

NSF Funding Opportunities: Statistics & Data Science

August 3, 2025

2025 JSM Portland Funding Opportunities Panel

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

Statistics Program

- Support research in statistical theory & methods, including research for applications to any domain of science and engineering
- Statistics Program (December 15, 2025)
- Conferences and Workshops Math Sci. (6-8m before conf.)
- Focused Research Groups in Math Sci. (FRGMS, waiting)
- Research Training Groups in Math Sci. (RTG, waiting)
- Program Officers: John Kolassa, Taps Maiti, Jun Zhu, Yong Zeng



Programs of Special Interest to Students and Junior Faculty

- Faculty Early Career Development Program (<u>CAREER</u>)
- Launching Early-Career Academic Pathways (<u>LEAPS-MPS</u>)
- Mathematical Sciences Postdoctoral Research Fellowships (MSPRF)
- Graduate Research Fellowship Program (GRFP, waiting)
- NSF EPSCoR Graduate Fellowship Program (<u>EGFP</u>, new)



LEAPS-MPS

- Supports the research of pre-tenure faculty
 - in mathematical and physical sciences,
 - with an emphasis on those at institutions that traditionally do not receive significant NSF funding,
 - such as minority-serving, predominantly undergraduate or R2 institutions.
- Deadline: January 22, 2026



MSPRF and **E**PSCoR **GFP** (new)

- Supports postdoctoral fellows in pursuing research and training in mathematics and statistics, including their applications to other disciplines.
- Deadline: October 15, 2025
- Supports institutions in **EPSCoR** jurisdictions by providing funding for graduate fellowships for *new or continuing students* who *received* the distinction of NSF Graduate Research Fellowship Program (GRFP) *Honorable Mention* within the last three years.
- Deadline: June 1, 2026 (**EGFP**, new)



Mathematical Sciences Institutes-A Community Resource (www.mathinstitutes.org)

- Currently supports six institutes
- **IMSI**: Institute for Mathematical and Statistical Innovation, University of Chicago.
 - IMSI: Long Program, Digital Twins, September 15 December 12, 2025
 - IMSI: **Workshop**, Contemporary Challenges in Large-Scale Sequence Alignments and Phylogenies Bridging Theory and Practice, August 11 15, 2025



Methodology, Measurement, and Statistics

Nicholas Nagle nnagle@nsf.gov

- MMS supports the development of innovative analytical and statistical methods and models for the **social**, **behavioral**, **and economic sciences**.
- MMS seeks proposals that are methodologically innovative, grounded in theory, and have potential utility for multiple fields within the social and behavioral sciences.
- MMS encourages submissions that develop new and innovative approaches to surveys, methods for the analysis of survey data, and survey-based approaches to producing statistics for the benefit of the federal statistical system.

Interdisciplinary Programs (1)

- Old ones: <u>AMPS</u>, <u>CDS&E</u>, <u>CRCNS</u>, <u>DMREF</u>, <u>DMS/NIGMS</u>
- Artificial Intelligence, Formal Methods, and Mathematical Reasoning (AlMing, 2/5/26)
- Mathematical Foundations of Artificial Intelligence (MFAI, 10/10/25)
- Mathematical Foundations of Digital Twins (MATH-DT, 3/16/26)
- Foundations for Digital Twins as Catalyzers of Biomedical Technological Innovation (FDT-BioTech, 5/4/26)
- Collaborations in Artificial Intelligence and Geosciences (CAIG, 2/4/26)



Interdisciplinary Programs (2)

- Emerging Mathematics in Biology (eMB, 3/2/26)
- Smart Health and Biomedical Research in the Era of Artificial Intelligence and Advanced Data Science (SCH, 10/3/25)
- Incorporating Human Behavior in Epidemiological Models (IHBEM)
- Secure and Trustworthy Cyberspace (SaTC, 9/29/25, 1/26/26)
- Internet Measurement Research: Methodologies, Tools, and Infrastructure (IMR)



OAC Programs Supporting Statistics, Data Science, and Al



CSSI: Cyberinfrastructure (CI) for Sustained Scientific Innovation Program funds software and data CI ecosystem that scales from individuals or small groups of researchers/innovators to large communities.

NSF 22-632 Deadline December 1, 2025

CSSIQueries@nsf.gov

FAIROS: Findable Accessible Interoperable Reusable Open Science funds sustainable open science and data management; advancing research, education, & CI; encouraging collaboration and reducing barriers to data sharing.

NSF 25-533 Deadline April 8, 2026 FAIROSQueries@nsf.gov





CICI: Cybersecurity Innovation for CI funds efforts to develop, deploy, and integrate cybersecurity that benefits the broader scientific community by securing science data, computation, collaboration workflows, and infrastructure.

Deadline January 21, 2026 NSF 25-531

NAIRR Pilot provides computing, datasets, model/software/platform, educational/training, and collaboration resources to demonstrate the vision of National Artificial Intelligence Research Resource, a shared national research infrastructure for Al. NAIRR_Pilot@nsf.gov





Community Resources

- Mathematical Sciences Institutes (www.mathinstitutes.org)
- NSF TRIPODS Institutes: 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
- Al Institutes, e.g.
 - Institutes for Foundations of ML (UT Austin)
 - Al Institutes in Dynamic Systems (U Washington)
- HDR Institutes



Final Remarks

- Check the published abstracts on the NSF website: http://www.nsf.gov/awardsearch
- Volunteer as a reviewer! Email POs or visit

https://www.nsf.gov/additional-resources.jsp?org=DMS

- Subscribe to DMS listserv: https://www.nsf.gov/mps/dms/about.jsp
- Talk to Program Officers
 - DMS virtual office hours (VOH): https://www.nsf.gov/events/index.jsp?org=DMS



Thank you. Questions?

CAREER

- Support early-career faculty who have the potential
 - to serve as academic role models in research and education, and
 - to lead advances in the mission of their department or organization.
- Activities should build a firm foundation for a lifetime of leadership in integrating education and research.
- All are encouraged, especially women, members of underrepresented minority groups, and persons with disabilities



NSF Office of Advanced Cyberinfrastructure (OAC)

Transforming science and engineering research and education through an integrated cyberinfrastructure ecosystem

- **Advanced Computing.** Provide state-of-the-art advanced computing and services for the broad research and education community.
- **Software and Data Infrastructure.** Support development and deployment of shared data and software resources, tools, and services. Support scientific communities to use and share data.
- **Networking and Cybersecurity.** Invest in campus and regional connectivity and communities to enable advanced computational science activities. Support the transition of cybersecurity research to practice.
- **Learning and Workforce Development.** Foster a national research workforce for creating, operating and using advanced computing, data and networking infrastructure for discovery and innovation.
- **Strategic Investments.** Lead and engage on special opportunities, cross-cutting agency and national initiatives