

Midwest Big Data Innovation Hub

Collaboration Cafe

April 2024

Support for Early-Career Researchers

via the NSF Faculty Early Career Development Program (CAREER)



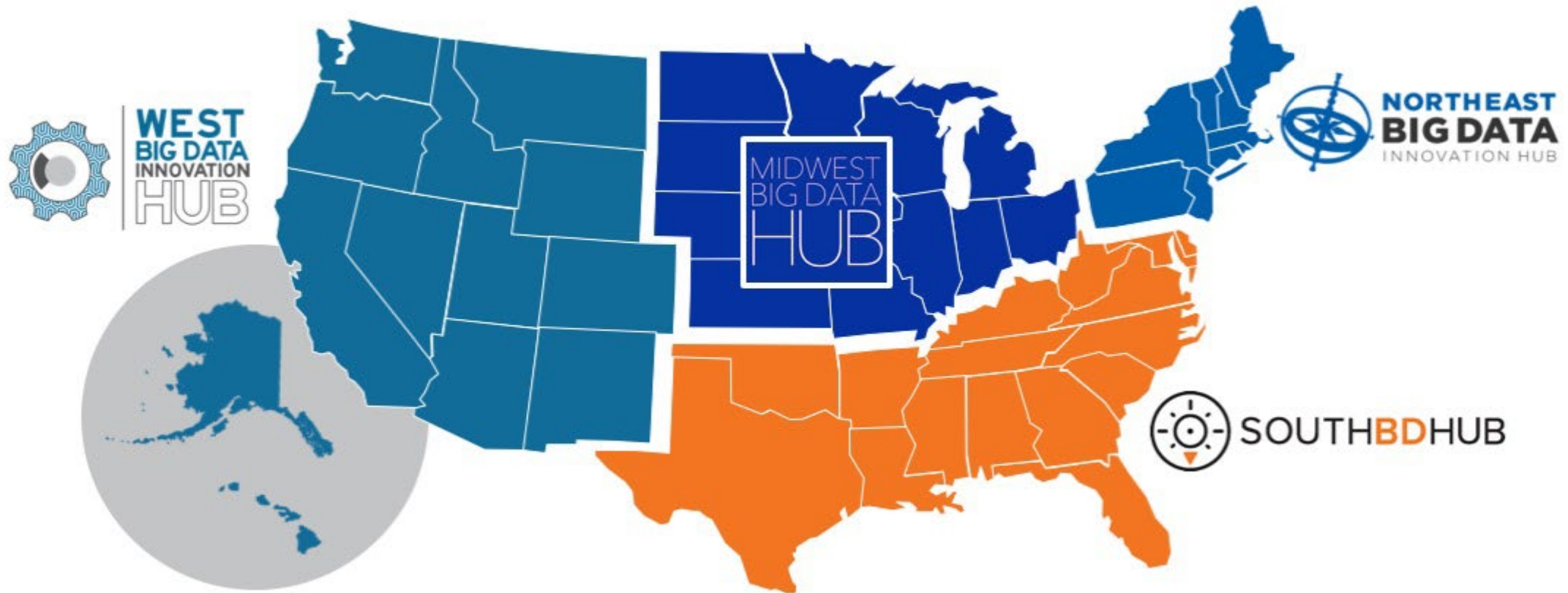
IOWA STATE
UNIVERSITY



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Four Regional Hubs, One National Mission



What We Do

Engage communities, share resources, and build partnerships that harness data science to address societal and scientific challenges.



Prior sessions on support for faculty development

- NSF Mid-Career Advancement (MCA) program – January 2023
 - Guests: Dr. Eleanor Sayre, NSF; Xiaoxia “Nina” Lin, University of Michigan–Ann Arbor; Christopher Bartlett, The Research Institute at Nationwide Children’s Hospital; Jennifer Gleason, University of Kansas
- FFAR Fellows Program – November 2022
 - Guests: Addison (Addy) Carroll, Kansas State University; Paul Oladele, Purdue University; Sara Tondini, UIUC; Annemarie (Krug) Mysonhimer, UIUC
- NSF Computer and Information Science and Engineering Research Initiation Initiative (CRII) – June 2022
 - Guests: Dr. Jenny Li, NSF; Sagar Samtani, Indiana University; Chia-Fang (Christina) Chung, Indiana University; Murat Yildirim, Wayne State University; Maoyuan Sun, Northern Illinois University
- NSF CAREER program – March 2022
 - Guests: Dr. Alan Sussman, NSF; Elaina Sutley, University of Kansas; Matt Daly, University of Illinois at Chicago

April Solicitation: NSF CAREER program

<u>NSF 22-586</u>	Proposals due: July 24, 2024
Program goals	<ul style="list-style-type: none"> • “A Foundation-wide activity that offers the National Science Foundation's most prestigious awards in support of 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 pursued by early-career faculty should build a firm foundation for a lifetime of leadership in integrating education and research..”
Size and duration (max)	<ul style="list-style-type: none"> • Minimum \$400k total budget over 5 years (\$500k for BIO, ENG, or Polar) • CAREER awards are eligible for supplemental funding (see PAPPG)
Number of awards (est)	500 per year
LOI/preproposal?	<ul style="list-style-type: none"> • No, but “Proposers are encouraged to communicate with the CAREER contact or cognizant Program Officer in the Division closest to their area of research to discuss the expectations and approaches that are most appropriate for that area”
Eligibility limits & other guidance	<ul style="list-style-type: none"> • 1 proposal per PI each cycle; 3 proposals lifetime maximum (1 awarded) • Early-career* faculty at all CAREER-eligible organizations*; NSF “especially encourages women, members of underrepresented minority groups, and persons with disabilities to apply”

NSF CAREER program eligibility

- Who is “early career”? You must meet these requirements as of the due date:
 - Hold a doctoral degree in a field supported by NSF;
 - Be engaged in research in an area of science, engineering, or education supported by NSF;
 - Hold at least a 50% tenure-track (or tenure-track-equivalent) position as an assistant professor (or equivalent title);
 - Be untenured; and
 - Have not previously received a CAREER award. (Prior or concurrent Federal support for other types of awards for non-duplicative research does not preclude eligibility.)
- What is a “CAREER-eligible organization”?
 - Institutions of Higher Education (IHEs) – Accredited 2 or 4 year, including community colleges
 - “Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities.”


NSF CAREER proposal guidance (from the solicitation)

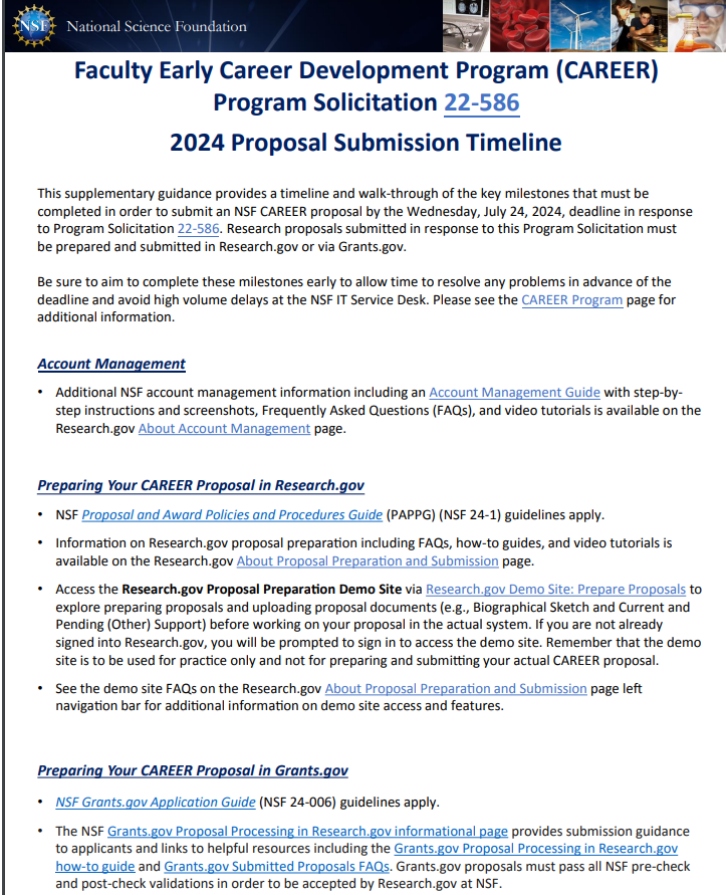
- “Integration of Research and Education - All CAREER proposals should describe an integrated path that will lead to a successful career as an outstanding researcher and educator.”
- “Successful Principal Investigators will propose creative, effective research and education plans, developed within the context of the mission, goals, and resources of their organizations, while building a firm foundation for a lifetime of contributions to research, education, and their integration.”
- “The proposed activities should help applicants develop in their careers as both outstanding researchers and educators.”
- “While excellence in both education and research is expected, activity of an intensity that leads to an unreasonable workload is not.”
- Detailed guidance on: Education Activities, Cross-Disciplinary Perspectives, Cross-Sector Perspectives, Scientific Software Development, International / Global Dimensions, Field work
- See the “Merit Review Principles and Criteria” section

NSF CAREER proposal elements

- Project Description (15 pages max)
 - “should contain a well-argued and specific proposal for activities that will, over a 5-year period, build a firm foundation for a lifetime of contributions to research and education in the context of the Principal Investigator's organization.”
 - “The proposed project should aim to advance the employee's career goals and job responsibilities as well as the mission of the department or organization”
- References Cited
- Budget and Justification
- Biographical Sketch of Principal Investigator
- Additional Supplementary Documentation
 - Letter of eligibility, academic support, and mentoring support from home department (specific elements required)
 - Letters of Collaboration (specific format required)
 - E.g.: access to a physical site, use of equipment or cyberinfrastructure, access to data

NSF CAREER program special requirements & timeline

- No co-PIs permitted; some support for limited roles of senior personnel and/or consultants may be allowed
- Allowable costs include support for students, outreach/education, external evaluation, etc.
- See the detailed CAREER Proposal Submission Timeline & milestones [supplementary document](#) 
- “Many programs and Directorates prefer to make more awards by funding CAREER proposals closer to the minimum award size. Proposers should also review the list of recent CAREER awards made in their discipline for guidance on average award size.”
- See the [MBDH list of prior CAREER awards](#) in the Midwest for examples of successful proposals



**Faculty Early Career Development Program (CAREER)
Program Solicitation 22-586
2024 Proposal Submission Timeline**

This supplementary guidance provides a timeline and walk-through of the key milestones that must be completed in order to submit an NSF CAREER proposal by the Wednesday, July 24, 2024, deadline in response to Program Solicitation 22-586. Research proposals submitted in response to this Program Solicitation must be prepared and submitted in Research.gov or via Grants.gov.

Be sure to aim to complete these milestones early to allow time to resolve any problems in advance of the deadline and avoid high volume delays at the NSF IT Service Desk. Please see the [CAREER Program](#) page for additional information.

Account Management

- Additional NSF account management information including an [Account Management Guide](#) with step-by-step instructions and screenshots, Frequently Asked Questions (FAQs), and video tutorials is available on the Research.gov [About Account Management](#) page.

Preparing Your CAREER Proposal in Research.gov

- NSF [Proposal and Award Policies and Procedures Guide](#) (PAPP) (NSF 24-1) guidelines apply.
- Information on Research.gov proposal preparation including FAQs, how-to guides, and video tutorials is available on the Research.gov [About Proposal Preparation and Submission](#) page.
- Access the [Research.gov Proposal Preparation Demo Site](#) via [Research.gov Demo Site: Prepare Proposals](#) to explore preparing proposals and uploading proposal documents (e.g., Biographical Sketch and Current and Pending (Other) Support) before working on your proposal in the actual system. If you are not already signed into Research.gov, you will be prompted to sign in to access the demo site. Remember that the demo site is to be used for practice only and not for preparing and submitting your actual CAREER proposal.
- See the demo site FAQs on the Research.gov [About Proposal Preparation and Submission](#) page left navigation bar for additional information on demo site access and features.

Preparing Your CAREER Proposal in Grants.gov

- [NSF Grants.gov Application Guide](#) (NSF 24-006) guidelines apply.
- The NSF [Grants.gov Proposal Processing in Research.gov informational page](#) provides submission guidance to applicants and links to helpful resources including the [Grants.gov Proposal Processing in Research.gov how-to guide](#) and [Grants.gov Submitted Proposals FAQs](#). Grants.gov proposals must pass all NSF pre-check and post-check validations in order to be accepted by Research.gov at NSF.

Get involved

- <https://midwestbigdatahub.org/cafe>
- info@midwestbigdatahub.org

May 22, 2024

2:00–3:00 p.m. CT / 3:00–4:00 p.m. ET

- Topic: Multidisciplinary Data Science in Health
- Solicitation: NSF/NIH “Smart Health and Biomedical Research in the Era of Artificial Intelligence and Advanced Data Science” program (NSF 23-614)
- Guests: Dana Wolff-Hughes, National Cancer Institute (NCI); Yanli Wang, NIH Office of Data Science Strategy (ODSS)



CAREER contacts at NSF Directorates

NSF BIO Division of Environmental Biology

CAREER office hours

May 13, 2024 | 12pm – 1pm CT (online)

NSF EDU Directorate CAREER workshop

May 15, 2024 | 9am – 3pm CT (online)

NSF ENG Engineering for Civil Infrastructure (ECI) CAREER office hours

May 21, 2024 | 2pm – 3pm CT (online)

Prior webinars on the CAREER program (May 2023) and proposal submission logistics (June 2023)

Discussion

- Prior experiences with CAREER proposals?
 - What would you do differently (or the same)?
 - What should new proposers be aware of?
 - What was most challenging for you?
 - How has your award influenced your career trajectory?
- Common mistakes or other NSF input
- Other questions

MBDH Priority Areas and Cross-cutting Themes

- Advanced Materials and Manufacturing
 - Big Data in Health
 - Digital Agriculture
 - Smart & Resilient Communities
 - Water Quality
-
- Data Science Education and Workforce Development
 - Cyberinfrastructure and Data Sharing

Collaboration Cafe webinar series

Goals:

- Building regional capacity for large-scale proposal response
- Growing a cross-disciplinary network of data science collaborators
- Elevating early career researchers
- Creating a more diverse data science community by actively engaging with non-R1 institutions, including minority-serving institutions (MSIs), tribal colleges and universities (TCUs), and predominantly undergraduate institutions (PUIs)
- Partnering with industry, government, nonprofits, and civic organizations to support translational research and transition-to-practice activities

Regular segments:

- Funding opportunity walkthroughs
- Lessons learned from prior awardees
- Researcher lightning talks
- Speed networking
- Small group discussions

Collaboration Cafe resources

- [MBDH website](#)
 - Web page with upcoming sessions
 - Short form for engagement
- [Slack community](#)
 - Networking
 - Input on future sessions
 - New solicitations
- [Shared Google Drive](#)
 - Running notes doc
 - Relevant prior awards to Midwest institutions
- [YouTube playlist](#) of webinar recordings

Cafe Ground Rules

- Multi-disciplinary team science is a core focus here - all proposal ideas are welcome for discussion
- Research proposals are competitive; some people may not be willing to discuss the details of their projects in this venue
- Private conversations in breakout rooms or Slack private messages are private
- Participating in Collaboration Cafe activities falls under our [NSF Code of Conduct](#)

MBDH engagement on proposals

There are multiple opportunities to have MBDH participate on proposals for this program, or other projects:

- Engagement partner: Communications, outreach, community assessments, participation in Hub events and activities
 - Non-exclusive Letter of Collaboration
 - Minimal to no funding to MBDH
- Collaborative partner: Engagement roles + involvement in developing and managing project activities
 - Non-exclusive Letter of Collaboration, subaward, co-PI roles, etc.
 - Funding to recover costs of MBDH staff time and other expenses
- **Note:** The MBDH is a neutral party and often provides non-exclusive Letters of Collaboration to multiple proposers to a solicitation