



NATIONAL SCIENCE FOUNDATION
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ARLINGTON, VIRGINIA 22230

NSF 16-138

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

September 21, 2016

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 2018 [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. Solicitations are announced annually for research proposals that fall under the specified Topic area(s).

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. You may submit your candidate topic idea along with a 500-word description at: https://www.surveymonkey.com/r/efritopicideas_FY2018.

The deadline for topic idea submission is: **October 31, 2016**.

BACKGROUND

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; new industries or capabilities that result in a leadership position for the country; and/or significant progress on a recognized national or societal need, or grand challenge. The EFRI Program is the signature activity of the [Office of Emerging Frontiers and Multidisciplinary Activities \(EFMA\)](#) in the Directorate for Engineering.

EFRI invests in high-risk multidisciplinary opportunities with high-potential payoff. Its role is to support research areas that would not fit within the scope of an existing program. These frontier ideas cannot be pursued by one researcher or within one field of expertise. They are "frontier" because they not only push the limits of knowledge of one field, but actually are at the convergence of multiple fields. The EFRI funding process is designed to both inspire and enable a group of researchers with diverse technical expertise to work together on a single frontier idea.

The [EFRI Program](#) continuously gathers information for use in deciding future research topic areas to support. This process operates constantly, ensuring 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 the EFRI criteria.

In order to provide a direct opportunity for the research community to provide input on potential topic ideas for FY 2018, the NSF EFRI team invites the community to submit emerging frontier Topic Idea suggestions for consideration by NSF.

Submit Your Ideas at: https://www.surveymonkey.com/r/efritopicideas_FY2018.

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 other programs at NSF. 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 NSF for further discussions of their proposed topic. Those submitters selected will be notified in December 2016 and will be invited to come to NSF in January 2017.

Inquiries may be directed to: Dr. Louise R. Howe or Dr. Sohi Rastegar at efritopicideas2018@nsf.gov.

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

Sincerely,

Grace Wang, PhD
Acting Assistant Director
Directorate for Engineering