NSF Funding Opportunities: Statistics & Data Science

October 22, 2021

Huixia Judy Wang, Program Officer
Division of Mathematical Sciences
National Science Foundation
NSF in a Nutshell

- Independent agency to support **basic** research & education
- Grant mechanism in two forms:
  - Unsolicited, curiosity driven (the majority of the $)
  - Solicited, more focused
- All fields of Science/engineering
- Discipline-based structure, some cross-disciplinary
Statistics Program

- Support research in statistical theory & methods, including research for applications to any domain of science and engineering

  - Regular Statistics Program: December 1–15, 2021

  - Faculty Early Career Development Program (CAREER, July)

- Conferences and Workshops in the Mathematical Sciences: anytime with sufficient lead time (>6 months)
Statistics Program Officers

Nandini Kannan (On Leave)
Yulia Gel (rotator)
Edsel Pena (rotator)
Gabor Szekely (permanent)
Huixia Judy Wang (rotator)
DMS Special Research Programs

- **DMS/NIGMS** (Interface of the Biological and Mathematical Sciences)
  - September 1–19, 2021

- **CDS&E–MSS** (computational and massive-data challenges presented to scientific and engineering communities)
  - September 1–15, 2021

- **ATD** (Algorithms for Threat Detection)
  - February 17, 2021

- **FRGMS** (Focused Research Groups in the Mathematical Sciences)
  - Second Wednesday in September
Other Special Research Programs

- **CRCNS** (Collaborative Research in Computational Neuroscience), NSF 20–609, Nov 23, 2021
- **SCH** (Smart Health and Biomedical Research in the Era of Artificial Intelligence and Advanced Data Science), NSF 21–530, Nov 10, 2021
- **SaTC (Secure & Trustworthy Cyberspace)**, NSF 22–517, Nov 17, 2021
- **DMREF** (Designing Materials to Revolutionize and Engineer our Future)
- **DCL NSF 21–124**: Critical Aspects of Sustainability (CAS): Innovative Solutions to Climate Change
- **HDR TRIPODS Phase II**, NSF 21–604,
  
  LOI: Nov 1–16, 2021; Proposal: Jan 4–18, 2022
- **AMPS (Algorithms for Modern Power Systems)**
Other Special Research Programs

- **LEAPS–MPS** (Launching Early-Career Academic Pathways in the Mathematical and Physical Sciences): Jan 7, 2022

- **MODULUS** (Models for Uncovering Rules and Unexpected Phenomena in Biological Systems):

- **EEID** (Ecology and Evolution of Infectious Diseases):
  Nov 17, 2021 (for FY 2021). Third Wednesday in Nov, Annually Thereafter


- **More at:** https://www.nsf.gov/funding/programs.jsp?org=DMS
Methodology, Measurement, and Statistics (MMS) program: an interdisciplinary program in the Directorate for Social, Behavioral, and Economic Sciences that supports the development of innovative analytical and statistical methods and models for those sciences.

- MMS seeks proposals that are methodologically innovative, grounded in theory, and have potential utility for multiple fields within the social and behavioral sciences.
- Deadlines: August 26, 2021, January 27, 2022
- Program Director: Cheryl L. Eavey (ceavey@nsf.gov)
Training & Career Development

- **GRFP** (Graduate Research Fellowship Program)

- **MSPRF** (Mathematical Sciences Postdoctoral Research Fellowships)
  - [https://www.nsf.gov/pubs/2016/nsf16558/nsf16558.htm](https://www.nsf.gov/pubs/2016/nsf16558/nsf16558.htm); Third Wednesday in October

- **MSGI** (NSF Mathematical Sciences Graduate Internship)
  - For math science doctoral students to participate in internships at federal national laboratories, industry and other approved facilities
  - [https://orise.orau.gov/nsf-msgi](https://orise.orau.gov/nsf-msgi); January 31

- **MPS-ASCEND**: (MPS Ascending Postdoctoral Research Fellowships), Jan 6, 2022

- **Others**: RTG (Research Training Groups in the Mathematical Sciences); REU (Research Experiences for Undergraduates) Sites
Community Resources

- **Mathematical Sciences Institutes** ([www.mathinstitutes.org](http://www.mathinstitutes.org))
  - IMSI (Institute for Mathematical and Statistical Innovation)
- **NSF TRIPODS Institutes**: [https://nsf-tripods.org/](https://nsf-tripods.org/)
  - Foundations of Data Science Institute
  - Institute for Foundations of Data Science
- **NSF–SF MoDL centers**
  - THEORINET
  - The Collaboration on the Theoretical Foundations of Deep Learning
- **AI Institutes**, e.g.
  - Institutes for Foundations of ML (UT Austin)
  - AI Institutes in Dynamic Systems (U Washington)
- **HDR Institutes**
Final Remarks

- Check the published abstracts on the NSF website: [http://www.nsf.gov/awardsearch](http://www.nsf.gov/awardsearch)

- Volunteer as a reviewer! Email the PD or visit [https://www.nsf.gov/additional-resources.jsp?org=DMS](https://www.nsf.gov/additional-resources.jsp?org=DMS)

- Subscribe to DMS listserv: [https://www.nsf.gov/mps/dms/about.jsp](https://www.nsf.gov/mps/dms/about.jsp)

- Talk to Program Officers
  - JSM: DMS Meet & Greet; Speed Coaching
QUESTIONS?

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