

Midwest Big Data Innovation Hub

Collaboration Cafe

January 2023



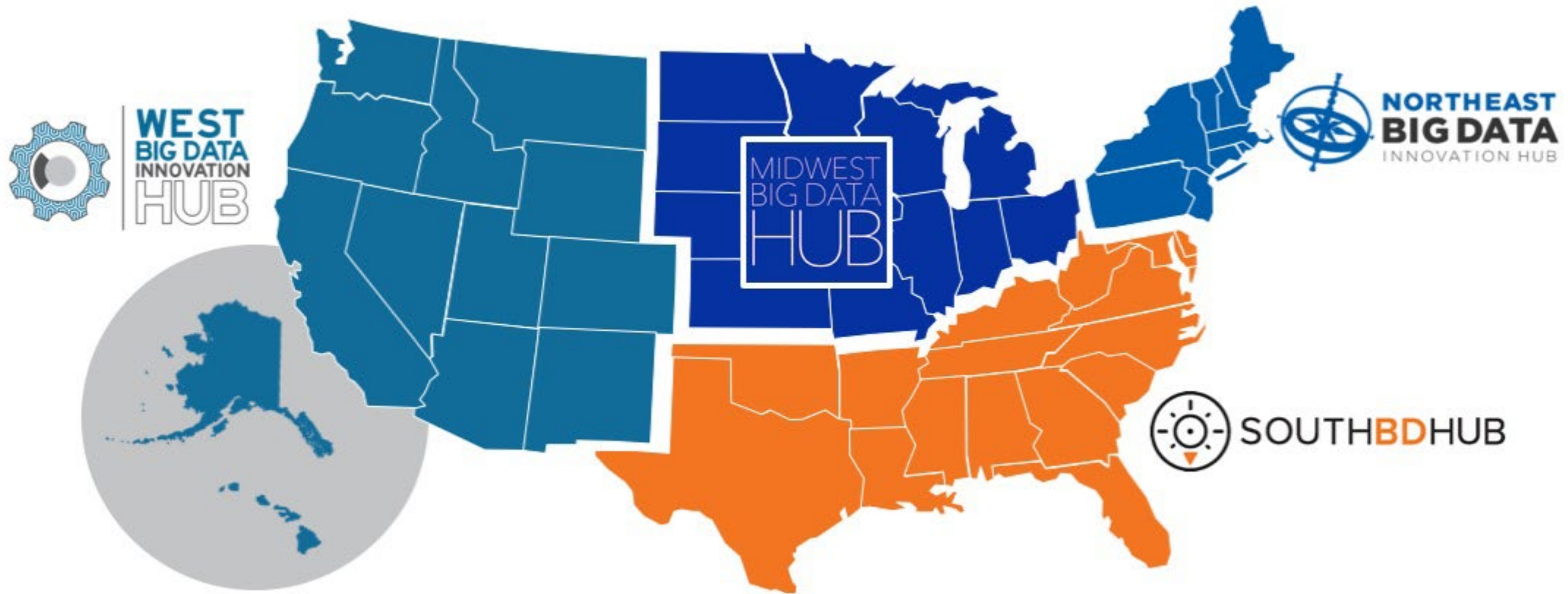
IOWA STATE
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supported by NSF [1916613](#)



Four Hubs, One Mission



What We Do

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



Priority Areas and Cross-cutting Themes



- Advanced Materials and Manufacturing
 - Big Data in Health
 - Digital Agriculture
 - Smart & Resilient Communities
 - Water Quality
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- 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
- Researcher lightning talks
- Lessons learned from prior awardees
- 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 CyberTraining, or other projects:

- Engagement partner: Communications, outreach, community assessments, participation in Hub events and activities
 - Non-exclusive Letter of Collaboration
 - Minimal to no funding
- 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 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

January solicitation: NSF Mid-Career Advancement (MCA) program

NSF 22-603	Proposals due: Feb 1 – Mar 1, 2023 [Program overview]
Program goals	<ul style="list-style-type: none"> • “A primary objective of the MCA is to ensure that scientists and engineers remain engaged and active in cutting-edge research at a critical career stage replete with constraints on time that can impinge on research productivity, retention, and career advancement.” “NSF hopes to enable a more diverse scientific workforce (more women, persons with disabilities, and individuals from groups that have been underrepresented) at high academic ranks.”
Size and duration (max)	<ul style="list-style-type: none"> • Up to 6.5 months of salary and benefits, plus up to \$100k in other direct costs, over 3 years • May include up to 1 month summer support for one or more collaborators
Number of awards (est)	<ul style="list-style-type: none"> • 35 to 45 annually
LOI/preproposal?	<ul style="list-style-type: none"> • No, but proposers are strongly encouraged to contact a Program Officer to discuss the expectations of the Directorate most aligned with your concept
Eligibility limits & other guidance	<ul style="list-style-type: none"> • PIs must be a) at the Associate Professor rank (or equivalent); and b) at that rank for at least 3 years by the proposal submission date. • Researchers at the Full Professor rank at PUI institutions only and with proposed research that falls within the purview of a participating program within the Directorate for Biological Sciences or the Directorate for Geosciences may also apply. • PIs from EPSCoR jurisdictions are especially encouraged to apply.

NSF MCA proposal guidance (from the solicitation)

- Multi-Directorate program
 - Biological Sciences, Geosciences, Social, Behavioral and Economic Sciences, STEM Education, Technology, Innovation and Partnerships (TIP), and Office of Integrative Activities
- *“A key component of a successful MCA will be the demonstration that the PI's current research program could substantively benefit from the protected time, mentored partnership(s), and resources provided through this program, such that **there is a substantial enhancement to the PI's research and career trajectory, enabling scientific and academic advancement not likely without this support.**”*
- “The MCA program provides protected time, resources, and the means to gain new skills through synergistic and mutually beneficial partnerships, typically at an institution other than the candidate's home institution.”
- “Partners from outside the PI's own sub-discipline or discipline are encouraged, but not required, to enhance interdisciplinary networking and convergence across science and engineering fields.”
- “Research projects that envision new insights on existing problems or identify new problems made accessible with cutting-edge methodology or expertise from other fields are encouraged.”
- Collaborators can only be included as consultants or senior personnel, not as co-Pis; no multi-institutional collaborative proposals allowed

NSF MCA proposal guidance (continued)

Pilot PUI Track in Directorates for Biological Sciences and Geosciences

- “Researchers at the Full Professor rank (or equivalent) at PUI institutions only and with proposed research that falls within the purview of a participating program within the Directorate for Biological Sciences or the Directorate for Geosciences may also apply.”
 - PUI = Primarily Undergraduate Institutions; see solicitation for details
 - Includes “including PUIs that are also considered Historically Black Colleges and Universities (HBCUs), Hispanic-Serving Institutions (HSIs), Tribal Colleges or Universities (TCUs)” and “other institutions that enroll a significant percentage of students from groups that have been underrepresented”
 - Some restrictions on research focus (e.g., no human health, including animal models of human diseases)
- Note to PUIs and other underresourced institutions: NSF’s new Foundation-wide [GRANTED](#) program is focused on building capacity for pre- and post-award sponsored research at institutions with minimal infrastructure for research administration.

NSF MCA proposal elements

- *Main elements – 12 page limit for narrative*

- Section 1. Candidate's Past Research
- Section 2. Candidate's Proposed Research Advancement and Training Plan
- Section 3. Candidate's Long-Term Career Plans
- Broader Impacts section
- References Cited section (must include Past Research from Section 1)
- Budget and Justification
- Must budget for mandatory awardee meeting as part of the \$100k direct costs

See details in solicitation

- *Supplementary Documents*

- Impact Statement (2 pages max)
- Letter(s) from collaborating partner(s) – more detailed than the standard NSF template
- Letter from departmental chairperson – more than just eligibility certification
- Biographical Sketches for PI and any partners
- Collaborators & Other Affiliations (COA)
- Names of suggested reviewers

NSF MCA review guidance (from the solicitation)

- Standard NSF “Merit Review Principles and Criteria”
 - “Intellectual Merit”
 - “Broader Impacts”
- Additional Review Criteria for MCA proposals
 - A key component of a successful MCA will be the **demonstration that the candidate's research program could substantively benefit from the protected time and resources provided by this program, such that there is a substantial enhancement to their research and career trajectory, enabling scientific and academic advancement, *not likely without such support***. Thus, the Impact Statement should make a strong case for the value of the MCA by providing information on past or current constraints to the PI's time and resources available for research.
 - There should be a strong case for how the proposed work builds upon past (and current) research and related accomplishments of the PI to enable a productive long-term scientific career extending well beyond the award period.
 - The research project proposed in Section 2 of the MCA **may be considered risky or preliminary, but this is appropriate** given a) that the PI is submitting to the MCA program to gain expertise that they do not currently have; and b) the MCA is meant to foster bold and innovative ideas that, in some cases, cross disciplinary boundaries. The work should result in publications that lay the foundation for future competitive research proposals.
 - Successful proposals should demonstrate a high likelihood of a synergistic and mutually beneficial collaboration between the PI and partner(s) given each of their respective skills, background, and areas of expertise. This should be more than what is normally achievable through a typical collaborative research grant.
 - MCA Broader Impacts are expected to contribute to broadening participation in research by PIs whose research careers have been diverted by extensive administrative duties, service, outreach, mentoring, and/or teaching, in addition to project-specific broader impacts.
 - The required Letter of Collaboration by the Partner and the Departmental Letter should demonstrate support for the candidate and the plans for advancement.

Discussion

- How has being an MCA awardee impacted your:
 - Research?
 - Teaching?
 - Future plans?
- What would you recommend to a colleague who is interested in applying to the MCA program?
- Did you have a collaborator on your proposal? How did that work out?



Get involved

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

February 15, 2023

3:00–4:00 p.m. CT / 4:00–5:00 p.m. ET

- Topic: Data Science Education and Workforce Development in Genomics
- Solicitation: NIH Research Experience in Genomic Research for Data Scientists

March 15, 2023

3:00–4:00 p.m. CT / 4:00–5:00 p.m. ET

- Topic: Building new data science collaborations in the Midwest
- Solicitation: NSF Research Coordination Networks (RCN)



Get Involved ▾

MBDH Collaboration Cafe

Community Development and Engagement Program

Community Advisory Panel

Midwest Carpentries Community

Data Science Student Community

Regional Activities

Event in a Box Tool Kit

Explore Funding Opportunities

Join a Working Group

