



NATIONAL SCIENCE FOUNDATION  
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NSF 22-031

## Dear Colleague Letter: Special Guidelines for Submitting Collaborative Proposals under National Science Foundation (NSF) and Natural Sciences and Engineering Research Council of Canada (NSERC) Collaborative Research Opportunities in Artificial Intelligence and Quantum Science

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December 16, 2021

Dear Colleague:

The U.S. National Science Foundation (NSF) and the Natural Sciences and Engineering Council of Canada (NSERC) have signed a Memorandum of Understanding (MOU) on Research Cooperation. The MOU provides an overarching framework to encourage collaboration between U.S. and Canadian research communities and sets out the principles for developing jointly supported activities. The MOU provides for an international collaboration arrangement whereby U.S. researchers may receive funding from NSF and Canadian academic researchers may receive funding from NSERC.

Recognizing the benefits of U.S.-Canadian collaboration, the goal of this collaborative research opportunity is to help reduce some of the current barriers to working internationally in areas of mutual interest. Through a lead agency model, NSF and NSERC will address these issues by allowing U.S. and Canadian research teams to submit a single collaborative proposal that will undergo a single review process at NSF, which will be the lead agency.

The collaborative opportunity described in this Dear Colleague Letter (DCL) remains in effect until archived. This is not a single-year program.

This NSF-NSERC collaborative research opportunity focuses specifically on discoveries and innovations in the areas of artificial intelligence and quantum science. **Collaborative research proposals will be accepted to the NSF programs listed below.** Note that deadlines and due dates vary by program.

- NSF Computer and Information Science and Engineering Core Programs ([https://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=505667](https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505667))
  - Small Projects and Office of Advanced Cyberinfrastructure (OAC) Core Projects

only

- NSF Computer and Information Science and Engineering Secure and Trustworthy Cyberspace Program ([Secure and Trustworthy Cyberspace](#))
  - Core Small Projects only
- NSF Foundational Research in Robotics (FRR) ([https://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=505784](https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505784))
- NSF Engineering Directorate, Division of Electrical, Communications and Cyber Systems (<https://www.nsf.gov/div/index.jsp?div=ECES>)
- NSF Engineering Directorate, Division of Civil, Mechanical and Manufacturing Innovation (<https://www.nsf.gov/div/index.jsp?div=CMMI>)
- NSF Engineering Directorate, Division of Chemical, Bioengineering, Environmental, and Transport Systems (<https://www.nsf.gov/div/index.jsp?div=CBET>)

Proposals are expected to adhere to the areas of science, funding limits, and grant durations for the NSF-participating programs (see list above). Limits for U.S. researchers on the number of proposal submissions are described in the NSF-participating programs.

Proposals are also expected to adhere to the funding limits and grant durations for NSERC's Alliance Grants ([https://www.nserc-crsng.gc.ca/innovate-innover/alliance-alliance/index\\_eng.asp](https://www.nserc-crsng.gc.ca/innovate-innover/alliance-alliance/index_eng.asp)). For the purposes of this DCL, NSERC does not have a requirement for partner organizations or contributions from partner organizations. In cases where one or more private sector organizations is involved in the proposal, additional requirements may apply pursuant to Government of Canada guidelines for the development of research partnerships. Canadian researchers are encouraged to consult the Safeguarding Your Research portal for further guidance.

Proposers are advised that all documents submitted to NSF or NSERC may be shared with the other agency in order to implement the two-way agency activities. By submitting, principal investigators agree that information contained in a proposal may be shared between agencies for the purposes consistent with program objectives. Principal investigators in the U.S. and in Canada are responsible for ensuring that all co-applicants and collaborators are aware of the rules concerning the disclosure of information contained in the proposal.

NSERC is subject to the [Access to Information Act](#) and the [Privacy Act](#). The information you provide is stored in a series of NSERC data banks which are described in [Information about programs and information holdings](#). You must ensure that others listed in the proposal have agreed to be included.

## PROPOSAL PREPARATION AND SUBMISSION

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Proposals will be submitted by U.S. organizations to NSF. The proposals will be reviewed by NSF in competition with other proposals received for the same funding round of the program to which the proposal is submitted using NSF's merit review process. NSERC will check that

the Canadian investigators have an active and appropriate role and confirm their eligibility at the onset of the process. NSERC will not conduct a parallel review and will not rank proposals.

There are no separate NSF funds available for these efforts; proposals must compete with all other proposals submitted to the relevant NSF program for the competition to which the proposal is submitted and must succeed on the strengths of their intellectual merit and broader impacts.

## FUNDING DECISION

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After the reviews are received and final recommendations for funding made, NSF communicates the outcome of the merit review to the U.S. Principal Investigator (PI) and NSERC communicates with the Canadian PI.

If a proposal is recommended for funding, the U.S. organization(s) will be supported by NSF and the eligible Canadian applicants will be supported by NSERC. NSF and NSERC staff will review budgets to ensure that there is no duplication in funding.

Because NSF and NSERC have different funding cycles, it is possible that some projects will have different start dates or delayed start dates in order to wait until funds become available.

Funding decisions may be subject to budget limits. The number of U.S.-Canada projects selected for funding and the total amount to be allocated will depend on the number and quality of the submitted proposals and the available funding for each agency.

## DEADLINES

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For participating NSF programs with deadlines, proposals are due at NSF by the submission dates indicated in the program solicitation or program description of the participating programs listed above.

For participating NSF programs without target dates or deadlines for submission, proposals may be submitted at any time. Proposals submitted late in a given U.S. fiscal year, which runs from October 1 through September 30, may be held over for consideration in the following fiscal year. In general, proposal review is completed within six months of submission. Proposers may wish to consult a program director in the relevant program about timing of submission.

## GUIDELINES

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1. The proposed work submitted under an NSF-NSERC collaboration **must** represent an integrated collaborative effort. The Project Summary and Project Description of the proposal submitted to NSF must include a description of the collaboration, including an explanation of the role(s) of the Canadian collaborator(s) and an explanation of how the team will work together.

2. The proposal must describe the intellectual merits of the proposed research, including the value of the international collaboration, and the anticipated societal benefits (broader impacts) of the effort. Broader impacts are an NSF review requirement, so the proposal should include societal benefits relevant to the U.S. and should also include benefits relevant to Canada.
3. NSF proposers should follow NSF data policies. The PIs are strongly encouraged to describe efforts to make the data, codes, and other outputs of the proposed research findable, accessible, inter-operable and reusable, through use of publicly accessible data repositories or other open access methods.
4. NSF proposers should indicate only the U.S. expenses on the NSF budget. **The Canadian budget and budget justification** must be included in the NSF proposal as a supplementary document (**see Additional Documents**). The Budget Justification section of the NSF proposal should clearly differentiate the U.S. budget from any similar funds requested by the Canadian team and justify the full project budget. Proposals that request duplicative funding may be returned without review.
5. The proposal must be submitted to a participating NSF program in English by a U.S. institution, using the NSF FastLane system (<https://www.fastlane.nsf.gov/>), Research.gov (<https://www.research.gov/>), or Grants.gov (<https://www.grants.gov/>). Proposals must be submitted in accordance with the standard requirements described in the NSF *Proposal & Award Policies & Procedures Guide (PAPPG)* and comply with requirements in the relevant program solicitation or program description of the NSF-participating programs (referenced above). Where programs have a solicitation, the requirements in the solicitation take precedence over those listed in the PAPPG.
6. By submitting, PIs and their organizations agree that NSF may share anonymized reviews and other documents pertaining to the review process with the NSERC.
7. For those participating NSF programs with limits on the number of proposals that an individual may submit in a year, involvement in a joint international proposal will count towards the limit on number of submissions in which an individual may participate as a PI or co-PI of a proposal, or senior lead investigator of a subaward.
8. The title of the proposal should be prefixed with "NSF-NSERC:".
9. If the proposal is submitted as part of a set of collaborative proposals from multiple organizations, the title of the proposal should begin with "Collaborative Research:" followed by "NSF-NSERC:".
10. Do **NOT** check "collaborative" proposal **unless** more than one U.S.-based organization will be submitting the same proposal for separate funding (i.e., the "collaborative" check box only applies if there is more than one collaborating organization on the U.S. side, each submitting the same proposal).
11. For proposals submitted to NSF, Canadian personnel should be listed as "non-NSF funded Collaborators." Guidance on information to provide for "non-NSF funded Collaborators" is below.
  - o Biographical Sketch - Required. The biographical information must be clearly identified as "non-NSF funded Collaborators" biographical information and

uploaded as a single PDF file in the Other Supplementary Documents section of the proposal. Use of a specific format is not required.

- Collaborators and Other Affiliations (COA) Information - Optional but requested. The COA information should be provided through the use of the [COA template](#), identified as "non-NSF funded Collaborators" COA information, and uploaded as a PDF file in the Single Copy Documents section of the proposal.
- Current and Pending Support - Not required.
- Results of Prior NSF Support - Not required.

12. For projects involving human subjects or vertebrate animals, proposals should follow both NSF and NSERC policies, submitting documentation to each as appropriate.

For awareness of the U.S. PIs, the Canadian PIs must comply with the following guidelines:

**Members of the Canadian research team must submit a "Letter of Intent" to NSERC at least 8 weeks prior to submission of the full proposal to NSF.** The Alliance Grants Letter of Intent (LOI) for this call is available on the [NSERC Online system](#) and the instructions and funding limits are available on the [NSERC website](#). The LOI should not exceed 3 pages, excluding references, and respect [NSERC online presentation and attachment standards](#). The [NSERC Eligibility Criteria for Faculty](#) apply.

The LOI should outline the research proposed, research teams involved, and bottom-line estimates of funding to be requested using Canadian dollars from both the NSF and NSERC. The research description should include: a brief summary of the main objectives and research challenges of the proposed research and the expected outcomes and benefits. A plan to foster equity, diversity, and inclusion (EDI) within the research and training environment must also be presented. The LOI and the eligibility of the Canadian research team members will be reviewed internally by NSERC. The plan to foster EDI within the research and training environment is a screening criterion. Only those LOIs that provide a satisfactory EDI training plan will be invited to submit full proposals to NSF. Canadian applicants should review the detailed information provided on the NSERC website.

While there is no requirement for partner organizations as described in the Alliance Grants, in the case where the proposal involves one or more organizations from the private sector, additional requirements, such as the submission of a completed risk assessment form alongside the LOI, may apply pursuant to Government of Canada guidelines for the development of research partnerships. Canadian researchers are encouraged to consult the Safeguarding Your Research portal for further guidance and to consult the [NSERC Alliance website](#).

No changes in the Canadian research team composition are permitted after a Letter of Intent is reviewed and approved by NSERC.

## **ADDITIONAL DOCUMENTS**

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The NSF proposal must include the documents requested in the solicitation or program

description to which the proposal will be submitted and as described in the [PAPPG](#).

In addition, the following documents must be included in NSF-NSERC proposals:

1. Provide as **Supplementary Document**, an "**Invitation to Submit**" letter obtained by the Canadian research team from NSERC. NSERC will provide such letters only for Canadian applicants whose Letter of Intent has been approved.
2. Provide as a **Supplementary Document**, a copy of the **proposed Canadian budget** requested from NSERC using U.S. dollars<sup>1</sup>, and a budget justification that explains the request.
3. Letters of collaboration or support may be included, however they **must** comply with the requirements in [PAPPG](#) Chapter II.C.2.j.

## POST AWARD CONSIDERATIONS

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Awardees will be expected to comply with the award conditions and reporting requirements in accordance with the agencies from which they receive funding.

Awardees will be required to acknowledge both NSF and NSERC in any reports or publications resulting from the award. Requests for changes in awards (for example, for changes in scope) should be submitted to the agency from which they are receiving funding and will be considered using that agency's standard procedures.

Questions about this DCL may be directed to Allen Pope ([apope@nsf.gov](mailto:apope@nsf.gov)), Program Director in the NSF Office of International Science and Engineering.

Sincerely,

Margaret Martonosi  
Assistant Director  
Directorate for Computer and Information Science and Engineering

Susan S. Margulies  
Assistant Director  
Directorate for Engineering

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<sup>1</sup> The value of the NSERC grant will be determined in Canadian dollars at the time of application for the duration of the grant and will not be adjusted by NSERC to reflect fluctuations in the currency exchange rate.