



#### **Established Program to Stimulate Competitive Research (EPSCoR)**

**Mission**: To enhance the research competitiveness of eligible jurisdictions by improving (STEM) capacity and capability through a diverse portfolio of investments from talent development to local infrastructure.

**Eligibility**: A jurisdiction can participate in the NSF's EPSCoR programs if its NSF research funding is equal to or less than 0.75% of the total NSF budget (averaged over the most recent five-year and excluding EPSCoR funding and NSF funding to other federal agencies). Visit EPSCoR site for details.

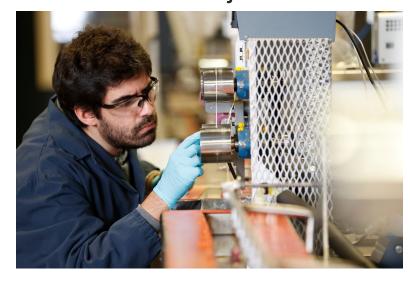
NSF's only state-based program (directed towards specific states). EPSCoR is a multi-disciplinary program.





#### **EPSCoR Trivia**

- How many EPSCoR jurisdictions exist? 28
- Which non-EPSCoR jurisdiction receives the highest % of NSF research funds? California 13%
- Which EPSCoR jurisdiction receives the least? Guam -.01%



The top five non-EPSCoR states (CA, TX, NY, MA, MD) receive 37.6% of NSF research funds!

**ALL EPSCoR** Jurisdictions (28) receive ~12% of NSF research funds!

AR - .36%





**Numbers by State** 

Trends Details

**Filters** 



Report Ran on February 7, 2024 with the Selected Filters: New Awards Funded for Fiscal Year(s) 2023, All Directorate(s), All Division(s), All States, (All) Minority Serving Institutions, AR State(s), All Congressional District(s), All Institution Name(s), All Institution Type

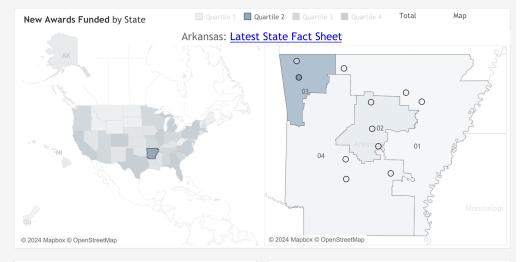


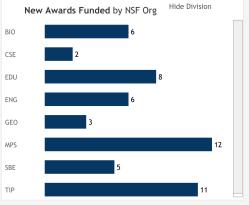


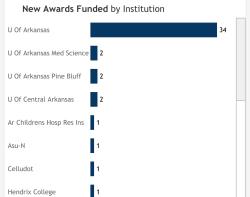






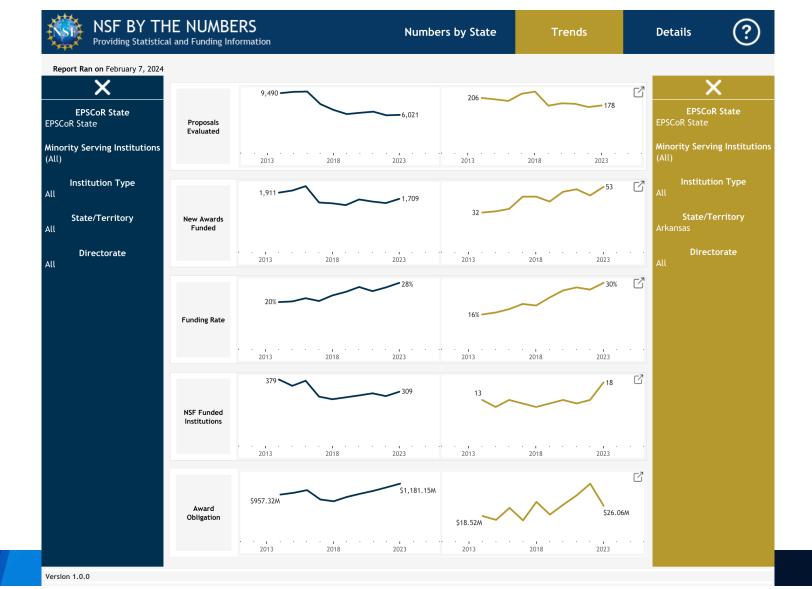




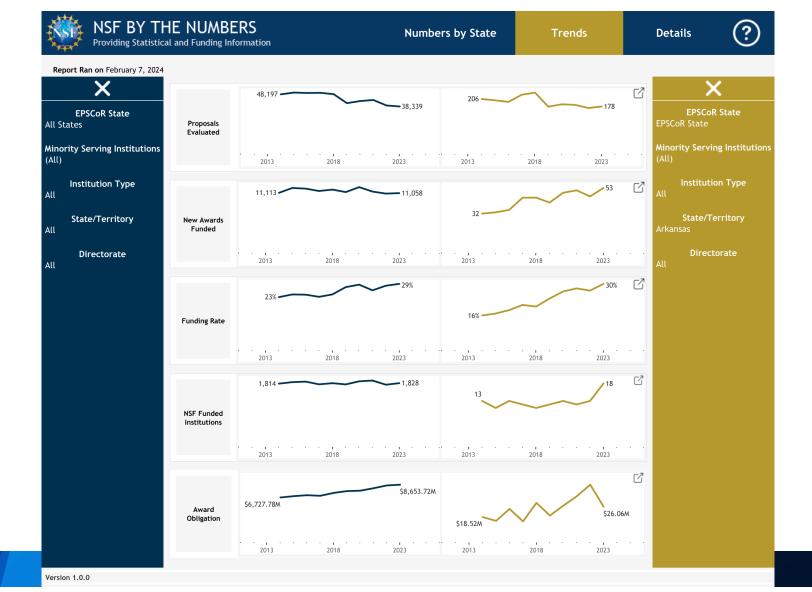




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#### **EPSCoR Investment Strategies**

Research Infrastructure Improvement (RII) Programs – RII Track-1 (sunsetting), E-CORE, E-RISE, Track-2, ERF (78-84% of EPSCoR budget)

Support physical, human, and cyber infrastructure within academic institutions across each jurisdiction

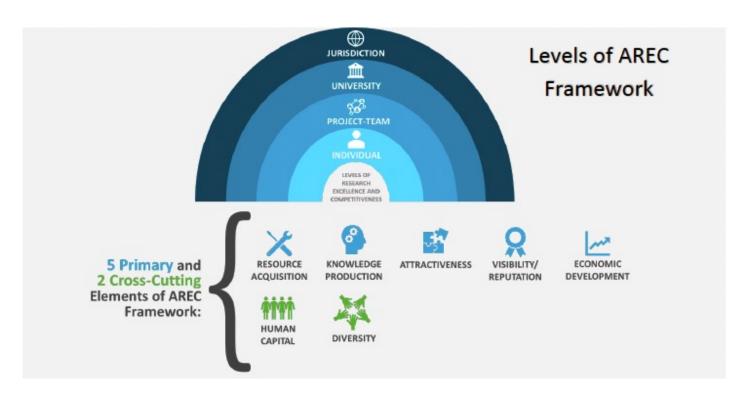
- Co-Funding w/ NSF Directorates & Offices (16-22% of budget)
  - Meritorious proposals reviewed in other NSF programs that also satisfy EPSCoR programmatic criteria
- Outreach and Workshops (0.5-1% of budget)
  - Interaction among EPSCoR Community and NSF to build mutual awareness and develop areas of potential strength





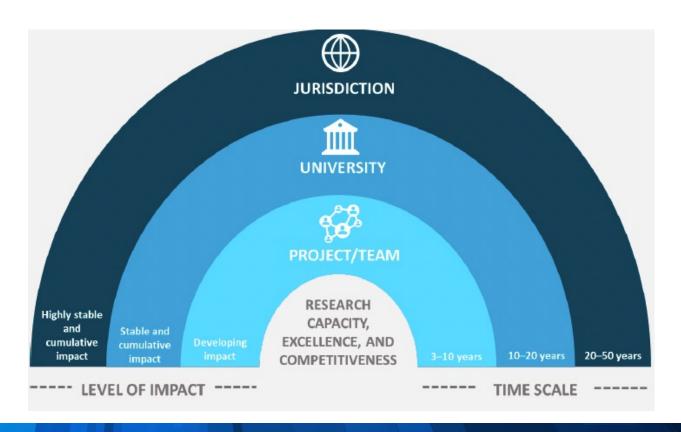


# Key elements that lead to success in building research capacity





# We Need to Affect Research Capacity at Scale and Speed





# REQUIRES A RESEARCH ECOSYSTEM APPROACH THAT IS DYNAMIC AND CAN BE TAILORED TO A JURISDICTION'S UNIQUE NEEDS



### Two New RII programs that:

- Provide more opportunity for each jurisdiction to be aware of, and develop its own unique strengths and/or respond to its own needs and challenges
- Develop collaborations across the jurisdiction to be able to build research capacity for, and, across the jurisdiction (not single institution awards!)
- Position the jurisdiction to be competitive for wider NSF funding beyond EPSCoR
- Provide the mechanism for the jurisdiction to respond and develop dynamically over time to it's needs in a matrix-type strategy
- Leads to jurisdiction-driven research competitiveness and thus, EPSCoR Goals



#### **May 2023 Release of Two New Programs**



EPSCoR Collaborations for Optimizing
Research Ecosystems Research
Infrastructure Improvement Program (E
CORE RII)

EPSCoR Research Incubators for STEM
Excellence Research Infrastructure
Improvement (E-RISE RII)

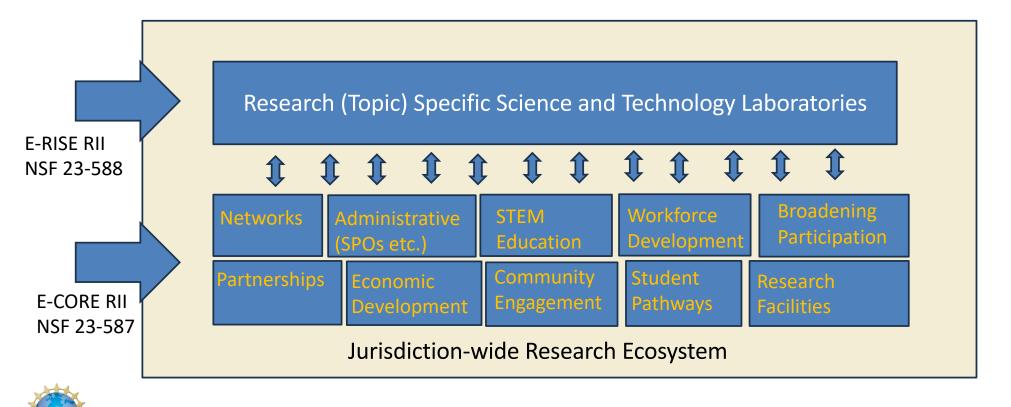
**E-CORE** supports jurisdictions in building capacity in one or more targeted research infrastructure cores that underlie the jurisdiction's research ecosystem. July 09, 2024

**E-RISE** builds a jurisdiction-wide network of teams of researchers that incubate research in a STEM topical area aligned with priority areas for jurisdiction. **August 13, 2024** 



Based on the Total Research Ecosystem of a Jurisdiction

# E-CORE and E-RISE are aimed at different levels of the jurisdictional research ecosystem



**NSF EPSCoR** 

	RII Track-1* NSF 23-582	E-CORE RII NSF 23-587	E-RISE RII NSF 23-588	
Duration of award	5 yrs	4 yrs + 4 yrs renewal	4 yrs + 3 yrs renewal	
Max budget amount	\$20M over 5 yrs	\$8M + \$8M in renewal = <b>\$16M</b> over 8 yrs	\$7M + \$4.5M in renewal = <b>\$11.5M</b> over 7 yrs	
Max # of active awards per jurisdiction	1	N/A – not a limited submission competition	N/A - not a limited submission competition	
Cost share amount	20% of budget	% requirement only in renewal (TBD)	% requirement only in renewal (TBD)	
Due Dates	August 23, 2023 (last competition)	July 9, 2024 2 <sup>nd</sup> Tuesday in July thereafter	August 13, 2024 2 <sup>nd</sup> Tuesday in August thereafter	



#### **NSF Investments**

Community, Stakeholders, and Public Jurisdictional EPSCoR Steering Committee

E-RISE RII NSF 23-588 Other EPSCoR-RII Investments Other NSF Centers or Center-Like Activities (Not limited to state) Other Research or Translational Activities in State

EPSCoR Collaborations for Optimizing Research Ecosystems Research Infrastructure Improvement Program (E-CORE RII, NSF 23-587) Supporting an Administrative Core that Will Build:

- Administrative Core
- Evaluation
- Sustainability
- Communication
- Additional Cores as Selected by Jurisdiction

State and Local Resources and State and Local Government Agencies Partnerships

- Industry Partnerships
- Tribal Partnerships
- Public and Private Partnerships

Other Jurisdictional and Local Sectors

Other Federal Infrastructural Support e.g. NIH, USDA, DOE, DOD, NASA

Other Federal Infrastructure

**Academic Institutions** 

**R1 Institutions** 

Emerging Research Institutions including Primarily Undergraduate Institutions

Community Colleges

Minority Serving Institutions



## To be successful, E-CORE projects must:

- Be focused on the <u>Jurisdiction as a whole</u>, irrespective of Scientific foci (or show a trajectory towards that over the potential 8 years of the award)
- Build Networks, or networks of networks to bring folks together
- To <u>look inward</u> at the challenges and opportunities to building fundamental research infrastructure and capacity
- To focus in on several key areas (depth vis breadth) to move the needle



#### What will an E-CORE look like?

Administrative Core (Required)



# Community, Stakeholders, and Public EPSCoR Colla Research Infrastructur (E-CO

#### Reflection and Analysis

#### **NSF Investments**

Jurisdictional EPSCoR Steering Committee

E-RISE RII NSF 23-588 Other EPSCoR-RII Investments Other NSF Centers or Center-Like Activities (Not limited to state) Other Research or Translational Activities in State

#### **Academic Institutions**

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State and Local Resources and State and Local Government Agencies **Partnerships** 

- Industry Partnerships
- Tribal Partnerships
- Public and Private Partnerships

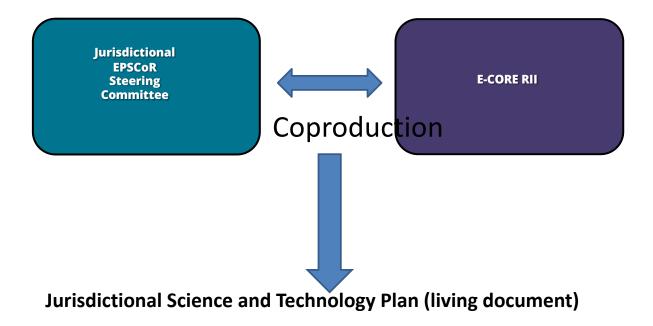
**Other Jurisdictional and Local Sectors** 

Other Federal Infrastructural Support e.g. NIH, USDA, DOE, DOD, NASA

Other Federal Infrastructure

**Jurisdictional Research Competitiveness Ecosystem** 

20



Shows strengths, needs and challenges in to the jurisdiction-wide research ecosystem

Identifies priorities

- Fundamental research infrastructure (addressed by E-CORE)
- Opportunities to build research strength (addressed by E-RISE)



#### What will an E-CORE look like?

Research Support Core

Academic Inf. and Rsh, Fac, Core

Higher Ed. Pathways Core

STEM Edu (K-16) Core

Workforce Development Core

**Broadening Participation Core** 

National and Global Partnerships Core

Community Engagement Core

**Economic Development and Use-Inspired Core** 

Early Career Research Trainee Pathway Core

#### **Jurisdictional**

- Needs
- Challenges
- Strengths

Administrative Core (Required)



## How will an E-CORE Develop over time?

Academic Inf. and Rsh, Fac, Core

Higher Ed. Pathways Core

STEM Edu (K-16) Core

Workforce Development Core

**Jurisdictional** 

- Needs
- Challenges
- Strengths

Administrative Core (Required)

**Broadening Participation Core** 

Research Support Core

National and Global Partnerships Core

Community Engagement Core

Economic Development and Use-Inspired Core

Early Career Research Trainee Pathway Core



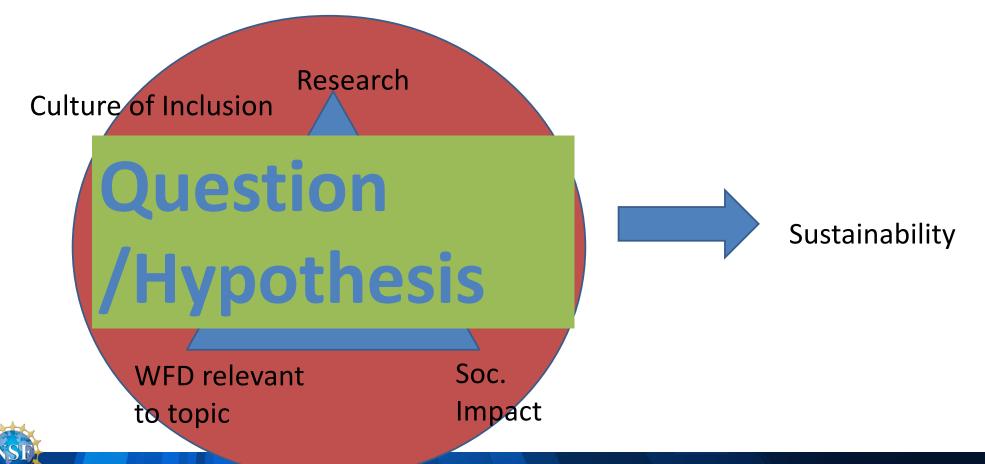
"Other" Core

#### Merit Review Criteria

- In addition to Intellectual Merit and Broader Impacts all proposals will be reviewed according to the additional Solicitation Specific Review Criteria
- Connection and potential impact of E-CORE RII to both jurisdictional needs and research capacity, as well as EPSCoR Mission and Goals
  - Are all cores well justified to the needs of the jurisdiction? Is there the potential, as evidenced by data, for each core to substantially benefit the jurisdictional research capacity? Are the cores aligned to EPSCoR mission and goals? Are the efforts sustainable, with a clear pathway to sustainability?
- Support of diversity and a culture of inclusion of different institution types and sectors (e.g., academia, industry, and government)
  - How well does the proposal describe how the project and project leadership embody diversity, equity, inclusion, and accessibility throughout all of its activities to create a jurisdiction-wide vision? Are clear, measurable goals and metrics specified?
- Plan for project management, leadership, and partnerships
  - Does the proposal provide a reasonable plan for forming a visionary and effective leadership team? Does the proposal describe a well-informed process by which all necessary disciplines, skills, perspectives, and capabilities will be brought together to form an interdependent, multidisciplinary, and diverse leadership team that can work and communicate effectively? Is the set of partners identified appropriate for addressing the proposed work? Does the proposal have a set of partners from multiple organizations that have clear, deep and meaningful roles? Does the Strategic Plan and Evaluation and Assessment Plan provide evidence that each project element will be well executed and will allow for clear and meaningful co-production with the Jurisdictional EPSCoR Steering Committee?



#### Structure of an E-RISE



But must be aligned to Jurisdictional Research priorities as outlined in State S&T Plan.

# RESEARCH FIELD IS OPEN



## To be successful E-RISE projects MUST

- Evidence of research excellence in the research topic across the jurisdiction
- Evidence of elements being successful in their stated goals (WFD and Use-Inspired work)
- Articulation of a clear pathway toward sustainability and evidence of accumulation of some resources or commitment thereof to achieve those goals
- Aimed at giving three additional years specifically to accomplish sustainability
- Proposal and Reverse Site Visit/Site Visit (details in a solicitation to come)



#### Merit Review Criteria

- In addition to Intellectual Merit and Broader Impacts all proposals will be reviewed according to the additional Solicitation Specific Review Criteria
- Connection and potential impact of the project to jurisdictional research capacity building and EPSCoR goals
  - What is the potential of the project to advance the relevant fields of STEM research while simultaneously enhancing jurisdictional research competitiveness and developing jurisdictional research capacity and infrastructure in the topic area of choice? How will the proposed activities contribute to the national and international recognition of the project participants and participating organizations? How will the proposed project contribute to EPSCoR goals and mission? Is the project connected to the needs of the jurisdiction as as supported by the jurisdiction's S&T plan?
- Development of a skilled workforce that is relevant to the project and its outcomes
  - What is the potential for the proposed activities to sustain a pathway of highly skilled students and postdoctoral fellows including those who are traditionally underrepresented in associated disciplines and industries, who can excel in this focus area, and who can succeed in careers in academia and/or industry? What novel and effective ways are proposed to achieve the workforce development goals?

## Merit Review Criteria (Cont)

- Support of diversity and a culture of inclusion of different institution types and sectors (e.g., academia, industry and government)
  - How well does the proposal describe how the project will embody diversity, equity, inclusion, and accessibility throughout all of its activities? Are there clear, measurable goals and metrics specified?
- Plan towards sustainability and societal impact
  - What is the potential of the project to increase the capacity of the participating organizations and capability of project participants to propose and implement research activities in the future? Does the project present a clear plan for sustainability that effectively leverages potential current and future investments that can ultimately allow this team to significantly contribute to the field and jurisdiction over the long term? Does the project present plans that demonstrate the potential and consideration of the realization of societal impacts to the jurisdiction and its stakeholders from its work in a timebound manner?
- Plan for project management, leadership, and partnerships
  - Does the proposal provide a reasonable plan for forming a visionary and effective leadership team? Does the proposal describe a well-informed process by which all necessary disciplines, skills, perspectives, and capabilities will be brought together to form an interdependent, multidisciplinary, and diverse leadership team that can work and communicate effectively? Is the set of partners identified appropriate for addressing the proposed work? Does the proposal have a set of partners from multiple organizations that have clear, deep and meaningful roles? Does the Strategic Plan and Evaluation and Assessment Plan provide evidence that each project element will be well executed?



## Proposals have a slightly different structure

- Part 1: State of the Jurisdiction and E-CORE/E-RISE vision
  - What, and why they are going to do it. Remember networks, evaluation, and focus.
- Part 2: Strategic Plan, Assessment and Evaluation
  - HOW are they going to do it, and what does success look like?
- Part 3: Leadership, organization, and Management
  - Have that got the folks in place and systems to run a large jurisdiction wide program (that allows anyone to participate)
- Part 4: Results from Previous support
  - Have they got a track record that sets them on a trajectory to achieve the promised made. (or can they build the ecosystem they envision?)



#### For more information about E-CORE/E-RISE

- Two webinars are available on the NSF EPSCoR Website
- Reach out to
  - For E-CORE questions
    - EPSCoR-CORE@nsf.gov
  - For E-RISE questions
    - EPSCoR-RISE@nsf.gov









#### **Important Information And Revision Notes**

- "EPSCoR Research Infrastructure Improvement (RII) Track-4: EPSCoR Research Fellows" is renamed "EPSCoR Research Infrastructure Improvement (RII): EPSCoR Research Fellows."
- PI eligibility is changed to include only submitters at the non-tenured and tenured Assistant and Associate professor ranks (or equivalent ranks).
- Language was added to clarify fellowship duration, activities at the primary host site, and allowable activities at a secondary host site.
- Language was added to clarify where the submission should include the NSF Directorate, Division, and Program that most closely aligns with the proposal's research focus.



- 1) Budgets may include <u>up to 6</u> months of salary for the PI and one additional trainee. Proposals may be for up to 24 months.
- 2)Total funds requested may not exceed \$300,000.
- 3) Track with NASA
- 4) Deadline April 22, 2024
- 5) New solicitation coming soon.

EPSCoR-RII Research Fellows awards build research capacity in EPSCoR eligible institutions and transform the career trajectories of early and mid-career investigators by supporting collaborative visits to the nation's premier private, governmental, or academic research centers.



Research Day in HI

# RII TRACK-2 EXPECT A NEW SOLICITATION SOON!



#### For more information about RII ERF and Track-2 (RII FEC)

Track-4 – Chinonye Whitley <a href="mailto:cwhitley@nsf.gov">cwhitley@nsf.gov</a>

Track-2 - Jose Colom Ustariz <a href="mailto:jcolom@nsf.gov">jcolom@nsf.gov</a>





# BUT THERE IS A LOT MORE OF NSF...



# CHIPS and Science Act: What it Means for EPSCoR and NSF

- Requires that by 2029,
   20% of R&RA and EDU programs and activities be awarded to EPSCoR institutions
  - Stepwise,
  - 15.5% in FY23
  - 16% in FY24
  - 16.5% in FY25
  - 17% in FY26
  - 18% in FY27
  - 19% in FY28
  - 20% in FY29

- Requires that by 2025,
   20% of funds
   appropriated to
   Scholarships be
   awarded to support
   EPSCoR institutions.
  - Stepwise,
  - 16% in FY23
  - 18% in FY24
  - 20% in FY25-29

- Freezes EPSCoR eligibility for five years
- From FY23, requires additional annual reporting to Congress on progress

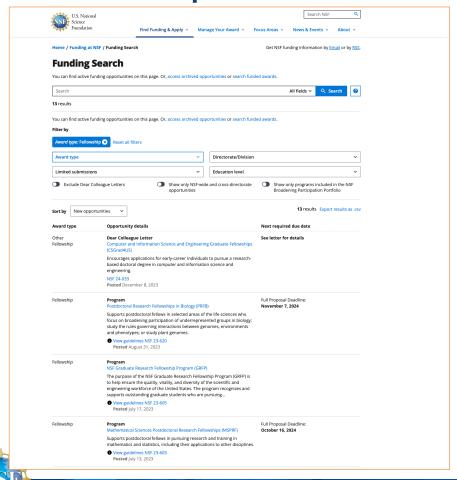


# Opportunities for Faculty

Program Name	Solicitation	Next Deadline	Description	Funding
Computer and Information Science and Engineering Research Initiation Initiative (CRII)	23-576	September 18 2024	Supports early-career scientists at non-Carnegie R1 institutions in computer and information science and engineering who lack access to organizational resources, enabling them to undertake exploratory research and develop collaborations and new approaches.	\$175k, up to 2 years
EHR Core Research: Building Capacity in STEM Education Research	22-548	February 23 2024 - Deadline date	Supports activities that will advance STEM education research, including professional development for researchers, institutional training on the use of cutting-edge research techniques, and conferences.	
Established Program to Stimulate Competitive Research: Research Infrastructure Improvement	24-528	22-Apr-24	EPSCoR-RII Track-4 awards build research capacity in EPSCoR eligible institutions and transform the career trajectories of early career investigators by supporting collaborative visits to the nation's premier private, governmental, or academic research centers.	Up to \$300k, 2 years
Faculty Early Career Development Program (CAREER)	22-586	July 24 2024	One of the most well-known and competitive awards comes through the CAREER program, which funds proposals from assistant professors (or equivalent ranks) whose proposals successfully integrate teaching and research.	
Mid-Career Advancement (MCA)	22-603	February 1 2024 - March 1, 2024 -	Supports opportunities for scientists and engineers at the associate professor rank (or equivalent) to substantively enhance and advance their research program through synergistic partnerships.	
NSF Boosting Research Ideas for Transformative and Equitable Advances in Engineering (BRITE)	23-592		Supports experienced researchers in forging new research directions or entering new fields.  Research must be in one or more areas supported by the Division of Civil, Mechanical and Manufacturing Innovation. The PI must hold a tenured faculty appointment at the Associate/Full Professor rank or equivalent	\$100,000 - \$200,000 per year



#### Fellowships: Postdocs, Grad Students

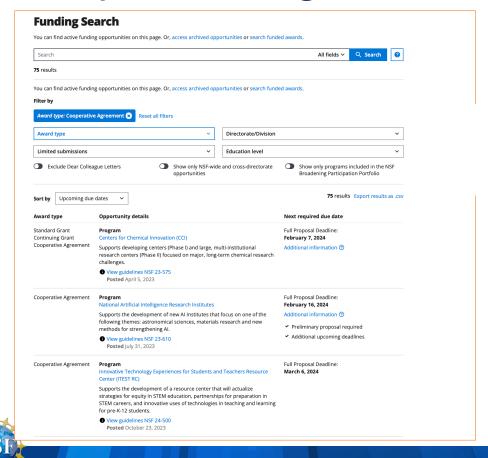






Supports postdoctoral researchers in performing work that will broaden their perspectives, facilitate interdisciplinary interactions, and help establish them in leadership positions within the atmospheric and geospace sciences communities.

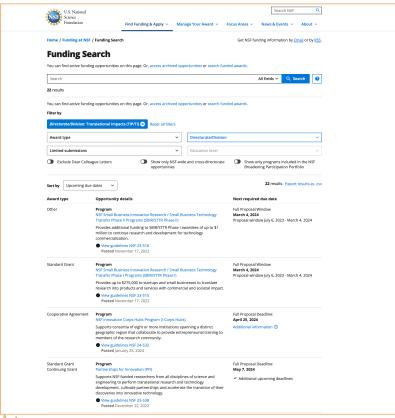
# Cooperative Agreements: \$MultiMillion





Supports the implementation of research infrastructure — including equipment, cyberinfrastructure, large-scale datasets and personnel — whose total project costs fall between \$20 million and \$100 million.

# Technology Innovation and Partnership(TIP)



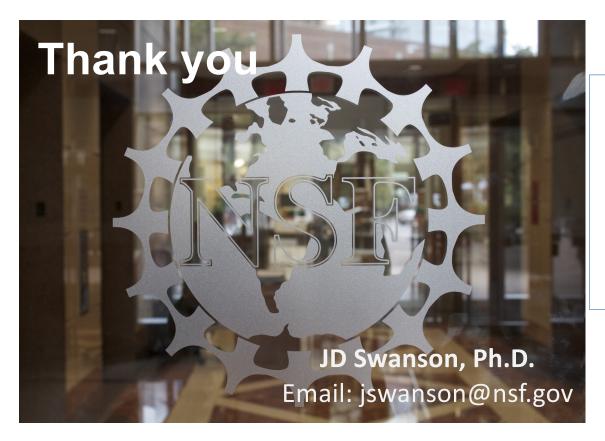


Supports institutions of higher education that seek to build capacity and infrastructure for translation of fundamental academic research into tangible solutions that benefit the public.

## Important Considerations in Capacity Building

- What capacity do you currently have?
- What do you need to build capacity?
- How will you connect the science to AR?
- How will you leverage the full intellectual capacity of AR?
- How will you sustain that capacity?
- How will you implement the project and mitigate risks?







Consider become a panelist....

https://public.govdelivery.com/accounts/USNSF/subscriber/new?category\_id=USNSF\_C54