



**NATIONAL SCIENCE FOUNDATION**  
2415 EISENHOWER AVENUE  
ALEXANDRIA, VIRGINIA 22314

**NSF 21-108**

## Dear Colleague Letter: Towards an Equitable National Cyberinfrastructure

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July 29, 2021

Dear Colleagues:

The National Science Foundation (NSF), through its Campus Cyberinfrastructure (CC\*) program ([NSF 21-528](#)), invests in coordinated campus-level networking and cyberinfrastructure improvements, innovation, integration, and engineering for science and engineering applications and distributed research projects. The purpose of this Dear Colleague Letter (DCL) is to encourage proposal submissions to CC\* for projects that will help overcome disparities in cyber-connectivity associated with geographic location, and thereby enable the populations based in these locales to become more nationally competitive in science, technology, engineering, and mathematics (STEM) research and education. This effort represents a partnership between NSF's Office of Advanced Cyberinfrastructure (OAC) and the Established Program to Stimulate Competitive Research (EPSCoR) within the Office of Integrative Activities (OIA).

The COVID-19 pandemic has affected different parts of the national STEM community in different ways, with some groups being disproportionately susceptible to its negative impacts. Among the disproportionate impacts that have been revealed are gaps in cyberinfrastructure. The pandemic led to much greater reliance on cyberinfrastructure nationwide, including at institutions of higher education, and limits in connectivity proved to be a fundamental bottleneck preventing full participation in virtual activities for many parts of the country. Further, cyberinfrastructure limitations tended to affect EPSCoR-eligible institutions disproportionately as a group, due to generally reduced levels of access to research infrastructure, including cyberinfrastructure in particular. This effect is compounded for institutions within EPSCoR jurisdictions whose existing STEM research and education infrastructure may be more limited, such as Primarily Undergraduate Institutions (PUIs) and Minority-Serving Institutions (MSIs). The disproportionate impacts of COVID-19 on these institutions were highlighted during a recent meeting of the Committee on Equal Opportunities in Science and Engineering (CEOSE), which advises NSF on these matters;

these presentations are featured on the CEOSE website<sup>1</sup>. Additional resources have been published by community organizations to help identify solutions to reduce gaps in cyber-connectivity for MSIs and other under-resourced institutions<sup>2</sup>.

Through this DCL, OAC and EPSCoR in OIA are specifically inviting proposal submissions to CC\* to address the disparities in campus-level networking and cyberinfrastructure that exacerbated the impacts of the COVID-19 pandemic in some areas of the country. There are several ways that such disparities could be addressed within the CC\* programmatic framework<sup>3</sup>. For example, a campus networking proposal may request funds for an external campus networking upgrade to 10 gigabits per second (Gbps), or for a campus compute cluster. CC\* Program Area 2 may be of particular interest to under-resourced institutions, where a partnership among multiple institutions within a jurisdiction or region may facilitate needed advances in cyber-connectivity. Additional resources for building regional STEM research and education networking may be found at The Quilt website<sup>4</sup>. All projects supported by CC\* must be driven by STEM research and education needs that require the support of networking and computing infrastructure on campuses.

This DCL does not constitute a new competition nor a new program. Rather, interested proposers should prepare and submit proposals in accordance with the instructions in the Campus Cyberinfrastructure (CC\*) program solicitation (NSF 21-528) and the NSF Proposal and Award Policies and Procedures Guide (PAPPG). Proposals responding to this DCL should be submitted to the October 11, 2021, deadline for CC\* to be considered for funding. Proposals submitted in response to this DCL may focus on any of the five current CC\* program areas.

Proposals responding to this DCL are welcome from any institution eligible to submit to CC\*. Institutions based in EPSCoR-eligible jurisdictions are especially encouraged to submit. The list of EPSCoR-eligible jurisdictions for FY 2022 can be found on the NSF EPSCoR website<sup>5</sup>.

As is described in the CC\* solicitation, several community resources are available to engage and leverage for community best practices and expertise in campus research and education networking and computing:

- For Networking: The Engagement and Performance Operations Center (EPOC, <https://epoc.global/>); and
- For Computing: The Open Science Grid (OSG, <https://opensciencegrid.org/campus-cyberinfrastructure>).

Questions should be directed to:

Kevin Thompson ([kthompso@nsf.gov](mailto:kthompso@nsf.gov)), Program Director, CC\*; and  
Subrata Acharya ([acharyas@nsf.gov](mailto:acharyas@nsf.gov)) and Timothy VanReken

([tvanreke@nsf.gov](mailto:tvanreke@nsf.gov)), Program Directors, EPSCoR.

Sincerely,

Margaret Martonosi  
Assistant Director, Computer and Information Science and Engineering

Suzanne Iacono  
Office Head, OIA

Manish Parashar  
Office Director, OAC

Loretta Moore  
Section Head, EPSCoR, OIA

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<sup>1</sup> <https://www.nsf.gov/od/oia/activities/ceose/>

<sup>2</sup> <https://internet2.edu/solutions/minority-serving-institutions/>

<sup>3</sup> The current CC\* program areas, described in solicitation [NSF 21-528](#), are: 1) Data-Driven Networking Infrastructure for the Campus and Researcher; 2) Regional Connectivity for Small Institutions of Higher Education; 3) Network Integration and Applied Innovation; 4) Campus Computing and the Computing Continuum; and 5) Planning Grants and CI-Research Alignment.

<sup>4</sup> <https://www.thequilt.net/campus-cyberinfrastructure-program-resource/>. The Quilt is a national coalition of non-profit U.S. regional research and education networks.

<sup>5</sup> [https://www.nsf.gov/od/oia/programs/epscor/Eligibility\\_Tables/FY2022\\_Eligibility.pdf](https://www.nsf.gov/od/oia/programs/epscor/Eligibility_Tables/FY2022_Eligibility.pdf)