



Funding Opportunities At NSF

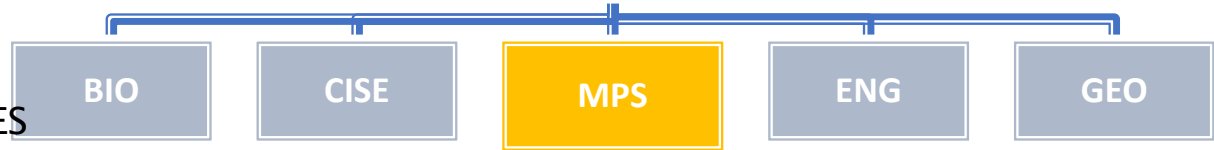
Workshop on
Distributed and Parallel Data Analysis (DPDA):
SAMSI, NCSU, September 21–23, 2016

Yong Zeng, Program Officer
Division of Mathematical Sciences
National Science Foundation

NSF ORGANIZATIONAL CHART

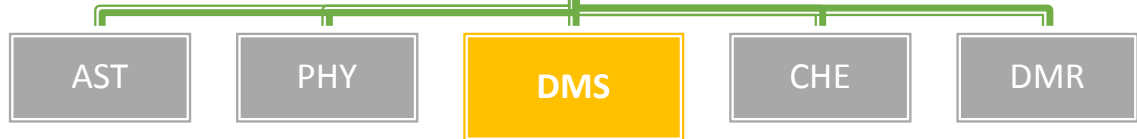
DIRECTORATE

MPS-MATHEMATICAL AND PHYSICAL SCIENCES

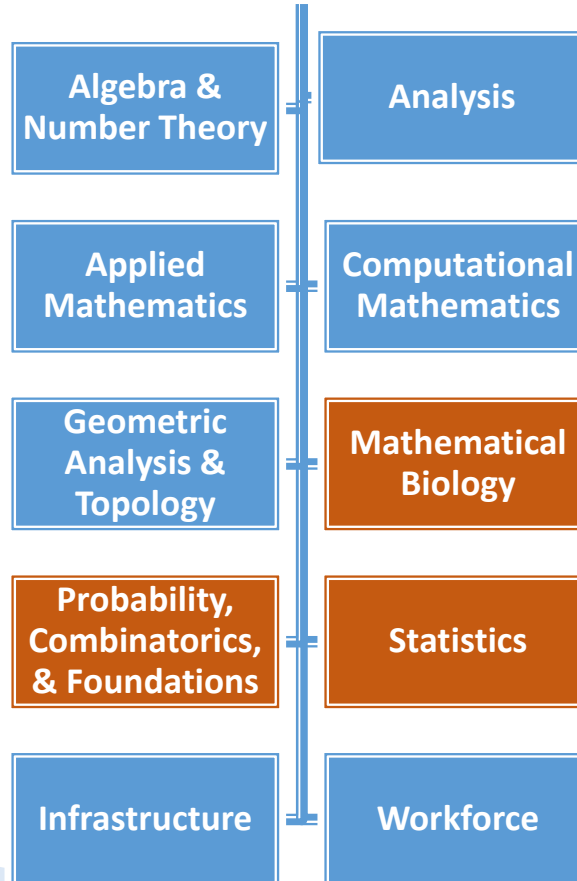


DIVISION

DMS-DIVISION OF MATHEMATICAL SCIENCES



PROGRAM



Programs of special interest to students and junior faculty

- ▶ NSF Graduate Research Fellowship Program (**GRFP**)
- ▶ Mathematical Sciences Postdoctoral Research Fellowships (**MSPRF**)
- ▶ Faculty Early Career Development Program (**CAREER**)
- ▶ Special Opportunities:
 - Conferences and Workshops
 - Mathematical Sciences Institutes



Support for Conferences and Travel

- ▶ Conference, Workshops, and Special Meetings in the Mathematical Sciences.
- ▶ Regional Conferences of the Conference Board of the Mathematical Sciences (**CBMS**).
- ▶ National Institutes in the Mathematical Sciences (e.g. SAMSI, ICERN,...)

Ask the conferences organizers whether financial support is available – this could supplement departmental or other support



Interdisciplinary Programs

- ▶ Joint Initiative in Math Biology (**DMS/NIGMS, 9/14**)
- ▶ Joint NSF/NIH Initiative on Quantitative Approaches to Biomedical Big Data (**QuBBD, 9/28/16**)
- ▶ Computational and Data-Enabled Science and Engineering in Math. and Stat. Sciences (**CDS&E-MSS, 12/9/16**)
- ▶ Critical Techniques and Technologies for Advancing Foundations and Applications of Big Data Science & Engineering (**BIGDATA/CISE**)
- ▶ Methodology, Measurement, and Statistics (**MMS/SBE, 1/26/17**)
- ▶ Collaborative Research in Computational Neuroscience (**CRCNS/CISE**)



Joint NSF/NIH Initiative on Quantitative Approaches to Biomedical Big Data (QuBBD)

- ▶ Supports research that addresses important application areas at the intersection of the biomedical and data sciences
- ▶ Encourages inter- and multi-disciplinary collaborations that focus on innovative and transformative approaches
- ▶ Collaborative efforts that bring together quantitative scientists and biomedical researchers are a requirement
- ▶ The program is designed to foster and support new inter- and multi-disciplinary teams of investigators.



Joint NSF/NIH Initiative on Quantitative Approaches to Biomedical Big Data (QuBBB)

- ▶ Examples of application areas that are appropriate:
- ▶ Development of methods for mobile health (mHealth) data, where mHealth includes new data not traditionally used in the biomedical sciences (e.g. data from mobile devices, social networks, wearable electronics, sensors)
- ▶ Development of methods for precision (or personalized) medicine. The goal of precision medicine is to develop a targeted treatment (or prevention) regimen that takes into account unique characteristics of an individual such as genetic makeup, environmental factors, and lifestyle.

Deadline: September 28, 2016



Computational and Data-Enabled Science and Engineering in Mathematical and Statistical Sciences (CDS&E-MSS)

- ▶ Confront the host of mathematical and statistical challenges presented to the scientific and engineering communities by the ever-expanding role of computational modeling and simulation on the one hand, and the explosion in production of digital and observational data on the other.
- ▶ The goal of the program is to promote the creation and development of the next generation of mathematical and statistical theories and tools that will be essential for addressing such issues.



Big Data

- ▶ The BIGDATA program seeks novel approaches in computer science, statistics, computational science, and mathematics, along with innovative applications in domain science.
- ▶ "Foundations" (F): those developing or studying fundamental theories, techniques, methodologies, technologies of broad applicability to Big Data problems;
- ▶ "Innovative Applications" (IA): those developing techniques, methodologies and technologies of key importance to a Big Data problem directly impacting at least one specific application.



Big Data

- ▶ Projects in this category must be collaborative, involving researchers from domain disciplines and one or more methodological disciplines, e.g., computer science, statistics, mathematics, simulation and modeling, etc.
- ▶ IA proposals may focus on novel theoretical analysis and/or on experimental evaluation of techniques and methodologies within a specific domain.



Funding Opportunities and Deadlines

- DMS Web Page

- <http://www.nsf.gov/div/index.jsp?org=DMS>

- DMS automated e-mail server: To subscribe, send an e-mail message to

listserv@listserv.nsf.gov

In the text of the message, put the following command:

subscribe dmsnews **Your Name**



THANK YOU!

QUESTIONS?

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National Science Foundation

