



U.S. NATIONAL SCIENCE FOUNDATION  
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NSF 24-123

## Dear Colleague Letter: Seeking Community Input for Topic Ideas for Emerging Frontiers in Research and Innovation (EFRI) Program

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September 3, 2024

Dear Colleagues:

The purpose of this Dear Colleague Letter (DCL) is to invite the research community to submit suggestions for **Topic Ideas** to be considered for the FY 2026/27 [Emerging Frontiers in Research and Innovation \(EFRI\) Program](#) Solicitation. Suggestions for EFRI Topic Ideas are currently solicited and vetted every two years. Selected Topic(s) become the focus of research supported by the EFRI Program. Research proposals that address the specified Topic area(s) are invited via the EFRI solicitation.

**This DCL is not a request for submission of a single research proposal idea**; rather, it is designed to solicit submission of [emerging topic areas](#) of potentially transformative research and innovation. Candidate topic ideas, including a 500-word description, may be submitted at the URL given below.

The deadline for topic idea submission is: **October 15, 2024**.

### BACKGROUND

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The mission of the NSF Directorate for Engineering is to transform our world for a better tomorrow by driving discovery, inspiring innovation, enriching education, and accelerating access. Specifically, NSF Engineering aims to propel U.S. leadership in transformational engineering approaches to problems with societal impact.

The [EFRI Program](#) is the signature activity of the [Office of Emerging Frontiers and Multidisciplinary Activities](#) (EFMA) in the Directorate for Engineering. The EFRI Program aims to focus the engineering community on important emerging areas in a timely manner. EFRI evaluates, recommends, and funds interdisciplinary initiatives at the emerging frontiers of engineering research and innovation. These transformative opportunities may lead to new

research directions and/or new industries or capabilities that result in a leadership position for the country; and are expected to result in significant progress on a recognized national or societal need, or grand challenge.

EFRI invests in high-risk multidisciplinary opportunities with high-potential payoff and substantive potential for societal impact. Its role is to support research areas that would not fit within the scope of an existing program. These frontier ideas push the limits of engineering knowledge and are often at the intersection of multiple fields.

The EFRI Program continuously gathers information for use in deciding future research topic areas to support. This rolling process ensures input and feedback from the engineering community on promising upcoming research opportunities. Input comes from diverse sources including workshops, advisory committees, proposals and awards, technical meetings, and professional societies, as well as from individual engineering researchers. From this comprehensive input, the EFRI team identifies, evaluates, and prioritizes those frontier topics that best match EFRI criteria.

## TOPIC IDEA SUBMISSION

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Through this DCL, the NSF EFRI team is providing a direct opportunity for the research community to offer input on potential EFRI topic ideas for FY 2026/7 by submitting emerging frontier Topic Idea suggestions for consideration. This opportunity is open to all disciplines, but topic ideas should have engineering research at their core.

Topic Idea submitters will be asked to provide:

- Name
- E-mail address
- Organization
- Title of Proposed Topic
- Up to three Key Words, and
- A Description (maximum 500 words) that encompasses how the suggested topic meets the EFRI topic criteria: transformative, addressing a national or societal need or grand challenge, and with a leadership role for Engineering.

Submit your ideas at <https://www.nsf.gov/eng/EFRI/topicideas>.

The deadline for topic idea submission is: **October 15, 2024**.

**NOTE: Ideas you submit should provide forward-looking views and identify opportunities in emerging frontiers of research and innovation. Topic ideas should not simply represent your own ongoing or planned research activities.** Suggested topics should identify challenges or opportunities rather than solutions. Topics or areas of

opportunity should be those that would be unlikely to be supported through existing NSF programs. In order to facilitate broader discussion of the submitted ideas, topic suggestions will not be kept confidential. NSF staff will review submitted candidate topic ideas in consultation with external experts. NSF plans to invite up to ten submitters to engage with NSF for further discussions of their proposed topic. Those submitters selected will be notified in December 2024 and will be invited to present their frontier idea suggestions to NSF in early 2025.

Inquiries may be directed to: Dr. Louise R. Howe or Dr. Sohi Rastegar at [efritopicideas2026@nsf.gov](mailto:efritopicideas2026@nsf.gov).

We thank you in advance for taking the time to submit your emerging frontier ideas to the NSF Directorate for Engineering.

Sincerely,

Susan Margulies, PhD  
Assistant Director  
Directorate for Engineering