



**National Science Foundation**  
**4201 Wilson Boulevard**  
**Arlington, Virginia 22230**

NSF 12-011

## **Dear Colleague Letter - CREATIV: Creative Research Awards for Transformative Interdisciplinary Ventures**

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**WEBCAST:** On November 9, 2011, NSF Director Subra Suresh and the co-chairs of the NSF INSPIRE Working Group presented a live webcast about the new CREATIV grant mechanism. The co-chairs answered questions submitted by the audience. The archived webcast can be viewed at <http://www.tvworldwide.com/events/nsf/111109/>.

**FREQUENTLY ASKED QUESTIONS:** The FAQ page for CREATIV is available at [NSF 12-012](#). Some links to particular FAQs are in the text below.

**CREATIV (Creative Research Awards for Transformative Interdisciplinary Ventures):** a [pilot](#) grant mechanism under the Integrated NSF Support Promoting Interdisciplinary Research and Education (INSPIRE) initiative, to support bold interdisciplinary projects in all NSF-supported areas of science, engineering, and education research.

The INSPIRE initiative was introduced by NSF Director Subra Suresh with the fiscal year 2012 NSF budget request to Congress. From his remarks ([http://www.nsf.gov/news/speeches/suresh/11/ss110214\\_nsfbudget.jsp](http://www.nsf.gov/news/speeches/suresh/11/ss110214_nsfbudget.jsp)): "INSPIRE is aimed to encourage cross-disciplinary science. INSPIRE will help to break down any disciplinary barriers that may exist within NSF and encourage its program managers to use new tools, collaboration modes and techniques in the merit-review process to widen the pool of prospective discoveries that may be hidden from or circumvented by traditional means."

CREATIV is the first grant award mechanism under INSPIRE, and will be the only one launched in FY 2012. In brief, its distinguishing characteristics are: *only internal merit review is required; proposals must be interdisciplinary and potentially transformative; requests may be up to \$1,000,000 and up to five years duration* (further details and specifications below). In the future, [further announcements](#) will be made regarding INSPIRE activities to be launched in FY 2013 and beyond. The funding for INSPIRE in future years is expected to increase substantially each year, reaching a steady state in FY 2016.

### **Goals of the CREATIV grant mechanism**

- Create new interdisciplinary opportunities that are not perceived to exist presently.
- Attract unusually creative high-risk / high-reward interdisciplinary proposals.
- Provide substantial funding, not limited to the exploratory stage of the pursuit of novel ideas.
- Designate [no favored topics](#); be open to all NSF-supported areas of science, engineering, and [education research](#).

### **Appropriateness of the CREATIV grant mechanism**

*CREATIV is a new grant mechanism for special proposals and is not intended to handle proposals that are more appropriate for existing mechanisms.* In particular, proposals of the following types should be submitted to and reviewed conventionally through existing programs or solicitations, and are not appropriate for submission through the CREATIV grant mechanism:

- Projects in which the scientific advances lie primarily within the scope of one program or discipline, such that substantial co-funding from another distinct program or discipline is an unlikely proposition.
- Projects that, in the judgment of cognizant program directors, can be expected to receive an appropriate evaluation through external review in regular programs.
- Projects that [continue well-established lines of research](#), in accordance with expected progress in their fields.

### Scope of the CREATIV grant mechanism

- Proposals on any NSF-supported topic will be accepted.
- Proposals for support in FY 2012 may be [submitted at any time](#) between **December 1, 2011**, and **June 15, 2012**.
- Awards will generally support an [individual PI or a small team](#).
- The allowable duration is up to five years.
- A CREATIV award must be [substantially co-funded](#) by at least two [intellectually distinct](#) NSF divisions or programs (this criterion is elaborated in the FAQ page at [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf12012](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf12012)). The maximum total award is \$800,000 for two co-funding programs, and \$1,000,000 for three or more co-funding programs. All awards are subject to the availability of funds.

### Eligibility for the CREATIV grant mechanism

- Proposals may be submitted only by U.S. academic institutions that have research and degree-granting education programs in any area of research supported by NSF, and by U.S. non-profit, non-academic organizations (independent museums, observatories, research labs, professional societies and similar organizations associated with research or educational activities). [Other types of organizations](#) may be included in a CREATIV proposal as subawardees.
- NSF will not accept collaborative CREATIV proposals for a single project submitted separately from multiple organizations. A multi-organization CREATIV project must be submitted as a single proposal requesting a single award to a U.S. academic institution or a U.S. non-profit, non-academic organization, with subawards administered by the lead organization.

### CREATIV proposal submission and review criteria

- Potential proposers are encouraged to begin the process by submitting the [CREATIV Inquiry Data Form](#), as explained on the [FAQ page](#). Before writing and submitting a CREATIV proposal, it is the principal investigator's responsibility to [obtain written authorization](#) to submit a CREATIV proposal by NSF program directors from at least two [intellectually distinct](#) divisions or programs. This written authorization must be submitted with the proposal in the Supplementary Documents section of the proposal. This documentation represents the program directors' preliminary judgment that the project could be appropriate for consideration under the CREATIV grant mechanism; it is not a commitment to recommend support of the proposal with program funds. If the program directors find that the proposal idea is more appropriate for a regular review process than for CREATIV, or that the idea does not appear to be promising, they will so inform the principal investigator(s). A CREATIV proposal submitted without the required program director authorizations will be returned without review.
- If a PI needs assistance in identifying appropriate programs or program directors with whom to communicate about a proposal idea, one potential resource is the NSF Interdisciplinary Research web site ([http://nsf.gov/od/iaa/additional\\_resources/interdisciplinary\\_research/](http://nsf.gov/od/iaa/additional_resources/interdisciplinary_research/)), as elaborated on the [FAQ page](#).
- The proposal will be submitted electronically via FastLane or Grants.gov to [one](#) of the prospective co-funding programs, with the other program(s) identified on the proposal Cover Sheet.
- The project title will be preceded by the prefix "CREATIV:", to distinguish the submission from a

- regular proposal that would go to a regular review process.
- Compliance with the Grant Proposal Guide ([http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg)) is required. Depending on the circumstances, the Project Description may be significantly shorter than the GPG maximum of 15 pages.
  - The two standard NSB-approved merit review criteria of intellectual merit and broader impacts apply, as augmented in what follows.
  - *Intellectual merit*: A CREATIV award must integrate across multiple disciplines, as opposed to incorporating disciplinary contributions additively. The proposal must identify and justify how the project is interdisciplinary, for example by:
    - Combining concepts/methods from multiple fields in new, surprising ways;
    - Forming a new community from a union of communities that rarely interact;
    - Proposing problem-driven research that requires a comprehensive and integrative approach to a grand challenge issue;
    - Raising new fundamental questions or interesting new directions for research at the interface of disciplines; or
    - Making major changes in understanding or use of existing concepts or methods to address complex phenomena.
  - *Intellectual merit*: A CREATIV award must be potentially transformative. The proposal must identify and justify what is potentially transformative in the project, by showing specifically how at least one of the following characteristics is fulfilled:
    - Challenges conventional wisdom;
    - Leads to insights that enable new techniques or methodologies; or
    - Redefines the boundaries among disciplines of science, engineering, or education.

The justification must be specific, e.g., for the first characteristic, what form of conventional wisdom is being challenged, and how the proposal has potential for overturning it.

- *Broader impacts*: Unusual promise for societal benefit is highly valued in a CREATIV proposal, in the spirit of the NSF strategic plan ([http://www.nsf.gov/news/strategicplan/nsfstrategicplan\\_2011\\_2016.pdf](http://www.nsf.gov/news/strategicplan/nsfstrategicplan_2011_2016.pdf)) goal to innovate for society.
- The proposal must address how the project is better suited for CREATIV than for a regular NSF review process. For example, if the project is of such a high-risk nature that it could meet resistance from conventional reviewers, this could be explained and justified.

## **CREATIV review procedure**

- Only internal merit review is required and typically expected for CREATIV proposals. If program directors elect to obtain external reviews to inform their decision, then the PI will be so informed in the interest of maintaining the transparency of the review and recommendation process.
- On the basis of the criteria outlined above, the cognizant program directors will decide whether to recommend a CREATIV proposal for co-funding from their programs.
- A decision and feedback will be sent to the principal investigator(s), generally within two to three months after proposal submission. The feedback will typically be in the form of a Context Statement and a PO Comment in FastLane, explaining the rationale for the decision.
- No reconsideration of declined CREATIV proposals is allowed. By submitting a proposal to the pilot CREATIV grant mechanism, with "CREATIV:" in the proposal title, the principal investigator chooses an alternative review process and waives the option of reconsideration. This is analogous to the GPG provision for the existing RAPID and EAGER mechanisms.
- No-cost extensions and supplemental funding are permitted under standard NSF policies.
- Renewed funding of CREATIV awards may be requested only through submission of a proposal that will be subjected to full external merit review. Such proposals may be designated as "CREATIV renewals".

## **Duration of CREATIV funding mechanism**

The CREATIV grant mechanism is being launched as a pilot for FY 2012 only, and will be evaluated on an ongoing basis. It is anticipated that this pilot will continue beyond FY 2012, but this Dear Colleague Letter applies only for FY 2012.

In the spirit of One NSF, and representing all directorates and programmatic offices of NSF, we look forward to implementing the exciting vision that Director Suresh laid out for INSPIRE several months ago. The CREATIV grant mechanism will empower program directors to support bold proposals that some investigators may have been [reluctant to submit](#) to the regular NSF merit review process. Your questions, feedback, and most of all, your exceptionally creative proposals are welcome as we move forward.

Sincerely,

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Machi Dilworth  
Office of International Science and Engineering

Karl Erb  
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