NATIONAL SCIENCE FOUNDATION
2415 EISENHOWER AVENUE
ALEXANDRIA, VIRGINIA 22314

NSF 20-066

Dear Colleague Letter: Mid-scale Research Infrastructure-Engineering Conferences

March 25, 2020

Dear Colleague:

Through this Dear Colleague Letter (DCL), the NSF Directorate for Engineering (ENG) plans to fund workshops to identify critical needs for unique research infrastructure that can serve a research community at a national needs level, and have the potential to significantly advance engineering research. Such workshops are typically identified as conferences in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), and will hereafter be referred to as conferences. Members of the engineering research community are invited to propose conferences that identify gaps in existing mid-scale research infrastructure and define the infrastructure that would be needed to address grand-challenge-level engineering research questions. Conference outcomes may help define either design or implementation projects for future mid-scale research infrastructure.

Advances in engineering and science research supported by the National Science Foundation (NSF) increasingly rely on cutting-edge research infrastructure. NSF has traditionally supported research infrastructure projects at the lower end through the Major Research Instrumentation (MRI) program and at the higher end through Major Research Equipment and Facilities Construction (MREFC) projects. The Mid-scale Research Infrastructure Big Idea is intended to provide NSF with an agile, Foundation-wide process to fund research infrastructure capabilities in the mid-scale range between the MRI and MREFC thresholds. In FY 2019, the NSF released two mid-scale solicitations: Mid-scale RI-1 (NSF 19-537) for design and implementation projects requesting up to $20 million and Mid-scale RI-2 (NSF 19-542) for implementation projects between $20 million and $70 million.

Mid-scale Research Infrastructure projects directly enable advances in fundamental science, technology, engineering, and mathematics (STEM) in one or more of the research and education domains supported by the NSF. Mid-scale projects emphasize strong scientific merit with an identified research infrastructure need of the research community at a national needs level. Demonstrated technical and project management expertise is required for both

design and implementation projects, as are well-developed plans for student training and the involvement of a diverse workforce in all aspects of mid-scale activities.

With this DCL, NSF anticipates funding up to **10** engineering research conferences on mid-scale research infrastructure. Each conference proposal should have strong science and engineering drivers with the aim of identifying potential projects that will identify and address national research infrastructure gaps. The budget of a conference proposal is generally limited to $50,000, but under exceptional circumstances may be supported up to $100,000. The conference should support 20 to 80 attendees. In addition to academic researchers, conference participants may include relevant scientists, engineers, and practitioners from industry, federal agencies, and international organizations. Conferences are encouraged to include individuals with experience in the management of research infrastructure at this scale for the purpose of mentoring investigators in the development of Project Management and Project Execution Plans[1]. Conference proposals should include the deliverable of a report with recommendations that address the identified gap in research infrastructure. The report should position the engineering research community to respond to future opportunities for mid-scale research infrastructure projects.

Prior to submitting a conference proposal, the PI must contact one of the individuals listed below to ensure that the proposal fits the goals of this DCL. PIs will then be directed to appropriate Program Director(s) for submission through the normal submission process outlined in Chapter II.E.7 of the NSF PAPPG. The title of a conference proposal should begin with MsRI-EW. Workshop proposals should be submitted by May 22, 2020, for consideration during Fiscal Year 2020. Proposals or requests where PIs have not contacted one of the listed Program Officers in this DCL, will be returned without consideration.

POINTS OF CONTACT

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Sincerely,

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[1] For further details, see the NSF Major Facilities Guide NSF 19-068.