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From: Faculty Research Development Office (FRDO)
Office of the Vice President for Research

Subject: Limited Competition: DOE Scientific Discovery Through Advanced Computing
(SciDAC) Institutes (DE-FOA-0002223)

Date: March 18, 2020

UNM Researchers,

The Department of Energy (DOE) Office of Science (SC) program in Advanced Scientific Computing Research (ASCR) hereby announces its interest in receiving applications from large multi-disciplinary, multi-institutional teams for the Scientific Discovery through Advanced Computing (SciDAC) Institutes. An individual may participate in no more than two applications and may be the Institute Director on no more than one application. **An institution may be the Lead Institution on no more than one application.** There is no limitation on the number of applications in which an institution may participate.

The ASCR program's mission (<https://science.osti.gov/ascr> and <https://science.osti.gov/ascr/Community-Resources/Program-Documents>) is to advance applied mathematics and computer science; deliver the most sophisticated computational scientific applications in partnership with disciplinary science; advance computing and networking capabilities; and develop future generations of computing hardware and software tools for science and engineering, in partnership with the research community. A major objective of the ASCR basic research portfolio is to enable DOE-supported science communities to take full advantage of the current and emerging high-performance computing (HPC) systems. ASCR achieves this goal through the SciDAC program (<https://www.scidac.gov>).

The end product of SciDAC is groundbreaking science through the use of HPC. The mission of the currently solicited SciDAC Institutes (SciDAC-5) is to provide intellectual resources in applied mathematics and computer science, expertise in algorithms and methods, and scientific software tools to advance scientific discovery, for the public benefit, in areas of strategic importance to SC and DOE. Further details can be found in the solicitation at https://science.osti.gov/-/media/grants/pdf/foas/2020/SC_FOA_0002223.pdf.

Specific goals and objectives for the SciDAC-5 Institutes are to support, complement or develop:

- Mechanisms for engaging computational grand challenges across application areas within DOE's and SC's Congressionally-authorized mission-space.
 - [Basic Energy Sciences](#)
 - [Biological and Environmental Research](#)
 - [Fusion Energy Sciences](#)
 - [High Energy Physics](#)
 - [Nuclear Energy](#)
 - [Nuclear Physics](#)

- Tools and resources for lowering the barriers to effectively use state-of-the-art computational systems such as those existing and planned for at the Oak Ridge and Argonne Leadership Computing Facilities (OLCF and ALCF), the National Energy Research Scientific Computing Center (NERSC), and similar world-class computing facilities over the next five (5) years.
- Mechanisms for incorporating and demonstrating the value of basic research results from ASCR investments. It is expected that the proposed Institutes will be structured around two main topics: Applied Mathematics and Computer Science, respectively.
- Plans for building up and engaging our Nation’s computational science research communities.

DOE will consider funding cooperative agreements with multi-institution collaborations under this FOA with budgets ranging from \$3M to \$8M per year for five years. Approximately 2 collaborations are expected to be funded, with the number of collaborating institutions depending on the nature of the proposed collaborations. Cost sharing is not required.

Applicants must submit a letter of intent to the sponsor by **April 14, 2020** to be eligible to submit a full application. The LOI is to help in planning the review and the selection of potential reviewers for the proposal. Even though the LOI is required, no responses will be sent to the Letters of Intent. Full proposals are due May 12, 2020.

This is a limited competition. The funding agency limits the number of submissions by a lead institution to one, but there is no limitation on the number of applications in which an institution may participate as a subaward or collaborator. Please follow the **required 2 steps** if you would like to participate on a proposal to the DOE with UNM as the lead.

Step 1 If you anticipate that you will be submitting a preproposal for this internal competition, please send a statement of interest naming the anticipated title of Institute, names and departments of all UNM personnel, and anticipated external collaborators via e-mail to limited@unm.edu by **noon, March 25, 2020**. Note: The statement of interest is required in order for the preliminary proposal to be reviewed by the limited competitions committee.

Step 2 Please submit your **2-page pre-proposal plus, rough budget overview, table of institute members (following template on page 3), and short biosketches of members; all documents in a SINGLE PDF file, 11 point font by NOON on Friday, April 3, 2020 to limited@unm.edu with the subject line indicating: SciDAC - your name. No late submissions will be considered.**

The **pre-proposal narrative** must be in 11-point Times New Roman font with 1-inch margins and include:

- Include this information on the first page:
 - Title of proposed Institute
 - Institute Director Name, Job Title
 - Lead Institution
 - Phone Number, Email Address
 - FOA Number: DE-FOA-0002223
- Identification of proposed targeted area (more details found on pg. 6-11 of solicitation)
- This information should be followed by a clear and concise description of the objectives and technical approach of the proposed research.

Table 1: Institute Members (Institute Director, Deputy Institute Director, Leads for Primary Topic Areas, PI’s and Senior/Key Personnel (Definitions of titles are included on page 5 of the solicitation)) on the application and institutional affiliations

Team Members			Institution
Last Name	First Name	Title	Institution Name