

Colorado School of Mines – RESEARCH COUNCIL MEETING MINUTES  
 January 10, 2:00 – 3:00 pm, Hill Hall 300

**Attendees:**

**Voting Members:** 18 total (12 - majority needed for quorum). Quorum was present

X	Mark Eberhart (Chair)		Joice Hu		James Simmons (GP)		Elizabeth Reddy (EDS)
X	Hussein Amery (HASS)	X	Yvette Kuiper (GE)		John Spear (CEE)	X	Seth Vuletich (LB)
	Mark Deinert (ME)	X	Annalise Maughan (CH)		Kenneth Steirer (PH)	X	Mike Wakin (EE)
X	Diego Gomez-Gauldron (CBE)	X	Erdal Ozkan (PE)		Eric Toberer (PH)	X	Zhexuan Gong (PH)
	Elizabeth Holley (MN)	X	Emmanuel De Moor (MME)	X	Steve Pankavich (AMS)		

**Other Regular Attendees and Guests**

	Lisa Kinzel (RTT)	X	Carson Snow (USG)				
X	Matt Morgan (CGS)						
	Barbara O’Kane (EHS)						

**Special Guest(s):** Matthew Ketterling, Kira Wells

**Welcome**

Mark Eberhart

**Approval of prior meeting minutes**

**MOTION:** Motion to approve previous meeting minutes was passed.

**Research Advisory Board**

I had a meeting with Walt where I brought up the four issues we discussed during the last meeting – bridging grad students (funding), graduate tuition, high performance computing (how decisions are made), and research related sick leave. The first three issues Walt let me know there is a committee for each one of these issues. I brought up the question, why is RC not involved? We can get updated from these committees, but why are we not involved in forming these committees and decisions. The sick leave issue was unknown to Walt. These issues were presented to RAB on Monday. Again, Walt said RC should be on these committees, but it was not thought of. Kauffman indicated that to his knowledge there were few scenarios where we do not bridge students. It’s more important that if/when the situation comes up that there is a process. RAB gave support to establish a process as it is an anxiety producing situation for researchers and their grad students. RAB also acknowledged that the sick leave issue was impacting decisions as to when to take family leave.

As an action plan, since we only have 3 meetings left in the semester, make “fact-finding sessions” since we do not know how the committees are formed or criteria for policies that are made regarding these issues. We want to address these questions, learn how we can become involved, and outline advantages for Mines if RC is involved. For me, an advantage would be the research community is anxious and unclear on the impacts of these decisions and we can present it to the Senate to concise the role of RC.

**Question:** What are the committees? Are they under RAB?

**Answer:** Some are RAB, some are Ad-Hoc, but we are unsure when/how they were established. Faculty were not informed until after the committees were formed.

**Comment:** I was part of one of the committees, but our involvement was limited to voting on items that were already brought about. We feel like we didn’t really have a voice to present research issues within departments.

As a research council, our role is not as defined as the other councils, so I would like to explicitly define our role and become more involved. We can do this by producing a case why it is advantageous for RC to be involved in these committees that are tackling these issues.

**Question:** What are the differences between RAB and RC? It seems like RAB has more responsibility than RC.

**Answer:** RAB is backed up by RTT which has a staff and budget. RAB serves as a strategic body for future research. Our goal is to provide a distinction between RAB and RC. RAB is involved in strategic planning and much of their work involves identifying long term research directions. There are three active RAB committees exploring different thrusts. These committees meet outside the normal RAB meetings. Among the other activities of the RAB is the Research Pillars web site, which has now gone live.

### **Subcommittee Appointments**

1) Lectures Series (Steve Pankavich)

Members: Matt Morgan, Seth Vuletich, Mike Wakin, Diego Gomez-Gauldron, Hussein Amery

We are distributing tasks. There is one small issue we have – we have two research awards winners from last year. One of them has left Mines (but might be involved part-time), and we haven't heard from the other award winner. If you can help get in touch with him, please do. If we haven't heard from Matt in the next week, we will reach out to Amy.

2) Excellence in Research Awards (Seth Vuletich)

Members: Mark Eberhart, Mark Deinert, Emmanuel De Moor, Elizabeth Reddy

We have received nine nominations for junior faculty and three for senior faculty. We will meet later this month after reviewing the nominations. By the next RC meeting, we will have nominees ready to vote. The award winner is usually announced in April. Nominations will then be sent to FS for approval.

3) Research Instrumentation Awards (Mark Eberhart)

Members: Andrew Petruska, Yvette Kuiper, Annalise Maughan

Equipment Manager: Ed Dempsey

We will send a call for proposals at the end of the month. We will do the process the same as in years past except that we have double the funding. I am having difficulty finding lab managers to help review proposals. I am reaching out to others that have been involved in RC in past years. Carolyn Koh and Kenneth Steirer might be a good resource.

### **HPC**

1) Vision and Process (Matthew Ketterling, Sr. Director Research Computing Solutions, Kira Wells, Manager Research Infrastructure)

We will discuss the policies established specifically with HPC, operations model (movement from capital expenditures to purchases per core hour), current infrastructure, support initiatives for budgeting, management, etc. We come up with policy as issues/needs arise. Policy is formed to support the community and gets posted on the CAIRC document website. The community is informed via email (to any user on the cluster). Adjustments are made over time. Documented HPC policies are data storage rates/best practices (to maintain an optimal shared infrastructure; Scratch, Project, Long-term storage, and Orebits). HPC is not calculated in the overhead rate so 2 cents are charged per core hour, wall-time policy – 6 day run time to main optimal shared infrastructure, and HPC node life cycle (to ensure power and space efficiency). Nodes are supported through a service contract. Servers are retired after 7 years **or** when retirement does not impact active users. Policy is open to exceptions for those hindered by hardware retirements (ex: MIO nodes).

Current HPC operational model. Originally, nodes were university funded that researchers, but we had challenges with charging grant funded vs non grant funded so it proved flawed. It is not “consistent reasonable allocable.

A RC subcommittee was organized to recommend a model that meets federal funding requirements and HPC requirements for most Mines use-cases. It was the most flexible and most like Cloud resources (since we are transitioning to Cloud).

The current infrastructure is still in Wendian and on-premises cluster. We are focusing on co-location. We are working with a company, Summit, to host HPC infrastructure. We are also looking at AWS. AWS costs more but has more Cloud benefits. We are running pilots in AWS, but we are discussing with Summit to save money and keep costs down for researchers. We would leave some on-premises for projects already utilizing it.

## 2) Questions

How do you define the community?

Answer: Any user that is present on the cluster. Most policies only impact these so we don't send communication to anyone outside of that.

Do you get input from anyone or just inform?

We would like to invite Matthew and Kira back to discuss more HPC policies and establishing rules and policies. Some of us have purchased into MIO and Wendian and were not expecting the transitions. 42% of MIO will be leaving. For some faculty that do HPC work, they were surprised so we would like to have further discussion. RC would also like to identify how we can further interact with HPC to communicate with faculty, so they are not so surprised. We would also like to get input from the faculty and provide feedback.

If anyone has ideas, please forward them to Mark to coordinate our meetings and make them more productive.

## Adjourn

Next meeting: February 7, 2:00-3:00 pm Hill Hall 300.