



NATIONAL SCIENCE FOUNDATION
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ALEXANDRIA, VIRGINIA 22314

NSF 23-140

Dear Colleague Letter: Fostering Harassment-Free STEM Education, Research, and Workplace Environments

August 24, 2023

Dear Colleagues:

It is the National Science Foundation's (NSF) policy to foster safe and harassment-free environments wherever STEM research, technology development, and education is conducted. NSF views harassment-free science, technology, engineering, and mathematics (STEM) environments as necessary for an innovative science enterprise. To that end, NSF has undertaken a number of initiatives, including implementation of its harassment notification award term and condition, code of conduct prerequisites for NSF-funded conferences and travel, and requirements for plans for safe and inclusive work environments for proposals involving off-campus and off-site research. NSF also continually promotes the sharing of promising practices to address harassment in science. [NSF Important Notice 144](#), states: "The NSF does not tolerate sexual harassment, or any kind of harassment, within the agency, at grantee organizations, field sites, or anywhere NSF-funded science and education are conducted. The 2,000 American colleges, universities and other institutions that receive NSF funds are responsible for fully investigating complaints and for complying with federal non-discrimination law." Nevertheless, harassment in general, and sexual harassment in particular, continues to persist widely in STEM education and research settings and workplaces.¹

The focus of this Dear Colleague Letter (DCL) includes all forms of harassment, whether based on gender or any other aspects of identity. The 2018 NASEM report, [Sexual Harassment of Women: Climate, Culture and Consequences in Academic Science, Engineering, and Medicine](#), classifies (sexual) harassment in three categories: (1) gender harassment (verbal and nonverbal behaviors that convey hostility, objectification, exclusion, or second-class status about members of one gender), (2) unwanted sexual attention (verbal or physical unwelcome sexual advances, which can include assault), and (3) sexual coercion (when favorable professional or educational treatment is conditioned on sexual activity). These categories can be either direct (targeted at an individual) or ambient (a general level of

harassment in an environment).

With this DCL, NSF encourages two types of proposals:

- I. Research projects that a) advance fundamental knowledge about the nature and underlying dynamics of sexual and other forms of harassment in STEM environments and b) inform anti-harassment efforts in STEM; and
- II. Implementation projects to facilitate culture change and organizational policy structures to ensure safe and harassment-free STEM environments.

I. Research on Anti-Harassment in STEM Education and Research Settings and Workplaces

Several programs across the Foundation may be appropriate for proposals that have theoretically driven research goals and advance generalizable knowledge about sexual or other forms of harassment in STEM environments. Areas for potential research are included in the 2018 NASEM report and, in addition, research areas of interest to NSF include:

- The nature and dynamics of harassment, including underlying social and behavioral processes, and factors unique to STEM environments, such as: the hierarchical and isolating nature of scientific training; the influential and exclusive social and professional networks, cultures and climates in STEM fields and subfields; STEM reward and recognition structures; power dynamics with respect to ethics, diversity, equity, and inclusivity in STEM; and power dynamics between senior/early-career faculty, faculty/students/postdocs, researchers/personnel at all research sites, facilities, and vessels, and employees/interns in industry.
- The impacts of the prevalence of harassment in STEM contexts on diversity, equity, and inclusion in STEM, the responsible conduct of research, research ethics, research productivity, the quality of STEM research, technology development, and education.
- The mechanisms for assessing and evaluating harassment prevalence, impacts of prevention efforts, and organizational responses across a range of organization types and levels.
- The strengths and weaknesses of organizational models, policies, and infrastructure for reporting, investigating, and addressing harassment.
- The development and testing of new models and processes for reporting and investigating harassment that are transparent and accessible and include accountability for organizations and organizational leadership.
- The intersection of identity harassment and sexual harassment and how this can be addressed in the design of reporting and investigation systems and anti-harassment work to ensure effectiveness for all.

To determine whether a research idea is appropriate for a particular NSF program,

prospective principal investigators are strongly encouraged to contact, prior to submitting proposals, the directorate/office liaison(s) for this DCL that is most closely aligned with the research activities to be proposed. Proposals will be submitted to existing NSF funding opportunities and should follow the guidance and requirements of the relevant NSF program(s), or if specific program guidance is not provided, then proposals should follow the guidance found in the [NSF Proposal & Award Policies & Procedures Guide](#) (PAPPG).

II. Culture Change and Organizational Policy Structure Projects to Create Harassment-Free STEM Education and Research Settings and Workplaces

Current research findings suggest that the most potent predictor of harassment is organizational culture and climate.² Culture can be generally defined as a set of beliefs, traditions, and accepted behaviors that are learned, shared, and viewed as the “norm” within a group of people. Climate refers to the perceptions and attitudes of individuals, including leaders, in that culture. Norms are often reinforced over generations and are rarely examined for continued added value to the community. Resistance to changing norms is strong and, unfortunately, some norms continue to create environments that enable harassment, including sexual harassment. Fortunately, all individuals and organizations within these communities - particularly those with power, influence, and reputational standing - have the capacity to foster change by taking explicit actions and implementing policies to improve the culture and climate of STEM education, research, and workplace settings for all. Projects might implement evidence-based actions such as:

- Creating or adopting organizational changes to promote anti-harassment, including but not restricted to training, communication, and policy changes.
- Empowering change agents, and current and future leaders, to foster harassment-free STEM education, research, and workplace environments.
- Partnering with STEM professional societies to establish professional expectations related to both acceptable individual behavior and organizational policies and practices.
- Developing, implementing, evaluating, and communicating promising practices for all types of STEM education, research, and workplace environments, such as practices to repair harassment related harm and promote reintegration.
- Creating clear, effective, transparent, consistent, and accessible harassment reporting and investigation processes that can be implemented without fear of retribution or regard to the power dynamics involved in the incident(s).
- Developing individual and organizational performance and accountability structures in support of harassment-free environments.

With this DCL, NSF welcomes creative and potentially transformative proposals that will facilitate the broader adoption of these evidence-based actions and policies by individuals and organizations. Projects may establish academic and non-academic coalitions to jointly implement promising practices, encourage researcher and practitioner partnerships, develop

and test scalable pilot programs, build and leverage existing efforts such as the NASEM [Action Collaborative on Preventing Sexual Harassment in Higher Education](#), and/or scale-up adoption of evidence-based programs or policies that will lead to curtailing harassment of all forms.

For culture change projects, proposals should be submitted to the Directorate that best represents the sector and disciplines of science and engineering whose culture would be impacted by the proposed activities. Proposers should follow the solicitation-specific instructions, or if no solicitation specific guidance is provided, proposers should follow the guidance in the PAPPG. Many programs across NSF may support projects to encourage culture change (https://www.nsf.gov/od/broadeningparticipation/bp_portfolio_dynamic.jsp). Some of the programs that accept proposals to do this work include:

- BIO: [NSF 22-542](#) Leading Culture Change Through Professional Societies of Biology (BIO-LEAPS)
- ENG: [NSF 22-514](#) Broadening Participation in Engineering (BPE), Tracks 1, 2, and 3.
- EDU: [NSF 20-554](#) ADVANCE Organizational Change for Gender Equity in STEM Academic Professions through the Partnership track. Proposals focused on any one or more STEM disciplines are accepted.
- GEO: [NSF 23-539](#) Cultural Transformation in the Geoscience Community (CTGC)
- SBE: [NSF 22-526](#) Ethical and Responsible Research (ER2)
- CISE: [NSF 21-571](#) Broadening Participation in Computing (BPC)
- TIP: Proposers are encouraged to contact the cognizant Program Director (PD) in their related TIP office or division. Once invited by the TIP PD, a proposal may be submitted pursuant to the current NSF PAPPG.

In addition, the NSF welcomes submission of planning proposals ([PAPPG Chapter II.F.1](#)), conference proposals ([PAPPG Chapter II.F.9](#)), or Research Coordination Network (RCNs) proposals where accepted. Proposals involving international collaboration, in which NSF supports the U.S. component of the collaborative activities, may also be considered.

Please direct any questions pertaining to this DCL to:

- Dan Marena, Program Director (BIO), dmarena@nsf.gov
- Allyson Kennedy, Program Director (CISE), aykenned@nsf.gov
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Individuals at NSF-funded organizations who experience, or witness harassment should either contact their Title IX Coordinator or NSF's [Office of Equity and Civil Rights](#). Visit [NSF.gov](https://www.nsf.gov) for more information on [NSF's policy on the prevention of harassment](#).

Sincerely,

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REFERENCES

- 1 DiDio, L. 2021. Sexual Harassment, Bias Against Women Persist in STEM Professions. [Communications of the ACM](#). For example.
- 2 Sexual Harassment of Women Climate, Culture, and Consequences in Academic Sciences, Engineering and Medicine, 2018 NASEM (<https://nap.nationalacademies.org/catalog/24994/sexual-harassment-of-women-climate-culture-and-consequences-in-academic>)