



From: Faculty Research Development Office  
Office of the Vice President for Research

Subject: Limited Competition: DOE, Exploratory Research for Extreme-Scale Science (EXPRESS),  
(DE-FOA-0002950)

Date: February 15, 2023

UNM Researchers,

Extreme-scale science recognizes that disruptive technology changes are occurring across science applications, algorithms, computer architectures and ecosystems. Recent reports point to emerging trends and advances in high-end computing, massive datasets, scientific machine learning, and artificial intelligence (AI) on increasingly heterogeneous architectures, including neuromorphic and quantum systems. Significant innovation will be required in the development of effective paradigms and approaches for realizing the full potential of scientific computing from emerging technologies. Proposed research should not focus strictly on a specific science use case, but rather on creating the body of knowledge and understanding that will inform future advances in extreme-scale science. This opportunity is not intended to **incrementally** extend current research in the area of the proposed project. Rather, it is expected that proposed projects will significantly benefit from the exploration of innovative ideas or from the development of unconventional approaches.

Applications must substantially address one of the three research topics:

**A) Modeling Future Supercomputing System**

**Technical Contact:** Hal Finkel, [Hal.Finkel@science.doe.gov](mailto:Hal.Finkel@science.doe.gov)

**B) Programming Techniques for Computational Physical Systems**

**Technical Contact:** Hal Finkel, [Hal.Finkel@science.doe.gov](mailto:Hal.Finkel@science.doe.gov)

**C) Quantum Algorithms Across Models**

**Technical Contact:** Thomas Wong, [Thomas.Wong@science.doe.gov](mailto:Thomas.Wong@science.doe.gov)

The ceiling for new awards for EPSCoR institutions, such as UNM, is \$250K/year for 2-year project periods. Required pre-applications are due to DOE on **March 8, 2023** at 5:00pm EST. The full solicitation can be found at [https://science.osti.gov/ascr/-/media/grants/pdf/foas/2023/SC\\_FOA\\_0002950.pdf](https://science.osti.gov/ascr/-/media/grants/pdf/foas/2023/SC_FOA_0002950.pdf). Full applications are by invitation only.

This is a limited competition. **No more than FOUR (4) pre-applications or applications as the lead institution in a single- or multi-institutional team are allowed.** If you are interested in applying to this program, please submit a statement of interest with a tentative project title and a brief description (200 words) by **NOON, Tuesday, February 21, 2023** via UNM's [InfoReady Review portal](#). **Because of the short turnaround time, this limited competition will be conducted on a first-come, first-served basis. This means that the first four SOIs we receive will be given the four UNM slots.**

If you have any questions, please contact [limited@unm.edu](mailto:limited@unm.edu).

*If you are affiliated with HSC, please contact HSC Limited Competition at [HSC-LimitedComps@salud.unm.edu](mailto:HSC-LimitedComps@salud.unm.edu) for more information.*