

NSF Big Idea: Growing Convergence Research



Webinar Objectives

- Overview of the program & program goals
- Solicitation specifics
- Review criteria
- Q/A

Submit questions via the Q/A panel in Zoom or via email to gcrelig@nsf.gov.

Convergence at NSF

- Convergence is a multifaceted concept
- It has long history at NSF; part of NSF's portfolio since 1954
- It is currently an important component of several parts of NSF's portfolio, including
 - the 6 research-oriented Big Ideas
 - NSF Convergence Accelerator
 - **Growing Convergence Research (GCR)** a process-oriented Big Idea

Characteristics of Convergence Research Supported by GCR

- *Research driven by a specific and compelling problem.* Convergence Research is generally inspired by the need to address a specific challenge or opportunity, whether it arises from deep scientific questions or pressing societal needs.
- *Deep integration across disciplines.* As experts from different disciplines pursue common research challenges, their knowledge, theories, methods, data, research communities and languages become increasingly intermingled or integrated. New frameworks, paradigms or even disciplines can form sustained interactions across multiple communities.

Stewardship of the GCR

- Lead NSF organization: Office of Integrative Activities
- Solicitation and proposal review : NSF wide Working Group:
- Award oversight: Directorates

Big Idea: Growing Convergence Research (GCR)

Foundation-wide Working Group comprised of:

BIO: Michell Elekonich

CISE: Mimi McClure

EHR: Laura Regassa

ENG: Mike Roco, Nora Savage

GEO: Sarah Ruth

MPS: Leonard Spinu

OIA: Dragana Brzakovic (chair), Leah Nichols

OISE: Jessica Robin

SBE: Steven Breckler, Toby Parcel

GCR solicitation NSF 19-551

- Deadline: February 3, 2020
- Project duration: 5 years, divided into two phases: Phase 1: Years 1-2 and Phase 2: Years 3-5.
- Budget: total up to 3.6M
 - Years 1-2, up to 600k/year
 - Years 3-5 Successful teams will receive funding up to 800k/year (progress of each team will be determined at the end of year 2 via a reverse site visit)

Who may submit

- Institutions of Higher Education
- Non-profit, non-academic organizations

Who may serve as a PI

- The PIs must hold full-time appointments in research or teaching positions at US-based campuses/offices of eligible organizations.
- A PI or a co-PI may participate in only **one** proposal in response to this solicitation.

What does GCR support?

Project characteristics:

- Basic research ideas that require convergence
- Projects that are inspired by a scientific or societal grand challenge
- Topics that are not currently supported by NSF'S existing programs and initiatives
- Projects with potential for sustainability beyond award duration

Team characteristics:

- Small research teams deliberately comprised of members with diverse scientific/technical backgrounds
- Collectively working to develop effective ways of communicating across disciplines and sectors and developing sustainable relationships

Proposal Structure

- **Vision driving the proposed research**
- **Appropriateness for this solicitation**
- Research Plan: Written for five years, divided into 2 phases (years 1-2 and years 3-5)
- Supplementary Documents:
 - List of Project Personnel
 - **Convergence Management Plan**
 - Letters of Collaboration

GCR Review Criteria

- The **Intellectual Merit** criterion encompasses the potential to advance knowledge; and
- The **Broader Impacts** criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.
- **Program Specific**

Program Specific Review Criteria

- Is the vision motivating this proposal sufficiently compelling and ambitious to justify investment in developing a convergent research community? Is there potential to sustain convergence research beyond this project?
- Is the proposed research appropriate for this solicitation? Do the proposed ideas differ markedly from research supported by other NSF programs, initiatives, Big Ideas or other NSF funding mechanisms?
- Are the intended approaches to address the scientific and/or technological questions innovative, promising, and appropriate for growing convergence research?
- Is the proposed management plan appropriate to foster convergent team-formation and sustainability?
- Are the goals outlined for the two research plan phases ambitious enough to move the science toward addressing the problem that engendered the proposal?
- Is the assembled team of partner organizations and personnel appropriate and essential for the planned project? Are the partner organizations and participants meaningfully integrated?

Thank you!

Questions

Email questions to gcrelig@nsf.gov.

Follow up with your panel managers if you have questions later.



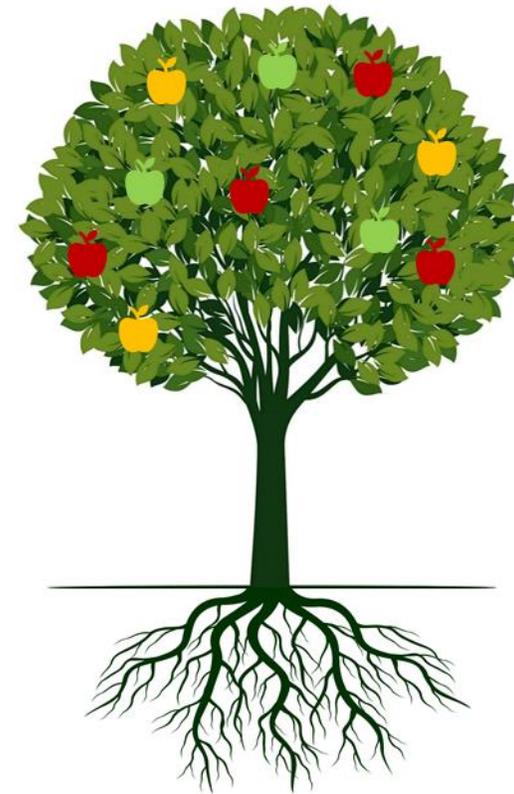
Cultivation of Convergence Research at NSF



**GROWING
CONVERGENCE
RESEARCH**



**NSF
BIG IDEAS**



**CONVERGENCE
ACCELERATORS**