



National Science Foundation

4201 Wilson Boulevard
Arlington, Virginia 22230

Dear Colleagues:

The United States, Northern Ireland, and the Republic of Ireland have come together to form a unique partnership as a way of increasing the level of collaborative R&D among researchers across the jurisdictions that will generate innovation and lead to improvements in society. The agencies involved in this effort are: the National Science Foundation (U.S.), Science Foundation Ireland (Republic), Invest Northern Ireland (Northern), and the Department of Employment and Learning (Northern).

Our objective is to encourage the development and submission of transnational and collaborative research projects that address the exciting research challenges in the areas of nanotechnology and sensors. These thematic areas have been identified initially as representing a unique opportunity in terms of research interests and reflect the potential for playing a meaningful role in research areas internationally recognized to be of pivotal significance for the 21st century.

Potential proposals generated as a result of this partnership should be submitted to relevant NSF programs in accordance with the program's proposal due date(s) and will be reviewed in accordance with the standard National Science Board-approved review criteria. No specific funding is set aside for this partnership.

The attachment below describes plans for the preparation, receipt, and review of proposals, as well as the administrative processes in which the four agencies involved will cooperate in the monitoring and funding of successful proposals. Questions regarding this partnership should be directed to: Mihail Roco, Senior Advisor for Nanotechnology at: mroco@nsf.gov.

Best Regards,

Richard O. Buckius
Assistant Director
Directorate for Engineering

Synopsis of Program

In order to foster an increase in collaborative research relationships, the National Science Foundation (NSF), the Science Foundation Ireland (SFI), Invest Northern Ireland (Invest NI), and the Department of Employment and Learning (DEL) have agreed to enter into a partnership to support research in the areas of nanoscale science and engineering and sensors and sensor networks through competitive awards via existing (core) programs in the case of NSF and SFI, and, in the case of Invest NI/DEL, via these organizations' R&D funding mechanisms.

Participating NSF Directorates include:

Biological Sciences (BIO)
Computer & Information Sciences & Engineering (CISE)
Engineering (ENG)
Geosciences (GEO)
Mathematical & Physical Sciences (MPS)
Social, Behavioral & Economic Sciences (SBE)
Education & Human Resources (EHR)
Office of International Science & Engineering (OISE)

Participating SFI Directorates include:

Information and Communications Technology Directorate (ICT)
Biosciences and Bioengineering Directorate (BIO)

Participating Invest NI Directorates include:

Innovation, Research and Technology Division

Participating DEL Directorates include:

Higher Education Division

Proposal & Award Process

The organizations will manage this process through their relevant funding programs/mechanisms. Information concerning this program will be placed on each organization's website, giving the background to the U.S.-Ireland R&D Partnership and details on how proposals will be considered.

Proposal Preparation & Submission to NSF

Tri-jurisdictional, integrated proposals to NSF will be submitted to those programs funding nanoscale science and engineering, and sensors research and education (see Sections A and B, below) or to the Office of International Science and Engineering (see Section C, below).

Applicants will submit their proposals in conformance with the guidelines specified in the NSF Proposal and Award Policies and Procedures Guide (GPG)

http://www.nsf.gov/publications/pub_summ.jsp?ods_key=papp or the NSF Grants.gov Application Guide

http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide .

All proposals must be submitted to NSF via use of the NSF FastLane System or Grants.gov.

Proposals must include the full project description under all three jurisdictions, and must include three budgets, the full NSF budget and two additional half-page budgets for Ireland and Northern Ireland. The project descriptions and budget pages for the three jurisdictions should be included in the Supplementary Documents section of the proposal. The names of the corresponding Program Managers from Ireland and Northern Ireland must be provided in the respective budget justification and will be used as a contact reference by the NSF Program Manager.

Principal Investigators (PIs)

Each proposal must have a minimum of one Principal Investigator from each jurisdiction. Proposals submitted to NSF must be submitted by the U.S. PI's home institution. PIs from Ireland and Northern Ireland will be identified as Senior Personnel in the proposal submitted to NSF.

Review Process

Proposals received at NSF will be evaluated in accordance with the standard NSF merit review criteria of intellectual merit and broader impacts of the proposed effort. The review will be conducted using the NSF merit review process, including conflict of interests and confidentiality policies. The process may include use of *ad hoc* mail reviewers, as needed, in combination with review panelists who meet, discuss the proposals, and make recommendations to NSF. Review procedures also may include provision for summary ratings by the panel.

Award Process

Proposals selected for potential funding by each organization will be considered in line with each organization's respective policies and practices. The form of award instrument shall be at the option of the funding organization. **No funds will be transferred between agencies. There will be no cross-organization co-funding of individual awards.** The issuance and administration of awards will be carried out by the relevant funding organization. Each award will contain an acknowledgement of this joint NSF/SFI/Invest NI/DEL initiative.

Post-award Process

Co-investigators will be required to submit identical annual written progress reports to their relevant Program Managers in each of the four funding organizations. Co-investigators must use the project report format identified in the NSF FastLane System for this purpose.

A. National Nanotechnology Initiative, FY 2008

For fiscal year 2008, the National Science Foundation budget request for the National Nanotechnology Initiative (NNI) is approximately \$390 million. All participating research and education directorates and the Office of International Science and Engineering (OISE) accept proposals with an international component following a competitive selection process. The NSF contribution covers only expenses made by the U.S. universities for research and for international interactions such as workshops, visiting students and professors in U.S. and abroad.

The participating directorates are: Biological Sciences (BIO), Computer and Information Science & Engineering (CISE), Engineering (ENG), Geosciences, Mathematical and Physical Sciences (MPS), Social, Behavioral and Economic Sciences (SBE), and Education and Human Resources (EHR).

NSF also supports nanoscale science and engineering in FY 2008 through the following programs:

Core Programs: Competitive awards via existing (core) programs in the research and education directorates. The following program directors may provide further information:

BIO: Eve Barak, ebarak@nsf.gov
CISE: Sankar Basu, sabasu@nsf.gov
ENG: Jimmy Hsia, jhsia@nsf.gov
MPS: Carmen Huber, chuber@nsf.gov
SBE: Stephen Zehr, szehr@nsf.gov
EHR: John Bradley, jbradley@nsf.gov
OISE: Cassandra Dudka, cdudka@nsf.gov

International supplements: Awards made in previous fiscal years for individual investigators, groups, centers, and user facilities can be supplemented by the programs. The NSF award database can be accessed from www.nsf.gov/nano.

General information about NNI specific programs can be found at www.nsf.gov/nano, on NSF's core programs at http://www.nsf.gov/funding/research_edu_community.jsp, and on OISE programs at <http://www.nsf.gov/div/index.jsp?div=OISE>.

B. Sensors and Wireless Sensor Networks, FY 2008

The participating directorates are: Biological Sciences (BIO), Computer and Information Science & Engineering (CISE), Engineering (ENG), Geosciences (GEO), Mathematical and Physical Sciences (MPS), Social, Behavioral and Economic Sciences (SBE), and Education and Human Resources (EHR).

NSF supports sensor and wireless sensor network research and education in FY 2008 through the following programs:

Core Programs: Competitive awards via existing (core) programs in the research and education directorates. The following program directors may provide further information:

BIO: Pat Dennis, pdennis@nsf.gov

CISE: David Du, ddu@nsf.gov

ENG: Bruce Hamilton, bhamilto@nsf.gov

GEO: Michael Ellis, mellis@nsf.gov

MPS: Zeev Rosenzweig, zrosenzw@nsf.gov

SBE: Sandra Schneider, sschneid@nsf.gov

EHR: Daniel Litynski, dlitynsk@nsf.gov

General information on NSF's core programs can be found at http://www.nsf.gov/funding/research_edu_community.jsp, and on OISE programs at <http://www.nsf.gov/div/index.jsp?div=OISE>.

C. Office of International Science and Engineering (OISE)

NSF's Office of International Science and Engineering (OISE) serves as NSF's focal point for international science and engineering activities. OISE supports – either through its own programs or working with the other NSF directorates and offices – innovative awards and supplements that promote research excellence through new international collaboration and that develop the next generation of globally engaged scientists and engineers. OISE funds international research and education activities in all NSF-supported disciplines involving any region of the world.

Researchers interested in collaborative research should consult both disciplinary and OISE program officers. OISE works to build effective partnerships throughout the global science and engineering research and education community and interacts with foreign government and scientific counterparts to facilitate research collaboration. The OISE Home Page is <http://www.nsf.gov/div/index.jsp?div=OISE>.

OISE supports science and engineering in FY 2008 through the following programs:

International Research and Education: Planning Visits and Workshops (NSF 04-035):

(http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12815&org=OISE&form=home)

- **International Planning Visits:** Travel to plan collaborative research with prospective foreign partners. (No deadlines apply. Proposals may be submitted at any time.)
- **International Workshops:** Meetings to identify common priorities and approaches for collaboration on specific, well-defined research areas. Note: OISE does not support US participation in international conferences. (Target Dates: September 20, 2007, February 20, 2008, and May 20, 2008.)

Developing Global Scientists and Engineers (NSF 04-036):

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12831&org=OISE&from=home

- **International Research Experiences for Students:** Enable faculty at US institutions to organize international research experiences for US undergraduate and graduate students. (Target Dates: and September 15, 2007 and February 15, 2008.)
- **Doctoral Dissertation Enhancement Projects:** Support dissertation research by US graduate students at a foreign site. (No deadlines apply. Proposals may be submitted at any time.)

International Research Fellowship Program (IRFP, NSF 06-582):

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5179&org=OISE&from=home

- Support for US citizens or permanent residents with a recent PhD to conduct research at institutions outside the United States. (Target Date: September 11, 2007.)

Additional support: In addition to its own programs, OISE will continue to co-fund proposals submitted to NSF's disciplinary programs and will consider highly meritorious requests for international supplements to current NSF awards. For more information on these funding opportunities, please see OISE's home page: <http://www.nsf.gov/div/index.jsp?div=OISE>.