2010 Committee of Visitors
Division of Mathematical Sciences
National Science Foundation

MPS Advisory Committee Meeting

17 June 2010

Important Things to Say First

- DMS is excellent! (but not perfect)
- Its portfolio is balanced and healthy.
- Funded proposals were of high quality.
- Many worthy proposals that did not get funded, even in 2009.
- The ARRA funds were managed well.
- The DMS leadership has been impressive and inspires confidence. It's engagement with the community has been especially commendable.

Proposal Review Process

- Panels have worked well. They seem to make mail reviews better too.

- While there has been a better understanding of the assessment criteria by reviewers, misunderstanding persists for proposers. ``Dear Colleague'' letters addressing ``Broader Impacts'' and ``Intellectual Merit'' be created that would serve to inform both the proposers and reviewers. Links to these on every solicitation page.

- DMS should continue experimenting with having reviewers score each criterion separately. This would provide good feedback to both proposers and DMS.

- Conflict of Interest situations were handled well, but some were discover late in the process. NSF and DMS should think about ways to catch potentially disruptive ones as early as possible.

ARRA

- Funding used effectively across all areas
- Particularly impressed by the ability of Math Institutes to work together to respond to short-term postdoc funding opportunities in 2009.
- Significant increase in participation from new investigators and women.
- Exceptional NSF performance at every level of DMS under extreme workload and time constraints

Disciplinary Programs

- Quality of funded research is high - 10 of the 20 plenary speakers at the 2010 ICM are NSF/DMS funded PIs.

- Many excellent proposals were unfunded, even after ARRA funding.

- Funding for core programs appears flat.

- Interdisciplinary Proposals can be handled better.

- Progress has been made for female PIs, but the situation for underrepresented minorities is still not very good.

Interdisciplinary Programs
CDI, CMG, CRCNS, DTRA, FODAVA, MCS, NIGMS, PetaApps, SOLAR

- These programs serve a valuable role and work well; Example: D. Levy's work on optimizing Leukemia treatments (NIGMS).
- Mixed panels are effective.
- Cross-program funding is crucial.
- Expansion desirable.

Mathematics competes well, reflecting its central nature to scientific research.
Large $ leverage.

Workforce programs

- Evolution of programs has been good, e.g. VIGRE -> RTG, MCTP, …
- Great potential from "unsolicited proposals" programs, e.g.
  - Develop new programs,
  - Tailoring proposals to individual institutions.
- Big increase in number of grad students and postdocs due to ARRA.
- Investment in assessment is essential!

Institutes

- Overall very strong portfolio of 10 Institutes with a well balanced set of activities.

- The Institutes quickly responded to emerging research and educational opportunities.

- COV endorses the DMS response to 2007 COV request for an assessment, which appears to be progressing well.

- Wide disparity between Institutes in terms of how well they disseminate the outcomes of their research and educational activities.

- Helped create opportunities for women.

Infrastructure

MRI, SCREMS**, IGMS UICRP**

- Travel and conference grants are important for promoting community (AMS, MAA, SIAM), diversity (AWM, SACNAS) and international presence (ICM, Oberwolfach).

- IGMS creates new expertise and interdisciplinary connections. E.g., Promislow's work on fuel cells.

- The evolution of equipment grants has been healthy.

Staff

- DMS is understaffed in both Program Officers and Administrative Staff (AS).

- The COV met with the AS, and wished it had met with the Program Officers.

- Path to advancement for AS should be clear. Training should be followed by opportunities to practice what has been learned.

- The rationale for decisions that affect the AS workload should be communicated to them.

COV

- As panels play such a large role in the DMS evaluative process, it would be helpful to future COVs if it were more transparent knowing how to interrogate the database in more panel-centric ways.

- Some panel-centric data should be provided.

- Add a meeting with the POs to discuss general issues affecting them, such as workload.

Questions?