

Committee on Research (CoR)
Minutes of Meeting
November 29, 2023

Pursuant to call, the Committee on Research met at 9:00 am on November 29, 2023, in the Administration Building Room 344. Chair Tao Ye presiding.

- I. Chair's Report – *Chair Ye*
 - A. Centers Policy has been transmitted to Divisional Council for review.
 - B. Core Facilities survey questions have been submitted to ORED.
ORED will send a test survey to CoR Chair Ye before issuing the final survey to faculty on CoR's behalf.
 - C. Oracle Task Force update
The task force will meet on December 6 to begin discussing issues. They anticipate holding four meetings in two weeks. The task force will discuss metrics and specific problems, and convene different working groups to take a deep dive on specific issues. The working groups will then report back to the task force. There are certain problems that the task force may be able to address in a relatively short period of time.

- II. Consent Calendar
 - A. Today's agenda
 - B. Draft November 8 meeting minutes

Action: The Consent Calendar was approved as presented.

- III. Consultation with ORED
AVC Viers attended today's meeting in VCR Wilson's absence. He echoed CoR Chair Ye's earlier announcement about the Oracle Task Force's progress and added that the Chancellor tasked VCR Wilson and CIO Nick Dugan with this effort. AVC Viers also informed CoR that the campus is still undergoing planning for better support for large grants. With regard to UC Merced's AES designation, AVC Viers reported that VCR Wilson has formed an ad hoc committee chaired by Professor Reza Ehsani. The committee's first task will be to draft a mission statement. The committee will continue with planning in the spring semester.

- IV. PROC Updates – *Member Andrea Merg*
Professor Merg reported that PROC has recently discussed enrollment issues for certain programs, including Computer Science.

- V. Core Facilities
 - A. Best practices. CoR Chair Ye asked CoR members to read an article on shared instrumentation facilities that was linked on today's agenda.

The benefits over individual faculty instrumentation are:

- Enable access to instruments that are too expensive to purchase, operate, or maintain by individual PIs.
- Maximize usage->reduce redundant purchases and maintenance costs; saves space.
- Provides consistent and effective training with a depth of knowledge and expertise not often achieved through peer-to-peer training.
- Promotes interdisciplinary collaboration and fosters a research culture-> more and larger grants; more and higher profile publications.
- Faculty recruitment and retention.
- Recruitment of competitive graduate students and postdocs.
- Student training.
- Supports local industry including startups, small, medium, and large companies. Collaboration with industry and build career pathways.

Funding for instrumentation:

- Faculty startup
- Institutional investment
- Grants
- Philanthropy
- User recharge

Funding for facility staff is also required.

CoR Chair Ye suggested the following questions for CoR to consider:

- How to fill in critical gaps in research facilities?
- How to secure more funding for procurement and maintenance of cutting-edge instrumentation?
- How to make funding for facility staff a higher institutional priority?
- How to improve the fiscal sustainability of the facilities?

CoR Chair Ye would like to speak to CAPRA so he can better understand the campus budget process and determine ways to make staff funding a priority. He suggested he could attend a CAPRA meeting or CoR could invite the CAPRA chair to a CAPRA meeting. CoR members also discussed the possibility of inviting the Chancellor to a CoR meeting after the core facilities survey is issued to faculty.

VI. Consultation with Faculty on CHIPS and Science Act

Guest: Professor Valerie Leppert (SoE). Professor Jennifer Lu was also scheduled to attend but had a scheduling conflict.

The background on the CHIPS and Science can be found here: <https://new.nsf.gov/chips>

Professor Leppert informed CoR that \$53 billion dollars has been allocated for shoring up semiconductor manufacturing. The Materials Science and Engineering department faculty have been working on the establishment of a semiconductor education program at UC Merced. This effort is synergistic with the new chemical engineering major. Professor Leppert stated that Professor Jennifer Lu wrote a proposal for infrastructure for semiconductor education. The proposal was reviewed positively and while it was not funded, it was a helpful roadmap for faculty to start establishing a semiconductor education program. Materials Science and Engineering, Chemical Engineering, and Electrical Engineering have started emphases and have recruited PhDs from the semiconductor industries to help develop courses with UC Merced faculty. Faculty received a secured donation for computational simulation of semiconductor fabrication. Faculty are also discussing upgrading clean room fabrication equipment and securing electronic characterization equipment. There is also discussion among faculty about developing a certificate program and a minor in semiconductor fabrication. Professor Leppert has spoken with a number of departments on campus about a collaboration in order to ensure there are enough courses to offer this minor.

Professor Leppert stated that Engineering deans across the UC system are working to secure funds for semiconductor manufacturing. However, there is a disconnect. The CHIPS act language refers to funding for diversifying the semiconductor industry to increase employment. Professor Leppert pointed out that HSIs, HSBCUs, and rural communities are diverse but some of them do not have the necessary infrastructure, while institutions with less diversity tend to have the infrastructure. UC Merced should think about how it can contribute to diversifying employment opportunities in the region. Fresno State is also pursuing CHIPS funding.

Professor Leppert reported that the School of Engineering dean met with VCR Wilson about CHIPS funding. CHIPS funding has implications for both research and economic development so we need a critical mass of faculty to convince stakeholders the campus needs the funding. UC Merced also needs a broader vision to connect grassroots efforts and higher levels of decision making. Professor Leppert and faculty have begun working with the internship center and development on campus. She also submitted an “ask list” to the Dean of the School of Engineering.

CoR Chair Ye asked how CoR can help with these efforts. Professor Leppert encouraged CoR to speak with VCR Wilson who is an ex-officio member of CoR.

There being no further business, the meeting was adjourned at 10:20 am.

Attest: Tao Ye, CoR Chair