSC):

Students admitted after completion of an appropriate master's degree must take the examination in the semester immediately following completion of a maximum 18 credits of course work or fewer at the limit established by the individual program at UWM.

Proposal to rename the “Center for Advanced Computational Imaging” to the “Center for Advanced Embedded Systems”

February 13, 2015

A. Proposed Name:

Center for Advanced Embedded Systems

(changing from Center for Advanced Computational Imaging)

B. Brief description, purpose and justification

The Center for Advanced Embedded Systems will advance scholarship, research, and education in the area of advanced embedded systems, with a particular focus on computational imaging (including medical imaging modalities) and intelligent embedded systems.

The center’s purpose is to coordinate and facilitate UWM’s research and instructional efforts in embedded systems. Activities of the center will include:

- Facilitating and promoting Catalyst grants sponsored by industrial and foundation sponsors, in collaboration with the UWM Research Foundation. Currently, the Center helps manage and promote the GE Healthcare Catalyst Grant Program, which is entering its third year;
- Promoting collaboration among scholars and researchers in their efforts to work singly and jointly to obtain additional extramural research funding in a wide variety of embedded systems areas. In particular, to organize substantial collaborative grant proposals to prestigious national research programs, such as NSF’s I/UCRC, IGERT, or Engineering Research Center programs.
- Designing and administering curricular innovations in advanced embedded systems, such as the already-approved Graduate Certificate in Advanced Computational Imaging. Initial planning is beginning for a Graduate Certificate in Embedded Systems, which will take advantage of some of the courses developed for the computational imaging certificate
- Promoting the curricular innovations and recruiting students for them, including linking UWM courses to corporate educational programs such as the GE Edison Program.
- Facilitating partnerships with companies, including GE Healthcare, Rockwell Automation, Johnson Controls, and Astronautics, who will benefit from embedded systems research.
- Facilitate joint UWM-Industry forums and seminars and host related speakers.

This proposal is to rename the existing Center for Advanced Computational Imaging in order to expand its relevance beyond a specific part of the healthcare domain to cover the entire embedded systems domain. Medical imaging device can be thought of as very complex embedded systems, so the Center’s scope will continue to include computational imaging. But embedded systems can be found throughout our world in homes (e.g. the Nest Thermostat), in automobiles (ignitions, anti-lock brakes, hybrid engine controls, dashboards, entertainment systems), oil platforms (Rockwell Automation power control

systems), airplanes (cockpit systems for pilots), and large buildings (Johnson Controls heating and ventilation systems). The Upper Midwest has extensive activities in the embedded systems area, so the topic has particular regional relevance.

Our research finds that there are few embedded systems research centers in the US and none in the Chicago-to-Minneapolis corridor. Milwaukee's location makes UWM a good location for such a center.

C. Organizational structure and assessment

The proposed center will have a Director, appointed by the Dean of CEAS for a three-year term. The Director's responsibilities are to manage all activities of the Center that are described in the section above.

The work of the Center will be assessed at least every five years by the CEAS Dean's Office and the CEAS Academic Planning Committee (APC).

D. Resources to be committed to the center

CEAS will provide the following:

- Modest summer salary support for the Center's Director, provided the Director is active and effective
- Staff support using existing staff positions
- A modest supply and expense budget allocation. Initially, this has been \$3000.
- Appropriate matching of Catalyst grant research funding, to be negotiated with each sponsoring organization.

GE Healthcare has committed \$1,000,000 in research funding to UWM for the Center, starting in 2013 and continuing until at least 2017. In addition, GE Healthcare has committed additional funds up to \$2,000,000 to support participation by their employees in curricular programs.

E. Individuals associated with the center

Brian Armstrong, Professor, Electrical Engineering
 Ilya Avdeev, Assistant Professor, Civil Engineering and Mechanics
 Jason Bacon, Systems Programmer, CEAS
 Michael Krauski, Director of Corporate Relations, CEAS
 Ethan Munson, Professor and Co-Chair, Computer Science
 Adel Nasiri, Professor, Electrical Engineering
 Ramin Pashaie, Assistant Professor, Electrical Engineering
 Mahsa Ranji, Associate Professor, Electrical Engineering
 Guangwu Xu, Associate Professor, Computer Science
 Zeyun Yu, Associate Professor, Computer Science
 Jun Zhang, Professor, Electrical Engineering

F. Long-term future and long-range plan

The medium-term goals for CAES are

- To establish the Graduate Certificate in Advanced Computational Imaging as a robust graduate educational offering and to strengthen the connection between the certificate and other relevant UWM degree programs, such as the MS and PhD in Engineering and the MS in Computer Science.
- To similarly develop and establish a new Graduate Certificate in Embedded Systems as a popular and valuable program.
- To encourage increased research activity at UWM in the areas of Computational Imaging and Intelligent Embedded Systems. This means working with faculty to develop research plans that can successfully garner extramural research funds from sources beyond the Catalyst grant programs.
- To pursue joint funding opportunities with industrial partners and other academic institutions such as the Medical College of Wisconsin and other CTSI partners.
- Establish an advisory board composed of representatives of industrial partners, other Catalyst sponsors, and academic collaborators.

The long-term vision is to establish UWM as an internationally recognized center of innovation and education in Embedded Systems. In the long run, this requires the establishment of a well-defined research cluster with a high-level of activity, including successful graduate students, active research, and extensive research funding. To make this happen, CAES's Director will begin to build links with researchers at MCW and other institutions in order to create the kinds of interdisciplinary teams that are required to create large research centers.

Goals for the long term include:

- 10 certificates in embedded systems and computational imaging granted per year
- 5 certificate students commencing MS or PhD programs per year
- \$ 1,000,000 per year in research expenditures for embedded systems research from non-Catalyst sources

**Resolution to Endorse the UWM Faculty Senate Resolution Regarding the
Future of the UW System**

The faculty in the UWM College of Engineering and Applied Science (CEAS) endorse the January 29, 2015 UWM Faculty Senate Resolution. The CEAS faculty are committed to graduating top-level, globally-competitive engineers who will serve local industry and grow Wisconsin's economy in the 21st century. However, the CEAS faculty are gravely concerned that the proposed UW-System budget cuts and the rush to convert the UW-System into a "public authority" without adequate research and discussion are detrimental to the CEAS teaching and research mission.

Communication from an Official Governance Unit
UW-Milwaukee (UWM) Faculty Senate Resolution
Approved January 29, 2015

The UWM Faculty Senate is gravely concerned about the future of UWM and the entire UW System. UWM plays a vital role in southeast Wisconsin and the region in its service of students, employees, alumni and other community members. As one of two research universities within one of the best state systems in the country, UWM is committed to our dual mission of top-tier research and access.

Governor Walker's proposal to slash the UW-System budget by \$300 million will be catastrophic and will lead to job losses for hard working Wisconsinites, cuts in programs that will compromise the education of current students, a dramatic reduction in research productivity, and a likely increase in the cost of tuition in the long term. The UWM Senate stands firmly opposed to this proposed budget cut and rejects the notion that the cuts stem from a budget shortfall. The legislature created the budget shortfall when it chose to invest in tax cuts, which the state could not afford. Using the university system to finance those cuts provides an excuse to privatize public higher education.

The Governor also proposes to convert the UW-System into a 'public authority.' While system President Ray Cross has said that a public authority is the "best model" for our system, a convincing case has not yet been made. The UWM Faculty Senate calls for an open process to analyze the proposed public authority before such a model is accepted. Universities operate on research, reason, and the free exchange of ideas. Such a process is necessary and must include full representation across system faculty, staff, students, and administration. The key tenets of Chapter 36, which enshrines shared governance and academic freedom into state law, must be preserved. Shared governance and tenure are the bedrock of a thriving university system and are non-negotiable.

Here are some of the many questions that must be addressed during a full vetting of the public authority proposal:

- What would be the structure of the public authority? Who would ultimately be in charge? How would collective decisions be made? If a board of regents will run the public authority, would they be appointed or elected? How will autonomy be preserved?
- Would Chapter 36 remain in place to secure shared governance and academic freedom? What are the guarantees that a board of regents would be obligated to protect these tenets? Would system officials of regents be able to change the rules of governance?
- How will the public authority be financed? How will budgets be allocated for each campus in the system? Who will manage operations, salaries, and tuition? Current guidelines indicate that a public authority will be financed with sales tax and tuition. These are both regressive, placing the burden of public higher education on those who can least afford it. We must find a solution that does not encumber our current students and our future students with unreasonable debt.