

# Midwest Big Data Innovation Hub

## Collaboration Cafe

NSF Eddie Bernice Johnson “Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science” (INCLUDES) initiative

Network Connectors program

July 2023



IOWA STATE  
UNIVERSITY



supported by NSF [1916613](#)



# Welcome



- [Dr. Adrienne Dixson](#) | Program Director, INCLUDES

## Invited guests

### NSF INCLUDES Alliances

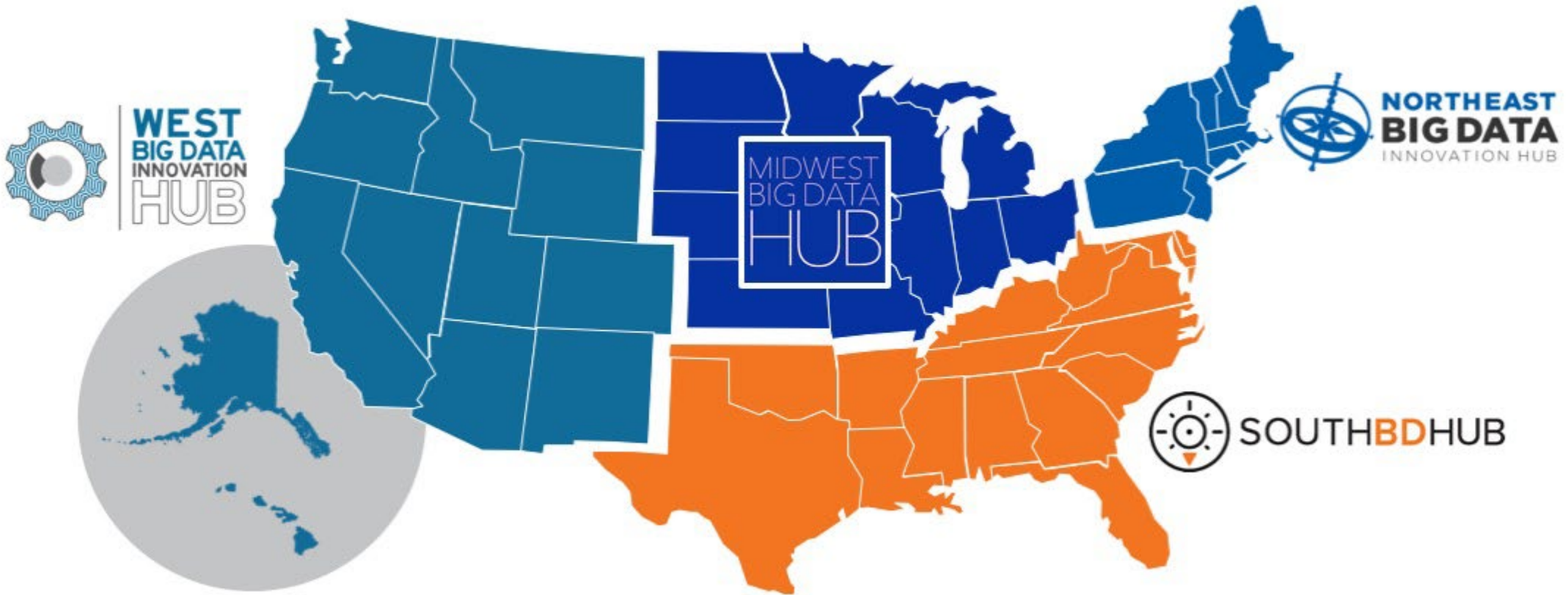
- Accelerate Latinx Representation in STEM Education (ALRISE)
- Alliance Supporting Pacific Impact through Computational Excellence (ALL-SPICE)
- Cultivating Indigenous Research Communities for Leadership in Education and STEM (CIRCLES)
- National Data Science Alliance
- Native FEWS Alliance
- TAPDINTO-STEM (Midwest Hub)

### NSF AI Institutes

- AI Institute for Climate-Land Interactions, Mitigation, Adaptation, Tradeoffs and Economy (AI-CLIMATE)
- AI Institute for Future Edge Networks and Distributed Intelligence (AI-EDGE)
- AI Institute for Future Agricultural Resilience, Management, and Sustainability (AIFARMS)
- AI Institute for Resilient Agriculture (AIIRA)
- AI Institute for Intelligent CyberInfrastructure with Computational Learning in the Environment (ICICLE)
- AI Institute for Inclusive Intelligent Technologies for Education (INVITE)
- Artificial Intelligence for Environmental Sciences (AI2ES)
- Institute for Student-AI Teaming
- Molecule Maker Lab Institute (MMLI)



# 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.



# 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



# July solicitation: NSF INCLUDES Network Connectors



NSF 22-622	Proposals due: <b>October 24, 2023</b> <a href="#">[program overview]</a>
Program goals	“The vision of NSF INCLUDES is to catalyze the STEM enterprise to work collaboratively for inclusive change, resulting in a STEM workforce that reflects the diversity of the Nation’s population. More specifically, NSF INCLUDES seeks to motivate and accelerate collaborative infrastructure building to advance equity and sustain systemic change to broaden participation in STEM fields at scale.”
Size and duration (max)	Up to \$250,000/yr over 2 years. “Requests that exceed \$250,000 may be considered, depending on the description of need in the proposal and the proposed activities.”
Estimated # of awards	5 Network Connectors
LOI/preproposal	No, but proposers are “strongly encouraged to submit a one-page description of their proposal idea to <a href="mailto:nsfincludes@nsf.gov">nsfincludes@nsf.gov</a> at least two months prior to proposal submission” for feedback on alignment; in 2023 this would be by August 24
Eligibility limits & other guidance	<ul style="list-style-type: none"> <li>• An organization may serve as a lead organization on only one proposal per project type, not including conferences.</li> <li>• A PI or co-PI of an active NSF INCLUDES Alliance may not be a PI or co-PI on a proposal under this solicitation, if the Alliance would still be active at the start of the new award [does not include conference proposals].</li> <li>• An individual may serve as a PI or Co-PI on only one NSF INCLUDES proposal per annual due date, not including conferences.</li> </ul>





# NSF INCLUDES Network Connectors

INCLUDES is an NSF-wide program

- Directorate for Biological Sciences
- Directorate for Computer and Information Science and Engineering
- Directorate for STEM Education
- Directorate for Engineering
- Directorate for Geosciences
- Directorate for Mathematical and Physical Sciences
- Directorate for Social, Behavioral and Economic Sciences
- Directorate for Technology, Innovation and Partnerships
- Office of Integrative Activities
- Office of International Science and Engineering



# NSF INCLUDES Network Connectors description

Network Connectors initiate or maintain linkages to the NSF INCLUDES National Network for projects or partnerships that are not currently funded by NSF INCLUDES. Network connector proposals may be submitted by existing NSF-funded and non-NSF funded projects seeking funding to provide or participate in:

- new collaborations that expand the impact of active or previously-funded NSF INCLUDES projects;
- new opportunities for collaboration across the NSF INCLUDES National Network;
- novel ideas to bring a community of NSF-funded projects into the NSF INCLUDES National Network;
- efforts to equitably scale up innovative and evidence-based approaches to broadening participation in STEM;
- NSF-funded research activities with the goal of broadening participation in STEM;
- development of shared goals, measures, and mutually reinforcing activities to build collaborative infrastructure for broadening participation in STEM;
- communicating knowledge and results from the NSF broadening participation portfolio of programs and projects, NSF Center-scale activities, or other major Foundation investments; or
- communicating findings from the science of broadening participation research community to the NSF INCLUDES National Network, especially pertaining to new efforts to translate basic research into practice.

Network Connectors implement connections to NSF-funded or other existing projects and evidence-based approaches.

# INCLUDES Network Connectors guidance from solicitation

“All NSF INCLUDES funded projects must operationalize five design elements of collaborative infrastructure –

- (1) shared vision
  - (2) partnerships
  - (3) goals and metrics
  - (4) leadership and communication
  - (5) expansion, sustainability, and scale
- to create systemic change that will lead to the substantially broadened participation of individuals from historically excluded and under-served groups in STEM.”

“Proposals must align with the four NSF INCLUDES key principles, described below:

- (1) broadening participation in STEM,
- (2) enabling sustainable change in systems,
- (3) scaling up outcomes in ways that advance equity, and
- (4) building collaborative infrastructure.

These key principles should be integrated throughout proposals and should align with the proposed activities.”

“Projects must include plans to connect and contribute to the NSF INCLUDES National Network and the NSF INCLUDES Coordination Hub.”

# Network Connectors review criteria

## Shared Vision:

What broadening participation challenge(s) will be addressed and what is the broader vision for effecting systemic change?

How will the work of the existing project inform the establishment of the shared vision?

What innovative strategies will be used to address the identified broadening participation challenge(s)?

How will the vision be informed by an assessment of the needs of the identified community(ies) in the broadening participation challenge, including why and how they are affected by inequity?

## Partnerships:

What organizations are the proposed partners and why are they important to address the identified broadening participation challenge(s)?

Why is this set of partners the right set to undertake the proposed activities?

How are individuals most impacted by the identified challenges involved in leadership or authentic partnership with the project?

## Goals and Metrics:

What are the measurable objectives, outcomes, and progress indicators that will demonstrate accomplishment of the project's goals?

Who will be the external evaluator and what is the evaluation plan?

What types of data will be collected? How will data be used? How will the data be managed and shared?

## Leadership and Communication:

What organizations and individuals will lead the project and how have they demonstrated capacity and vision to develop, manage, and lead?

How will the project provide for collective and distributed leadership and build capacity for leadership among the partnering organizations?

How will project activities, progress, and achievements be broadly shared in new and creative ways with those most impacted by the challenge and with other communities of interest, including the NSF INCLUDES National Network, the NSF INCLUDES Coordination Hub, and other interested stakeholders?

## Expansion, Sustainability, and Scale:

How will the project's activities contribute to next steps for equitable expansion, sustainment, or scale?

What will be the overall contribution to broadening participation in the nation's scientific workforce?

# Q&A and Discussion

- INCLUDES Alliance guests
  - What challenges could the Network Connectors program help you address?
  - What should proposers be mindful of understanding about your communities?
  - What scale of participation would be impactful?
- AI Institute guests
  - What Alliance needs could be a good fit for your programmatic work?
  - What activities are at the right level of readiness to be able to engage?
  - What scale of participation is possible?

# Get involved

- <https://midwestbigdatahub.org/cafe>
- [info@midwestbigdatahub.org](mailto:info@midwestbigdatahub.org)

## August 16, 2023

3:00–4:00 p.m. CT / 4:00–5:00 p.m. ET :

- Topic: Data Science for Biomedical Discovery
- Solicitation: NIH NLM Research Grants in Biomedical Informatics and Data Science (R01)

## September 20 & October 18, 2023

3:00–4:00 p.m. CT / 4:00–5:00 p.m. ET

- Topic: Cyberinfrastructure Workforce Development
- Solicitations: NSF CyberTraining & SCIPe



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