



Directorate for Mathematical and Physical Sciences (MPS) Advisory Committee Meeting
National Science Foundation
November 17-18, 2016 (all times EST)
Stafford I, Room 1235

Thursday, November 17th, 2016

8:30 – 8:45 AM: Meeting opening, FACA briefing and approval of April meeting minutes

Juan de Pablo, MPS Advisory Committee Chair

Fleming Crim, Assistant Director, Directorate for Mathematical and Physical Sciences

John Gillaspy, Staff Associate, MPS Office of the Assistant Director

The meeting was opened by Juan de Pablo, followed by a reminder from John Gillaspy that this is an open FACA meeting, meaning members of the public may be present. AC members were reminded that they are special government employees for two days. Roundtable introductions were made, and the minutes from the April meeting were approved by vote.

8:45 – 9:30 AM: Science Hors D'Oeuvre

Fleming Crim

Presentations were made demonstrating current research including: the Materials Genome Initiative, computational tools, digital data, synthesis, and single-crystal turbine blades.

9:30 – 10:00 AM: MPS updates

Fleming Crim

Fleming Crim said thank you to departing front office members, and welcomed the new arrivals. The same was done for departing and arriving AC members. AC members were reminded of the structure of MPS as a directorate, and the calendar for the next MPSAC meeting dates. He then gave a budget presentation. This was followed by a facilities update and programmatic updates. The updates were capped by going over the agenda for the next two days of the AC meeting.

10:00 – 10:15 AM: Break

10:15 – 11:30 AM: NSF Big Ideas

Juan de Pablo, MPS Advisory Committee Chair

Fleming Crim, Assistant Director, Directorate for Mathematical and Physical Sciences

Fleming Crim and Juan de Pablo informed the Advisory Committee of the “Big Ideas” that had been generated by the NSF. Dr. Crim gave a scientific background for each Big Idea, and discussed which directorate(s) would be involved. Discussion included how to generate enthusiasm for these ideas, what are the next steps that need to be taken, and who the audience is for various documents.

Slides for Dr. Crim's presentation are given here:

https://www.nsf.gov/attachments/136042/public/12_MPSAC_Presentation_Nov_2016.pdf

https://www.nsf.gov/mps/fleming/mps_fy17_budget_presentation_v1.4.pptx.pdf

[https://www.nsf.gov/attachments/136042/public/Big_Ideas_compiled\[1\].pdf](https://www.nsf.gov/attachments/136042/public/Big_Ideas_compiled[1].pdf)



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11:30 – 12:30 PM: MPSAC Working Lunch

12:30 – 1:30 PM: NSF Big Ideas (cont'd)

Discussion of the big ideas continued with going over the NSF strategic plan. After an overview of plan, the Advisory Committee was asked to give feedback on the language of the plan. Discussion included what the core values should be, the clarity of the document, concerns about its sometimes lengthy and vague wording, and who the audience is.

1:30 – 2:30 PM: Division of Mathematical Sciences Committee of Visitor (COV)'s report

Peter Jones, Yale University, COV Chair

Juan de Pablo, MPS Advisory Committee Chair

Peter Jones presented the findings of the Division of Mathematical Sciences COV report which included equalization, review of disciplinary programs and the review process itself, work-force and infrastructure development, and the postdoctoral research fellowships. Recommendations were made based on these topics, and the COV was provisionally accepted, pending some minor edits.

2:30 – 3:15 PM: Briefing on NSF Merit Review Process

Stephen Meacham, OIA

Stephen Meacham gave a presentation on the NSF merit review process including how panels are convened, the different types of panels, the recommendation process, and the role of the PO in this process.

3:15 PM – 3:30 PM: Break

3:30 – 4:15 PM: Briefing on NSF Strategic Review Planning

Stephen Meacham

Discussion continued with strategic review planning. Topics of discussion included: the nature of maintaining global leadership, how to generate excitement, and the nature of the intended audience

4:15 – 5:30 PM: Preparation for meeting with the Director

Richard Buckius and Amanda Greenwell answered questions fielded by the AC members. These questions included information about the upcoming transition, whether the research that is getting funding is the most important, sponsoring young investigators, communications by the NSF, and updates on INCLUDES.

5:30 PM: Adjourn



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8:30 – 8:45 AM : Meeting opening

Juan de Pablo, MPS Advisory Committee Chair

Fleming Crim, Assistant Director, Directorate for Mathematical and Physical Sciences

John Gillaspy, Staff Associate, MPS Office of the Assistant Director

The second day of the meeting opened with a reminder that this is an open FACA meeting, meaning members of the public may be present. AC members were reminded that they are special government employees for two days.

8:45 – 9:45 AM Discussions on Robust and Reliable Sciences

Bogdan Mihaila and Clark Cooper, Science Advisors, MPS

Juan de Pablo, MPS Advisory Committee Chair

Bogdan Mihaila and Clark Cooper gave an introduction to the increasing importance of robust and reliable science throughout the NSF and MPS. A brief history of the initiative was presented including the details of a recent workshop. Discussion was then opened up, and included: making data more readily available, the influence of federal mandates, the cost and feasibility of providing petabytes of data, data propriety and publication embargos, the differences in fields of science regarding the need for data privacy, how to ensure reliability, and the need for transparency.

9:45 – 10:00 AM: Break

10:00 – 11:00 AM: Meet with NSF Chief Operating Officer

During a discussion with Richard Buckius and Amanda Greenwell, several major points were covered, specifically the status of the INCLUDES proposal program, the NSF's new approach to interfacing with Congress, and the agency's mission in promoting basic research. Both Richard Buckius and Amanda Greenwell stressed the importance for the NSF to enhance its ability to communicate with members of Congress about the importance of basic scientific research. They also discussed how disseminating the importance of basic research, both to Congress and to the public, is a main goal of the NSF, and what steps they are taking to accomplish this goal.

11:00 – 12:00 noon: General Comments and Discussions

Fleming Crim opened up the floor for general discussion. The discussion centered on clarifying the nature of broader impacts. This included how the term should be defined and the approaches that should be taken.

12:00 PM: Adjourn



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Appendix A: Attendance (on record from sign-in sheet)

November 17

MPSAC

Juan de Pablo
Mark Cardillo
Jennifer Chayes
George Crabtree
Catherine Pilachowski
Melanie Sanford
Robert Bryant
William Zajc
Lynne Hillenbrand
Susanne Brenner (virtual)

NSF Staff

Fleming Crim
Deborah Lockhart
Bradley Keister
Edward Ajhar
Peter Kurezyuski
Kevin Clancey
Tim Hogan
Bruce Palka
Joanna Kania-Barloszysleu
Leonard Spinu
Sean Jones
Christopher Stark
Thomas Ivey
Tamara Savage
Amanda May
Denise Caldwell
Tie Luo

Visitors

James Murday
Andre Porter
B. Schuffeit

November 18

MPSAC

Juan de Pablo
Mark Cardillo
Jennifer Chayes
George Crabtree
Catherine Pilachowski
Melanie Sanford
William Zajc
Lynne Hillenbrand
Susanne Brenner (virtual)

NSF Staff

Fleming Crim
Deborah Lockhart
Edward Ajhar
Leonard Spinu
Denise Caldwell
Jim Whitmore
Amanda May
Amanda Greenwell

Visitors

B. Schuffert
Andre Porter