



**KANSAS NSF ESTABLISHED PROGRAM  
TO STIMULATE COMPETITIVE RESEARCH  
(EPSCoR)**

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***REQUEST FOR PROPOSALS:***

**RESEARCH &  
EDUCATION  
INNOVATION (REI)  
AWARDS**

**For Research in Resiliency and  
Smart Infrastructure**

**Submission Deadline: Tuesday, January 10, 2023**

## Research & Education Innovation (REI) Awards.

Kansas NSF EPSCoR is seeking proposals for Research & Education Innovation (REI) Awards that align with the current NSF EPSCoR Research Infrastructure Investment Track-1 award titled “Adaptive and Resilient Infrastructures Driven by Social Equity (ARISE)”. See <http://arisekansas.org/> for more information about ARISE.

This statewide initiative seeks to advance the resilience of infrastructures that all Kansans depend on—such as water, energy, and transportation systems—by creating tools that ensure support for our most vulnerable communities in both rural and urban areas. The project will also create a pipeline of community leaders and decision-makers who will transform how a community invests in and manages its human and physical infrastructure. Complex infrastructure systems provide essential services for societal well-being and economic prosperity. These systems enable mobility for humans, goods, and services, and delivery of power, water, and other essential utilities to households and businesses. Natural hazards and attacks on cyber and physical assets have made **resilience**—the capacity of a system to absorb a disturbance, adapt, and recover rapidly when disruption does occur—an urgent pursuit for critical infrastructure.

Social equity is essential to resilience since the most socially vulnerable people live and work in the most physically vulnerable buildings and areas (e.g., floodplains) with undersized or undermaintained infrastructure. Federal agencies recognize that many disaster recovery efforts are systemically biased against houseless people, persons with disabilities or living in poverty, racial minorities, ethnic and indigenous populations, or renters. These put racial equity, support for underserved communities, and combatting the climate crises at the center of national security.

To help close this fundamental gap in resilience science and engineering, [ARISE researchers](#) take a convergence approach by integrating expertise from computer science, economics, engineering, public policy, psychology, and other areas.

### Focus Area

Proposed projects must align with the current ARISE project. See <http://arisekansas.org/> for more information. Proposals will be accepted in any topic related to ARISE research and education, but special consideration will be given to proposals in the following areas:

1. Bias in machine learning and/or data science
2. Resiliency planning and risk mitigation within indigenous communities
3. Emergency management; disaster and resilience planning

### Project Director

Dr. Belinda Sturm, Kansas NSF EPSCoR, Foley Hall, University of Kansas, 2021 Constant Ave., Lawrence, KS 66047-3729. Telephone: 785-864-3096.

Email: [nsfepscor@ku.edu](mailto:nsfepscor@ku.edu) Web site: <https://nsfepscor.ku.edu/>

## Source of Funds

The source of funding for REI Awards is Kansas NSF EPSCoR, which receives its funding from the current NSF EPSCoR RII Track-1 award (OIA-2148878), the Kansas Board of Regents (KBOR) and the participating universities.

## Purpose

REI awards are for ARISE research or education initiatives that:

- add significant and measurable value to the research capacity of Kansas institutions of higher education;
- allow the ARISE team to expand faculty involvement and lines of inquiry to its thematic areas;
- increase multidisciplinary, multi-institutional and multi-sector collaborations to promote synergy across ARISE theme areas and lead to long term sustainable funding;
- result in increased ARISE outputs and outcomes (publications, proposals, curricula, broadened participation, etc.); and
- develop stronger linkages between research and education.

## Eligibility

Eligible to apply is any individual with PI status at Kansas State University, University of Kansas, Wichita State University, Emporia State University, Fort Hays State University, Pittsburg State University, Washburn University, or Haskell Indian Nations University.

Researchers not originally participating in the ARISE project are encouraged to apply for REI Awards. To ensure that newly funded researchers are fully integrated with the ARISE project, awardees are required to participate in ARISE meetings and trainings, and collaborators and mentors from the [ARISE project team](#) are encouraged to participate as co-investigators, as appropriate. Applicants are allowed to contact team members.

## Award Amount and Duration of Award

An individual Principal Investigator may submit a total project budget of up to \$50,000 in direct costs for up to 14 months. It is expected that Kansas NSF EPSCoR will fund up to four awards depending upon the funds available. The start date is expected to be April 1, 2023.

## Application Procedure

Prepare the REI Award proposal as a single PDF containing the following components in the order listed:

1. Cover sheet (1 page max) should include:
  - a. Proposal Title
  - b. Name, affiliation and email for the PI and each co-PI
  - c. Project duration (in months) and proposed start date, e.g. 14 months starting April 1, 2023.
  - d. The name, affiliation, and contact information of **three** potential reviewers outside of Kansas with expertise in the area of the proposed project. Reviewers

should not include Ph.D. or postdoctoral advisors or current or past collaborators.

2. Project summary (1 page max) that follows the NSF Proposal Margin and Spacing Requirements (*PAPPG NSF 22-1*).
3. Project description (5 pages max exclusive of references) that includes the following:
  - a. Purpose and rationale for the initiative and its relation to the ARISE project and any specific focus area(s) referenced above
  - b. Specific goals and a timeline for expected outputs and outcomes
  - c. Summary of proposed activities and how they will achieve the specific project goals
  - d. Description of how project may coordinate or supplement the current ARISE project.
4. Biosketch for the Principal Investigator and Co-PIs that follows the NSF Requirements (*PAPPG NSF 22-1*).
5. Budget
  - a. Prepared on the KNE Budget form downloaded from <https://nsfepscor.ku.edu/wp-content/uploads/2020/10/First-Award-RFP-Budget.xls>. Do not exceed \$50,000 in direct costs (F&A, as allowed, will be added when a proposal is awarded)
  - b. Budget justification (1-2 pages).

To submit a proposal, the PDF described above must be sent as an email attachment to [nsfepscor@ku.edu](mailto:nsfepscor@ku.edu).

**White Papers must be submitted via this process by 5:00 pm Tuesday, January 10, 2023.**

### **Review Criteria**

External reviews will be solicited. Kansas NSF EPSCoR, along with research officers at KU, K-State and WSU, will evaluate the initiative described in the proposal. *Research clearly related to the specific areas referenced in the **Focus Area** section above and that are clearly aligned with the current ARISE project will be given priority.* Projects deemed to have the highest impact and merit will receive awards (limited to funds available).

### **Contact Information**

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### **Questions**

Questions may be directed to Doug Byers, Assistant Director, at 785-864-3227 or [dbyers@ku.edu](mailto:dbyers@ku.edu).