

Colorado School of Mines – RESEARCH COUNCIL MINUTES
February 1, 2:00-3:00 pm via Zoom

Attendees:

Voting Members: 24 total (13 needed for quorum). Quorum was present.

P	Sid Saleh (Chair)	P	Seth Vuletich (LB)	P	Tulay Flamand (EB)	P	Andrew Petruska (ME)	P	Emmanuel De Moor (MME)
P	Mark Deinert (NSE)	P	Erdal Ozkan (PE)	A	Matthew Morgan (CGS)	P	Mike Wakin (EE)	P	Kathleen Hancock (HASS)
A	Thomas Monecke (GE)	A	Svitlana Pylypenko (CH)	A	Jim Ranville (GC)	P	Elizabeth Reddy (EDS)	A	Jamal Rostami (UCT)
P	Steve Pankavich (AMS)	P	Jeffrey Shragge (GP)	A	Jim Simmons (GP)	P	John Spear (CEE)	P	Kenneth “Xerxes” Steirer (EREP)
A	Eric Toberer (MS/PH)	A	Sumit Agarwal (CBE)	P	Mehmet Belviranli (CS)				

Non-Voting Members:

A	Johanna Eagan (ORA)	P	Mara Green (AA)	P	Jonathan Diller (GSG)	P	Barb O’Kane (EHS)	P	Emmelia Ashton (USG)
A	Liza Kinzel (RTT)								

Special Guest(s): Doug Mayo (Chief Advancement Officer; Foundation)

Welcome

Sid Saleh

Vuletich reported funds available for open access publications at the Library.

- **Question** if this can be done retroactively; Vuletich confirmed the funds can be used for reimbursement.
- **Question** if a closed access publication can be moved to open access; Vuletich suggested reaching out to the publisher for information.

High Performance Computing

Jeff Shragge

Changes are coming down the pipeline that will affect HPC users on campus; changes in response to report that HPC systems were not in compliance with federal statutes. Shragge provided snapshot of current state of HPC at Mines.

There are two clusters at Mines operating at eighty-five percent efficiency. Mio, procured 2014-2018) is at end of life. Wendian, procured 2019, operates at about 30M core per hour with ninety nodes. Support for Wendian ends August 2023.

The original recharge model was developed 2018 for Wendian and proved flawed and was not “consistent-reasonable-allocable”. The faculty council subcommittee recommended a model to meet federal funding requirements and the HPC requirements of most Mines use-cases. Subcommittee explored computing models and evaluated the suitability for Mines and federal statutes. Subcommittee noted two major cultural shifts in Mines HPC to include: moving from capital purchases to a pay-for-use model and elimination of priority access.

Shragge presented subcommittee plan for moving forward: a core hour rate with a ceiling of two cents per core hour for Mines’ on premises resources through Wendian. Shragge noted HPC teaching activities would not be governed by this and are covered by the ITS budget. Ketterling and his group looking to

partner with other universities such as CU Boulder to see if a similar base cost can be used to access their resources. HPC team also looking to access the Amazon web.

Shragge presented the change management business plan. Phase one included socialization with HPC community, faculty council, research advisory board, and department head council. Phase two included HPC user direct communications and an HPC townhall on 2/7 at 9am. An explanatory webpage is in development. Projected implementation of changes March 2023.

- **Question** on push for March 2023 implementation; subcommittee would like to reach compliance by the end of the fiscal year so that issues can be covered in advance.
- **Question** on funds being used to for replacements of Wendian; Shragge reported funds would cover hardware, personnel, and development costs. Funds raised would be passed through the HPC and ITS system and could provision new nodes as needed and refresh or expand cluster on demand.
- **Question** on what is expected after Wendian; there is a desire for a cloud submission system but this is more expensive. The cloud system would allow rapid provision of HPC and on-demand computing. ITS and Ketterling going through capital investment within Mines' infrastructure to support an increase in data flows. This would allow increase of 10GB or higher connectivity.
- **Question** on new supercomputer; Shragge noted there had been plans for a large computing center that would be shared between Mines and USGS. Shragge encouraged subcommittee to see where the plans are and if it had been de-emphasized.
- **Question** on where townhall would be located; Green Center 224.

Approval of Minutes – January 4, 2023

Sid Saleh

MOTION: To approve the January 4, 2023 Research Council minutes by Vuletich, seconded by Spear. 13 for, 1 abstention.

Graduate Stipends

Tim Barbari

Barbari aware of impact and implications of graduate stipend increase brought forward by Council. Graduate Council discussed competitive stipends for PhD students to compete with peer institutions and the increasing cost of living in Golden.

Barbari noted the original proposal was aggressive. The minimum stipend at the beginning of the year was \$27k with a proposed increase to \$30k, \$33k, \$36k, and onward. Barbari reported several competing institutions are already above the \$30k minimum and private institutions offer \$40k and higher. Graduate Council was in support and endorsed the recommendation to increase the stipend. GSG provided a report to President Johnson on rent and stipend data; GSG reported several PhD students had filled out FAFSAs for loans and this number had doubled in recent years. Stipends do not cover the cost of attendance at Mines.

A mid-year increase from \$27k to \$29k was approved. Departments were asked to adjust to that which required assessing the gap on the TA side and institutional support of tuition. Budget modeling \$32k as a minimum for 2024.

Barbari reported on discussions on where relief can happen. Mines recovers all Colorado resident tuition on grants and contracts for students that are RAs. Cost of a PhD student for a Mines grant is very high.

Parties looking at models to provide tuition relief and what that might look like; consideration for less than 100%.

- **Question** on ability to dig into indirect costs and if anything can come out of IDC; Barbari noted there is a need to balance tuition and IDC revenue streams.

Councilor noted there are immediate problems regarding ongoing and existing projects impacted by a stipend increase. Barbari reported the graduate student dashboard allows viewing number of RAs, indexes being charged and additional information to find the gap for the next fiscal year. Councilor noted there is a cultural shift that would need to happen as stipends increase.

Barbari noted HR does not view graduate students as employees and different processes are followed. Lawyers had found students do not fall within the Equal Pay for Equal Work statute.

- **Question** on engaging with congressional contacts; Barbari reported a government relation director had been hired to lobby in D.C.

Suggestion made for Mines to issue fellowships to students independent of stipends.

Committee Updates

REI

Sid Saleh

Committee had published Spring 2023 call with sixty thousand dollars to provide. Committee would like to move fast to ensure money is transferred into accounts by the end of the semester.

Research Council Lecture and Research Fusion

Tulay Flamand

Fusion series expected on 2/15. Research Council lecture expected 4/10. Committee will keep Council updated on finalized dates. The fusion was moved up an additional week as only two had signed up for the event. Flyer has not been posted.

Excellence in Research Awards

Sid Saleh

A few submissions had been received. An open invitation for nominations had been posted; Saleh asked Councilors to ask colleagues and departments for nominations. Committee needs to complete its work by 3/22 for AA to process awards.

Graduate Stipends

Andrew Petruska

Meeting has been scheduled.

Other Business & Announcements

Steirer asked Council assistance on improving research communications across campus; noted there had been little traction with ITS on building new system or integration of new systems. An idea had been drafted on what could be successful at Mines, but implementation had been stalled. Steirer reported expensive equipment is dispersed across campus and a spreadsheet lives on the RTT website; spreadsheet is three years old and has a threshold of \$50k, equipment less than that are unknown and may cause individuals to additional costs of existing equipment on campus.

Adjourn

Sid Saleh

Meeting adjourned: 3:02 pm.

Next meeting: March 1, 2:00-3:00 pm via Zoom. The Research Council Meets on the first Wednesday of the month.