



NATIONAL SCIENCE FOUNDATION  
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NSF 15-018

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

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November 17, 2014

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 2016 Emerging Frontiers in Research and Innovation (EFRI) Program Solicitation.

Suggestions for EFRI Topic Ideas are currently solicited and vetted every two years. Selected Topics become the foci of EFRI-supported research. Solicitations are announced annually for research proposals that fall under the specified Topic areas.

This DCL is not a request for submission of a single research proposal idea; rather, it is meant to generate potential topic areas of emerging transformational research and innovation. You may submit your candidate topic idea along with a one-page description by visiting <https://www.surveymonkey.com/s/efritopicideas>. The deadline for topic idea submission is: **December 19, 2014**.

### BACKGROUND

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EFRI was established in FY 2007 to serve a critical role in focusing the engineering community on important emerging areas in a timely manner. Each year, 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 need or grand challenge.

EFRI invests in high-risk multidisciplinary opportunities with high-potential payoff. Its role is to support research opportunities that would be difficult to fund through the current funding mechanisms of EARly-concept Grants for Exploratory Research (EAGER), typical core programs, or large research center awards. 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 overlap 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 one frontier idea.

The EFRI Program is perpetually gathering information for use in deciding future research topic areas to support. This process operates continually, ensuring input and feedback from the engineering community on promising upcoming research opportunities. This input comes from diverse sources such as 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 wider and more direct opportunity for the research community to provide input on selection of topic ideas for FY 2016, the NSF EFRI team is inviting the community to submit emerging frontier Topic Idea suggestions for consideration by NSF.

**Submit Your Ideas at:** <https://www.surveymonkey.com/s/efritopicideas>.

**NOTE: Ideas you submit should provide forward-looking views and identify opportunities in emerging frontiers of research and innovation; topic ideas should not simply summarize or justify your own ongoing research activities.** Topics or areas of opportunity should be those that would be unlikely to be supported through other programs at NSF. The topic suggestion that you submit will not be confidential, in order to facilitate broader discussion of the ideas. 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 on their proposed topic. Those selected submitters will be notified in January 2015 and will be invited to come to NSF in February 2015.

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

Sincerely,

Sohi Rastegar, Director  
Office of Emerging Frontiers in Research and Innovation (EFRI)  
Directorate for Engineering