



National Science Foundation
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Dear Colleague Letter: Science Across Virtual Institutes (SAVI): A NSF-wide Activity to Accelerate Advances in Science and Engineering Research and Education through International Collaborations

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Promoting international collaborations in STEM (science, technology, engineering, and mathematics) research and education is a fundamental element of NSF's mandate and NSF has been an unfaltering advocate throughout its more than 60 year history. With this letter, I again call to your attention an important and now proven NSF-wide opportunity for expanding NSF's slate of international activities: Science Across Virtual Institutes (SAVI). Since its inception in October 2011, 12 different SAVI programs have been established involving dozens of institutions in the United States and more than a dozen countries.

SAVI is an innovative, flexible mechanism intended to foster interactions among scientists and educators around the globe based on belief that excellence in STEM research and education exists in many parts of the world and that scientific advances can be accelerated by scientists, engineers, and educators working together wherever they are. SAVI focuses on interactions among cohesive teams of collaborating researchers across national borders and takes advantage of existing U.S. and international investments in frontier research by leveraging complementary strengths and sharing unique research infrastructures at multiple locations. Such virtual institutes can serve as research hubs in which new ideas originate, multidisciplinary research is fostered, diversity is valued, and long-term professional networks are developed between U.S. researchers and students and their international counterparts.

OBJECTIVES

The primary objective of SAVI is to bring together leading STEM researchers/educators from different countries, both physically and virtually, to work on problems of mutual interest, by building on relationships initiated by NSF-supported teams of researchers. NSF will support U.S. participants, while international partners will be supported by their own national or regional funding sources.

NSF intends to accomplish the following specific objectives through SAVI:

- Support collaborative research initiated by STEM researchers/educators at the frontiers in all fields supported by NSF;
- Stimulate networking among NSF-funded U.S. researchers with complementary strengths and common interests to form coherent research teams, and become virtual institutes;
- Facilitate STEM research and education partnerships among NSF-funded research centers/institutes and their international counterparts;
- Provide students, postdocs and junior faculty with opportunities for research experiences abroad that lead to long-lasting international collaborations;

Strengthen connections between NSF and counterpart STEM research funding organizations around the globe by leveraging each other's investments in fundamental research and human resource development; and

- Develop a streamlined organizational structure to facilitate administrative processes.

SCOPE OF SAVI PROJECT ACTIVITIES

NSF will support activities that are designed to meet the SAVI objectives described above. Examples of activities, which can be carried out virtually or physically, include:

- Joint research activities that advance science, engineering, and STEM learning more effectively than individual national teams working independently;
- Joint meetings of SAVI team members that promote synergy;
- Workshops, advanced study institutes, and symposia;
- Joint seminar series, college-level courses;
- Co-mentoring of graduate students and postdoctoral fellows;
- Long-term research exchange visits for junior faculty; and
- Opportunities for focused summer research experiences abroad for U.S. undergraduate and/or graduate students.

The above list is illustrative, and not meant to be exhaustive. Other balanced and mutually beneficial activities that contribute to meeting the SAVI objectives will be considered. The SAVI Website (<http://www.nsf.gov/savi>) describes 12 active virtual institutes that serve as inspiring examples representing varied and effective SAVI models.

As previously established, SAVI is not a stand-alone program. Proposals to support SAVI activities can be submitted as a supplemental funding request to an existing award, or as a full proposal to the active NSF program that best fits the proposed subject matter. Such full proposals should be submitted in accordance with the program's regular target or deadline dates. All NSF research Directorates and Offices will accept SAVI proposals. The Office of International and Integrative Activities (OIIA) will coordinate and support SAVI activities across NSF. Each NSF Directorate and Office will process SAVI proposals in a manner consistent with its established proposal review practices. Potential proposers should communicate with appropriate Directorate or Office contacts listed on the SAVI website (<http://www.nsf.gov/savi>) prior to proposal submission for pertinent advice.

Teams of investigators with active NSF awards are eligible to apply. A team can be: 1) an existing NSF center/institute awardee; or 2) a virtual center/institute consisting of multiple investigators holding individual awards with common research/education interests. A single individual representing the team must be designated as the SAVI coordinator and his/her institution must serve as the U.S. lead institution responsible for management of a SAVI award. At the time of proposal submission, the U.S. team's identified international partners should have support or apply to an appropriate funding organization in their country or region for needed research resources. SAVI partnerships may be bilateral or multilateral.

SAVI funds are meant to serve as "glue" to facilitate building of solid foundations for virtual institutes. Depending on the extent of SAVI-like activities already supported by existing awards and the size of a proposed virtual institute, the budget of a SAVI award is expected to vary from \$50,000 to \$400,000 per year for up to five years. NSF funds will support only the U.S. participants. SAVI awards are meant to facilitate initial catalytic efforts, and NSF and our international counterpart funding organizations expect a successful SAVI to become a self-sustainable virtual institute after SAVI funding ends.

NSF and our international funding counterparts envision virtual institutes that connect researchers with common interests and goals across national borders, and that have significant impact for the advancement of global STEM research and education. We look forward to receiving compelling,

imaginative SAVI proposals to realize this vision.

Sincerely,

Subra Suresh
Director