

NATIONAL SCIENCE FOUNDATION
4201 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22230



OFFICE OF THE
ASSISTANT DIRECTOR
FOR MATHEMATICAL AND
PHYSICAL SCIENCES

August 14, 2012

Dr. James Berger
Department of Statistical Science
221 Old Chemistry Building
Duke University
Durham, NC 27708-0251

Dear Jim,

This letter is to request that the MPS Advisory Committee (MPSAC) form a subcommittee to examine the current structure of support of the statistical sciences within the National Science Foundation (NSF) and to provide recommendations for NSF to consider.

This request is based on discussions of the last year, and in particular on a recommendation by Professors Bickel, Johnstone, and Kurtz found in the *Report of the Subcommittee of the MPSAC to Examine the Question of Renaming the Division of Mathematical Sciences* presented to and accepted by the MPSAC on April 5, 2012¹:

“... we recommend consideration of a study directed at assessing the current structure of support for the statistical sciences and even more broadly the mathematical and statistical sciences within NSF We believe that a major issue that needs to be considered is the classical big science vs. little science dichotomy. To a very considerable extent statistics and applied mathematics and parts of pure mathematics have become ‘group’ science requiring bodies of graduate students, postdocs and computing resources. Parts of the disciplines have fruitfully remained, small science, focusing on the individual investigator. NSF is charged with fostering fundamental research, which, of course, covers both modes of operation. We strongly suspect that an assessment in the light of these questions would identify a more effective organizational structure that would take into account the new forms that the mathematical and statistical sciences are assuming and better relate developments in these sciences to developments in areas of application while maintaining the integrity of the ‘small science’ core.”

While this would be a subcommittee of the MPSAC, the subject matter involves all of the disciplines supported by NSF, and membership on this subcommittee would have representation from members of other NSF Advisory Committees, from the statistical and mathematical societies within the US, as well as members from the communities we support. Staff support for the activities of this subcommittee will be provided by the NSF and, if necessary, we will find funds to support a meeting of the subcommittee.

¹ http://www.nsf.gov/attachments/124926/public/DMS_Name_Change_Committee_Report_Final_4-1-12.pdf

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Dr. Fred Roberts of Rutgers University, the Chair of the Subcommittee that provided the April 5, 2012 report, and Dr. Iain Johnstone of Stanford University have graciously agreed to serve as Co-chairs of this subcommittee. I hope to work with you, Fred, Iain and staff within NSF in determining the membership of this subcommittee.

I have attached a formal charge to this subcommittee. The role of this subcommittee has the support of the leadership of NSF, including the Director and Assistant Directors, and the subcommittee's charge should be interpreted as relevant across NSF.

I would like the subcommittee to report to the full MPSAC and to the other NSF Directorate Advisory Committees at their Spring 2013 meetings. The subcommittee will be governed by the rules and procedures of the Federal Advisory Committee Act (FACA) to the extent they apply to subcommittees.

Sincerely yours,

Ed Seidel
Assistant Director
Directorate for Mathematical and Physical Sciences

Attachment

Cc: Director, NSF
Deputy Director, NSF
Assistant Directors, NSF

**National Science Foundation
Directorate for Mathematical and Physical Sciences
Support for the Statistical Sciences at NSF (StatSNSF)
A Subcommittee of the Mathematical and Physical Sciences Advisory Committee**

Charge:

StatSNSF will work in concert with a cross-foundation NSF working group, various communities and societies to deliver recommendations concerning the statistical sciences at NSF to the MPSAC and other NSF advisory committees in Spring 2013.

The scope of the subcommittee and the NSF working group will include the following:

- An analysis of the growing role of statistics in all areas of science and engineering, including the changing character of research across the spectrum of “individual investigator” and “group” science;
- An inventory of activities and programs related to statistics, theoretical and applied, across NSF;
- The management of these activities in the NSF;
- Interactions between the various communities and societies related to the field of statistics;
- The role of statistical sciences in data-enabled science.

Input to be used by StatSNSF will include, but not be limited to:

- The existing report accepted by the MPSAC at its Spring 2012 meeting;
- Input from the mathematical and statistical societies within the U.S;
- Input from individual members of the community on this matter;
- Discussions by StatSNSF subcommittee members with NSF Advisory Committees;
- Discussions with NSF leadership across the Foundation.

Recommendations in the report should include, but not be limited to:

- Ways to better structure and support statistical sciences across the NSF, including recommendations for better coordination of internal programs, development of new programs, relationship of individual and group activities and their relationship with grand challenge problems in science and engineering, and arguments for why any recommended actions would be better for the communities than what exists at present. Recommendations will not include renaming of the Division of Mathematical Sciences. Particularly desired are recommendations that can be implemented within the current divisional and directorate structure of NSF;
- Means of enhancing the role of statistics in data-intensive science as an integral segment of data initiatives being developed within NSF; and
- Activities that could be undertaken, perhaps with NSF support, in the communities and societies that could help to address some of the issues that have been highlighted in the April 2012 report;
- Other comments the subcommittee deems relevant to the charge.

MPS will arrange for creation of a website or email address to which the community may send its comments. While the subcommittee is not required to announce its meetings and hold them open to the public because it will be reporting directly to the MPSAC, any documents received by or created by the subcommittee may be subject to access by the public.

The subcommittee should deliver its final report and present a summary of this report for consideration of acceptance by the MPSAC at its meeting in April 2013.