2022 UPDATE

NSF EPSCoR IMPACTS IN ARKANSAS

ARKANSAS NSF EPSCoR

All Track-1 projects are administered through the Arkansas Economic Development Commission. Visit arepscor.org for more info or follow us on social media @arepscor

Active NSF EPSCoR Awards in Arkansas Including Co-Funding

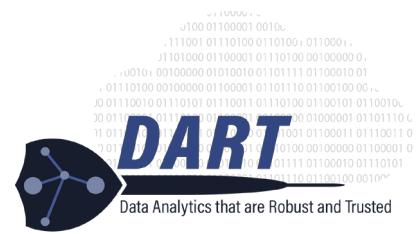| Project Title	Institution	Total Award
EPSCoR Workshop: Building an EPSCoR Community for Science and Technology Innovation	AEDC	$ 49,700.00
IRES Track I: Collaborative Research:Application-Specific Asynchronous Deep Learning IC Design for Ultra-Low Power	UARK	$ 199,976.00
EPSCoR Workshop: Artificial Intelligence (AI) with No-Boundary Thinking (NBT) to Foster Collaborations in Research, Education and Training	A-State	$ 49,999.00
Track-1: Data Analytics that are Robust and Trusted (DART): From Smart Curation to Socially Aware Decision Making	AEDC	$ 20,000,000.00
Track-2 FEC: Systems Genetics Studies on Rice Genomes for Analysis of Grain Yield and Quality Under Heat Stress	UARK	$ 5,564,316.00
Track-4: Harnessing Big Event Data with Heterogeneous Feature: Intelligent Food-Borne Outbreak Investigations & Beyond	UARK	$ 238,173.00
Track-4: Synthesis, Characterization and Applications of FRET based Ionic Materials	UALR	$ 188,863.00
Track-4: Chloroplast retrograde signaling during plant immunity: integrating signal transduction and cellular dynamics	UARK	$ 163,299.00
		$26,454,326.00

With the $72M in Track-1 and Track-2 awards the state has received since 2007, EPSCoR researchers have successfully leveraged over $163M in additional research funding to Arkansas institutions (below). This includes numerous SBIR grants from multiple federal agencies to commercialize technology developed in EPSCoR-funded labs.

AEDC recently implemented an SBIR Matching Grant program for the state, which has attributed to an increase in SBIR applications from and awards to Arkansas investigators. Arkansas has also experienced an increase in the number of faculty and students participating in the NSF I-Corps program.

Grant Period	Federal EPSCoR Award (T1 + T2)	State Match	Additional Funds Generated
2007-2010	$ 9,000,000	$ 4,500,000	$ 15,049,719
2010-2015	$ 20,000,000	$ 4,000,000	$ 76,255,721
2014-2017	$ 3,150,000	$ -	$ 21,687,851
2015-2020	$ 20,000,000	$ 4,000,000	$ 35,310,589
2020-2025	$ 20,000,000	$ 4,000,000	$ 14,993,343
Total	**$ 72,150,000**	**$ 16,500,000**	**$ 163,297,223**

EPSCoR Investments in Arkansas: Current Track-1 Project

Arkansas began work on the Track-1 project Data Analytics that are Robust and Trusted (DART) in July of 2020. This project will investigate key aspects of three barriers to practical application and acceptance of modern data analytics: the management of big data, the security and privacy of big data, and interpretability of the models used to understand big data. DART will also address the looming gap in the number of data science jobs and data science-skilled workers in the country by transforming the K20 education landscape and building a statewide data science educational ecosystem. DART's industry advisory board includes representatives from Walmart, Arvest, Hytrol, Deloitte, LinkedIn, Acxiom, Arkansas Blue Cross Blue Shield, and others. The project recently awarded over $700K in seed funding. Scan the QR code to read a short blog about the project, or visit dartproject.org for information.

Outcomes From Previous Track-1 Project

The Center For Advanced Surface Engineering

June 2021 marked the end of Track-1 award OIA-1457888, the Center for Advanced Surface Engineering (CASE). The project strengthened the collaborative research infrastructure in materials science and created a foundation for sustained research activity with these promising results.

Summary of CASE Outputs:

- 311 scientific publications related to CASE research
- More than $100M in additional proposals submitted to federal and private funders
- $35.3M additional research funds secured
- More than 300 collaborative research activities documented
- 20 research-supported patents filed
- 5 new startup companies formed
- 9 new undergraduate and graduate level courses implemented based on CASE research
- 23 courses modified to include results from CASE
- 25 CASE-funded PhD students matriculated
- 20 CASE-funded Master's students matriculated
- Dozens of curriculum kits and 3D printers distributed for K-12 use statewide
- More than 60 faculty participants, 90 graduate students, and 100 undergraduate students involved

Updates from Track-2 and Track-4 Projects

On March 8, 2021 Dr. Noureen Siraj was named Arkansan of the Day by THV11. Dr. Siraj was the recipient of an EPSCoR Track-4 award that resulted in the following accomplishments: Dr. Siraj published 8 papers and mentored 6 PhD students, 18 undergraduate students, and 19 high school students. In 2018, one high school student who performed research with Dr. Siraj became the first student from Arkansas to win the 2nd place grand prize of $50,000 at Intel International Science and Engineering Fair. Scan the QR code for the THV11 Arkansan of the Day article.

The Track-2 project, Systems Genetics Studies on Rice Genomes for Analysis of Grain Yield and Quality Under Heat Stress, involved faculty and graduate student participants from several Arkansas campuses and has resulted in 23 publications.

Updates from EPSCoR Workshop Awards

April 3-4, 2022: NSF EPSCoR Workshop on Artificial Intelligence & No-Boundary Thinking in Downtown Little Rock. The agenda will feature a reception and project showcase at the Clinton Library and full conference day at the Downtown Marriott. Visit epscor.astate.edu for info and registration.

May 2-4, 2022: NSF EPSCoR Workshop on Building an EPSCoR Community for Science and Technology Innovation, in conjunction with the National SSTI Conference in Downtown Little Rock. Visit ssti.org for info and registration.