

01/15/13

**ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY (FFO)
Graduate Student Measurement Science and Engineering (GMSE) Fellowship Program
National Institute of Standards and Technology (NIST)**

EXECUTIVE SUMMARY

- **Federal Agency Name:** National Institute of Standards and Technology (NIST), United States Department of Commerce (DoC)
- **Funding Opportunity Title:** Graduate Student Measurement Science and Engineering (GMSE) Fellowship Program
- **Announcement Type:** Initial
- **Funding Opportunity Number:** 2013-NIST-GMSE-01
- **Catalog of Federal Domestic Assistance (CFDA) Number:** 11.609, Measurement and Engineering Research and Standards
- **Dates:** Electronic applications must be received no later than 11:59 p.m. Eastern Time, Friday, February 15, 2013. Paper applications must be received by 5:00 p.m. Eastern Time, Friday, February 15, 2013. Applications received after the respective deadline will not be reviewed or considered. Review, selection, and award processing is expected to be completed in March 2013. The earliest anticipated start date for awards under this FFO is expected to be May 1, 2013.
- **Proposal Submission Address:** See Section IV in the Full Announcement Text of this FFO.
- **Funding Opportunity Description:** NIST is soliciting proposals from eligible applicants for a Graduate Student Measurement Science and Engineering (GMSE) Fellowship Program that will provide doctoral-level graduate students with opportunities and financial assistance to obtain laboratory experiences within the NIST laboratories in the science, technology, engineering and mathematics (STEM) disciplines. The recipient will work with NIST to foster collaborative research relationships among NIST, doctoral-level graduate students and the students' academic institutions in STEM.
- **Total Amount to be Awarded:** Up to \$300,000 may be obligated in Fiscal Year 2013.
- **Anticipated Amounts:** Approximately \$300,000 for new awards in Fiscal Year 2013, subject to the availability of funds. NIST anticipates funding one (1) to no more than three (3) awards for up to three (3) years in the range of approximately \$100,000 - \$300,000 per award per year, consistent with the multi-year funding policy described in Section II.2, Award Information, of this FFO.
- **Funding Instrument:** Cooperative agreement
- **Who Is Eligible:** Accredited institutions of higher education; non-profit organizations; commercial organizations; and state, local and Indian tribal governments. An eligible organization may work individually or include proposed subawards or contracts with others in a project proposal, effectively forming a team or consortium. Applicants are encouraged, but not required, to select underrepresented minorities for participation in the GMSE Fellowship Program.
- **Cost Sharing Requirements:** Cost sharing is not required.

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FULL ANNOUNCEMENT TEXT

I. Funding Opportunity Description

The statutory authorities for the Graduate Student Measurement Science and Engineering (GMSE) Fellowship Program are 15 U.S.C. § 278g-1(a) and (c); 15 U.S.C. §272(b) and (c).

Program Description: The National Institute of Standards and Technology (NIST) is one of the nation's premiere research institutions for the physical and engineering sciences and, as the lead Federal agency for technology transfer, it provides a strong interface between government, industry and academia. NIST embodies a science culture, developed from a large and well-equipped research staff that enthusiastically blends programs that address the immediate needs of industry with longer-term research that anticipates future needs. In this context, NIST is soliciting proposals from eligible applicants for a Graduate Student Measurement Science and Engineering (GMSE) Fellowship Program that will provide doctoral-level graduate students opportunities and financial assistance to obtain laboratory experiences within the NIST laboratories in the science, technology, engineering and mathematics (STEM) disciplines that are pertinent to research priorities at NIST. Refer to <http://www.nist.gov> for more information about NIST and the areas of research collaboration available to the GMSE Fellowship Program participants.

The recipient will work with NIST to foster collaborative research relationships among NIST, doctoral-level graduate students and the students' academic institutions in STEM disciplines that are pertinent to research priorities at NIST. The recipient may cooperate with any accredited U.S. institution(s) of higher learning and/or other organization(s) in planning and implementing the GMSE Fellowship Program.

Specifically, the recipient will work cooperatively with NIST to:

- 1) identify (with NIST) and financially support doctoral-level graduate students to conduct on-site collaborative research with NIST staff at NIST laboratories in Gaithersburg, Maryland, and/or Charleston, South Carolina, and/or Boulder, Colorado,
- 2) engage a diverse, educated, and skilled pool of scientists and engineers in measurement science and engineering at NIST with academic institution faculty and their students to enable long-term collaborative relationships between NIST, doctoral-level graduate students and the students' academic institutions,
- 3) conduct outreach to enhance student participation in the GMSE Fellowship Program in an effort to increase the STEM workforce.

The recipient will collaborate with the NIST International and Academic Affairs Officer in selecting graduate-level researchers to participate in the GMSE Fellowship Program. In accordance with the procedures proposed by the recipient and included in the cooperative agreement, the NIST International

and Academic Affairs Officer anticipates working with staff from the NIST Laboratories (Engineering Laboratory, Physical Measurement Laboratory, Material Measurement Laboratory, Information Technology laboratory, NIST Center for Nanoscale Science and Technology and NIST Center for Neutron Research) and/or Offices (Office of Special Programs, Standards Coordination Office) within the NIST Laboratory Directorate to review candidate graduate-level researchers in the GMSE Fellowship Program managed by the recipient. In addition, the graduate-level researchers selected to be part of the GMSE Fellowship Program managed by the recipient will require a moderate amount of graduate-level researcher guidance and training from NIST staff as part of the collaboration.

II. Award Information

- 1. Funding Instrument.** The funding instrument that will be used is a cooperative agreement. The nature of NIST's "substantial involvement" will generally be collaboration with the recipient by working jointly with them in carrying out the scope of work. Additional forms of substantial involvement that may arise are described in the DoC Grants and Cooperative Agreements Manual, which is available at http://www.osc.doc.gov/oam/grants_management/policy/doc_grants_manual/default.htm.
- 2. Multi-Year Funding Policy.** When a proposal for a multi-year award is approved, funding will usually be provided for only the first year of the program. If a project is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the sole discretion of NIST. Continued funding will be contingent upon satisfactory performance, continued relevance of the mission and priorities of the GMSE Fellowship Program, and the availability of funds.
- 3. Funding Availability.** Approximately \$300,000 for new awards in Fiscal Year 2013, subject to availability of funds. NIST anticipates funding one (1) to no more than three (3) awards for up to three (3) years in the range of approximately \$100,000 - \$300,000 per award per year, consistent with the multi-year funding policy described in Section II.2, Award Information, of this FFO.

III. Eligibility Information

- 1. Eligible Applicants.** This program is open to accredited institutions of higher education; non-profit organizations; commercial organizations; and state, local and Indian tribal governments. An eligible organization may work individually or include proposed subawards or contracts with others in a project proposal, effectively forming a team or consortium. Applicants are encouraged, but not required, to select underrepresented minorities for participation in the GMSE Fellowship Program
- 2. Cost Sharing.** Cost sharing is not required.
- 3. Other**
 - a. Pre-Proposals.** NIST is not accepting pre-applications or white papers for this program.
 - b. Graduate-level Researcher Applications.** NIST is not accepting applications from individual graduate-level researchers to conduct work within the NIST laboratories on any NIST campus. This FFO seeks only applications from institutions with the knowledge, skills, and abilities to develop and manage a GMSE Fellowship Program that will provide doctoral-level graduate students with opportunities and financial assistance to obtain laboratory experiences within the NIST laboratories.

IV. Application and Submission Information

- 1. Address to Request Application Package.** The standard application package, consisting of the standard forms, i.e., SF-424, SF-424A, SF-424B, SF-LLL, and the CD-511, is available at

www.grants.gov and at <http://www.nist.gov/iaao/GMSE>. The standard application package may also be requested by contacting the NIST personnel listed below.

Dr. Susan Heller-Zeisler, National Institute of Standards and Technology, International and Academic Affairs Office, 100 Bureau Drive, Stop 1090, Gaithersburg, MD 20899-1090 (Email: susan.heller-zeisler@nist.gov; Phone: 301-975-3111)

2. Content and Format of Application Submission

a. Required Forms and Documents

- (1) SF-424, Application for Federal Assistance. The SF-424 must be signed by an authorized representative of the applicant organization. The FFO number 2013-NIST-GMSE-01 must be identified in item 12 of the SF-424. The list of certifications and assurances referenced in item 21 of the SF-424 is contained in the SF-424B.
- (2) SF-424A, Budget Information – Non-Construction Programs
- (3) SF-424B, Assurances – Non-Construction Programs
- (4) SF-LLL, Disclosure of Lobbying Activities (if applicable)
- (5) CD-511, Certification Regarding Lobbying
- (6) **Technical Proposal.** The Technical Proposal is a word-processed document of no more than thirty (30) pages responsive to the program description (see Section I of this FFO) and the evaluation criteria (see Section V.1. of this FFO). It should contain the following information:
 - a) **Executive Summary.** The Executive Summary should briefly describe the proposed project and how the applicant will plan and implement the GMSE Fellowship Program (see Section I. of this FFO), consistent with the evaluation criteria (see Section V.1. of this FFO). The executive summary should not exceed one (1) single-sided page.
 - b) **Project Narrative.** A description of the proposed approach to plan and implement the GMSE Fellowship Program (see Section I. of this FFO), sufficient to permit evaluation of the proposal, in accordance with the Project Narrative evaluation criterion (see Section V.1.a of this FFO).
 - c) **Qualifications of the Applicant.** A description of the qualifications and proposed operational or management activities of key personnel who will be assigned to work on the proposed project, in accordance with the Qualifications of the Applicant evaluation criterion (see Section V.1.b) and the Staff and Institution Capability to Perform the Work evaluation criterion (see Section V.1.c of this FFO). Examples of key personnel current and/or past experiences should include experiences with encouraging and assisting underrepresented students in STEM.
 - d) **Connections to academic institutions.** A description of the proposed approach to create and maintain connections to U.S. academic institutions, sufficient to permit evaluation of the proposal, in accordance with the Connections to Academic Institutions evaluation criterion (see Section V.1.d of this FFO).
- (7) **Budget Narrative.** There is no set format for the Budget Narrative; however, it should provide a detailed breakdown of each of the object class categories as reflected on the SF-424A and clearly explain all proposed project funding. Applications must include a budget for each funding period (budget year). Each applicant should determine its

capabilities for managing a select number of fellows. This section should be the primary, but not only, means by which the proposal will be evaluated according to the Budget Narrative criterion (see Section V.1.e of this FFO). Eligible costs are:

- i. stipend (minimum of \$20,000 per year per fellow),
- ii. full tuition assistance for students calculated at the in-state rate, and
- iii. fringe benefits, including health insurance.

In addition to these costs, the applicant may include the following optional costs:

- iv. applicant's indirect costs (including administrative and operation costs), as appropriate, and
- v. necessary costs to provide oversight and implementation of the program.

- (8) **Indirect Cost Rate Agreement.** If indirect costs are included in the proposed budget, provide a copy of the approved negotiated agreement if this rate was negotiated with a cognizant Federal audit agency. If the rate was not established by a cognizant Federal audit agency, provide a statement to this effect. If the successful applicant includes indirect costs in the budget and has not established an indirect cost rate with a cognizant Federal audit agency, the applicant will be required to obtain such a rate.

- (9) **Resumes of key personnel** (these do not contribute to the total number of pages)

If submitting the application electronically via Grants.gov, items IV.2.a (1) through IV.2.a (5) above are part of the standard application package in Grants.gov and can be completed through the download application process. Items IV.2.a (6) through IV.2.a (9) must be completed and attached by clicking on "add attachments" found in item 15 of the SF-424, Application for Federal Assistance. This will create a zip file that allows for transmittal of the documents electronically via Grants.gov. Applicants should carefully follow specific Grants.gov instructions at www.grants.gov to ensure the attachments will be accepted by the Grants.gov system. A receipt from Grants.gov indicates an application is received but does not provide information about whether attachments have been received.

If submitting a proposal by paper, all of the required application documents should be submitted in the order listed above.

b. Application Format

- (1) **Cover Page.**
- (2) **Double-sided copy.** For paper submissions, print on both sides of the paper (front to back counts as two (2) pages).
- (3) **E-mail and facsimile (fax) submissions.** Will not be accepted.
- (4) **Number of paper copies.** For paper submissions, one (1) signed stapled original and two (2) stapled copies. If original proposal is in color, the two (2) copies must also be in color. If submitting electronically via Grants.gov, paper copies are not required.
- (5) **Figures, graphs, images, and pictures.** Should be of a size that is easily readable or viewable and may be landscape orientation.
- (6) **Font.** Easy to read font (10-point minimum). Smaller type may be used in figures and tables but must be clearly legible.

- (7) **Page layout.** The Technical Proposal (Section IV.2.a (6)) must be in portrait orientation except for figures, graphs, images, and pictures. Paragraphs are to be clearly separated from each other by double spacing paragraph formatting or equivalent.
- (8) **Page Limit.** Proposals are limited to thirty (30) pages.
 - a) Page limit includes: Table of contents (if included), Technical Proposal with all required sections, including management information and qualifications, figures, graphs, tables, images, and pictures.
 - b) Page limit excludes: SF-424, Application for Federal Assistance; SF-424A, Budget Information – Non-Construction Programs; SF-424B, Assurances – Non-Construction Programs; SF-LLL, Disclosure of Lobbying Activities; CD-511, Certification Regarding Lobbying; Budget Narrative; and Indirect Cost Rate Agreement, and resumes.
- (9) **Page numbering.** Number pages sequentially.
- (10) **Paper size.** 21.6 by 27.9 centimeters (8 ½ by 11 inches).
- (11) **Proposal language.** English.
- (12) **Staple paper submission.** For paper submissions, staple the original signed proposal and each of the two (2) copies securely with one (1) staple in the upper left-hand corner.
- (13) **Typed document.** All proposals, including forms, must be typed; handwritten proposals and forms will not be accepted.

3. Submission Dates and Times. Electronic applications must be received no later than 11:59 p.m. Eastern Time, Friday, February 15, 2013. Paper applications must be received by 5:00 p.m. Eastern Time, Friday, February 15, 2013.

Applications not received by the specified due date and time will not be considered and will be returned without review. NIST determines whether applications submitted by paper have been timely received by the deadline by the date and time receipt they are physically received by NIST at its Gaithersburg, Maryland campus. For electronic submissions, NIST will consider the date and time stamped on the validation generated by www.grants.gov as the official submission time.

NIST strongly recommends that proposers do not wait until the last minute to submit a proposal. NIST will not make allowance for any late submissions, including but not limited to incomplete Grants.gov registration, delays in mail delivery caused by Federal Government security screening of U.S. Postal Service mail, or for delays by guaranteed express mailing and/or couriers. To avoid any potential processing backlogs due to last minute Grants.gov registrations, proposers are highly encouraged to begin their Grants.gov registration process early.

In the event of a natural disaster that interferes with timely proposal submissions, NIST may issue an amendment to this FFO to change the proposal submission due date.

Important: *All applicants, both electronic and paper submitters, should be aware that adequate time must be factored into applicants' schedules for delivery of their proposal. Submitters of electronic proposals are advised that volume on Grants.gov may be extremely heavy on the deadline date, and if Grants.gov is unable to accept proposals electronically in a timely fashion, applicants are encouraged to exercise their option to submit proposals in paper format. Submitters of paper proposals should allow adequate time to ensure a paper proposal will be received on time, taking into account that Federal Government security screening for U.S. Postal Service mail may delay receipt of*

mail for up to two (2) weeks and that guaranteed express mailings and/or couriers are not always able to fulfill their guarantees.

4. Intergovernmental Review. Proposals under this Program are not subject to Executive Order 12372.

5. Funding Restrictions. Profit or fee is not an allowable cost.

6. Other Submission Requirements

a. Proposals may be submitted by paper or electronically.

(1) Paper proposals must be submitted in triplicate (an original and two copies) and submitted to the NIST personnel identified in Section IV.1. of this FFO.

(2) Electronic proposals must be submitted via Grants.gov at www.grants.gov, under announcement 2013-NIST-GMSE-01.

a) Submitters of electronic proposals should carefully follow specific Grants.gov instructions to ensure the attachments will be accepted by the Grants.gov system. A receipt from Grants.gov indicating a proposal is received does not provide information about whether attachments have been received. For further information or questions regarding applying electronically for the 2013-NIST-GMSE-01 announcement, contact Christopher Hunton by phone at 301-975-5718 or by e-mail at christopher.hunton@nist.gov.

b) Applicants are strongly encouraged to start early and not wait until the approaching due date before logging on and reviewing the instructions for submitting a proposal through Grants.gov. The Grants.gov registration process must be completed before a new registrant can apply electronically. If all goes well, the registration process takes three (3) to five (5) business days. If problems are encountered, the registration process can take up to two (2) weeks or more. Applicants must have a Dun and Bradstreet Data Universal Numbering System (DUNS) number (See Section VI.2.b) and must maintain a current registration in the Federal government's primary registrant database, the System for Award Management (<https://www.sam.gov/>), as explained on the Grants.gov Web site. After registering, it may take several days or longer from the initial log-on before a new Grants.gov system user can submit a proposal. Only authorized individual(s) will be able to submit the proposal, and the system may need time to process a submitted proposal. Applicants should save and print the proof of submission they receive from Grants.gov. If problems occur while using Grants.gov, the applicant is advised to (a) print any error message received and (b) call Grants.gov directly for immediate assistance. If calling from within the United States or from a U. S. territory, please call 800-518-4726. If calling from a place other than the United States or a U. S. territory, please call 606-545-5035. Assistance from the Grants.gov Help Desk will be available around the clock every day, with the exception of Federal holidays. Help Desk service will resume at 7:00 a.m. Eastern Time the day after Federal holidays. For assistance using Grants.gov, you may also contact support@grants.gov.

c) Information essential to successful submission of proposals on the Grants.gov system is detailed in the For Applicants section found in red on the left side of the www.grants.gov home page, and all potential applicants should pay close attention to the information contained therein. The All About Grants, Applicant FAQs, and Submit Application FAQs sections found under the Applicant Resources option are particularly important.

Refer to important information in Section IV.3. Submission Dates and Times, to help ensure your proposal is received on time.

- b. **Amendments.** Any amendments to this FFO will be announced through Grants.gov. Applicants may sign up for Grants.gov FFO amendments or may request copies from Dr. Susan Heller-Zeisler by telephone at (301) 975-3111, or by e-mail to susan.heller-zeisler@nist.gov.

V. Application Review Information

1. Evaluation Criteria

The evaluation criteria that will be used in evaluating these proposals and assigned weights are as follows:

- a. **Project Approach/Methodology and Program Management Plan.** The extent to which the applicant's proposal clearly articulates a coherent plan to provide qualified graduate students the opportunity to obtain doctoral-level research experience within the NIST Laboratories in STEM disciplines that are pertinent to research priorities at NIST will be evaluated. (Refer to <http://www.nist.gov> for more information about NIST and areas of research collaboration for the GMSE Fellowship Program participants.) The extent to which the applicant establishes the ability to collaborate in the selection of graduate-level researchers in the GMSE Fellowship Program with the International and Academic Affairs Officer at NIST will be considered (see Section I of this FFO). The applicant's ability to understand the unique role of measurement science and standards in development and implementation of a successful fellowship program proposal will be considered. The applicant's ability to ensure the availability of students for on-site work at one of NIST's campuses (Gaithersburg, Maryland; Boulder, Colorado, or Charleston, South Carolina) during the students' tenure as a graduate student, even those taking coursework, will be considered. The extent to which the applicant clearly indicates expected outcomes and benefits to the applicant and to the participating students, expressed in measurable terms, will also be considered. (0-25 points)
- b. **Qualifications of the Applicant.** The extent to which the applicant has experience in or ability to plan for providing students pursuing degrees in STEM with work experiences in laboratories or other settings consistent with furthering the students' education will be evaluated. This includes the extent to which demonstrated commitment to encouraging and assisting underrepresented students in NIST fields of research is evident. If this will be a new or developing activity for an applicant, the applicant's qualifications to plan and implement the new program will be evaluated. (0-30 points)
- c. **Staff and Institution Capability to Perform the Work.** The extent to which the qualifications and experience of the applicant's staff, as demonstrated by resumes, indicates adequacy and reasonableness of plans for utilizing the applicant's staff effectively to administer the GMSE Fellowship Program. The applicant's ability to coordinate with the GMSE Fellowship Program Coordinator and the NIST Technical Advisors in Gaithersburg, Maryland, Boulder, Colorado, and Charleston, South Carolina will be considered. (0-10 points)
- d. **Connections to Academic Institutions.** The degree to which the applicant demonstrates current relationships to U.S. academic institutions which grant doctoral degrees in STEM fields will be evaluated. The plan to maintain such established relationships will be considered. In cases where connections do not exist, the extent to which a plan is presented for the applicant to develop and maintain such connections will be assessed. (0-25 points)
- e. **Budget Narrative.** An assessment of the budget against the proposed activities (proposed fellowships and other proposed costs the applicant will incur) will be conducted to determine the practicality of the proposed budget with respect to developing and implementing the GSME Program as described in Section I of this FFO. (0-10 points)

2. Review and Selection Process

- a. **Initial Screening of all Program Applications.** An initial review of timely received applications will be conducted to determine eligibility, completeness, and responsiveness to this FFO (see Section I of this FFO). Applications determined to be ineligible, incomplete, and/or non-responsive may be eliminated from further review.
- b. **Review of Eligible, Complete, and Responsive Applications.** Applications that are determined to be eligible, complete, and responsive will proceed for full reviews in accordance with the review and selection process below:

Each application will be reviewed by at least three independent, objective merit reviewers who are knowledgeable in the subject matter of this FFO and its objectives and who are able to conduct a review based on the evaluation criteria (see Section V.1. of this FFO). If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus. Based on the average of the reviewers' scores, a rank order will be prepared and provided to the Selecting Official for further consideration.

The NIST Selecting Official, who is the International and Academic Affairs Officer at NIST, or his/her designee, will make the final applicant selection. The Selecting Official shall select an application for award based upon the rank order of the proposals and may select a proposal out of rank order based on one or more of the following selection factors: the availability of funds and the results of the reviewers' evaluations.

In accordance with the Federal appropriations law expected to be in effect at the time of project funding, NIST anticipates that the selected applicant will be provided a form and asked to make a representation regarding any unpaid delinquent tax liability or felony conviction under any Federal law.

NIST reserves the right to negotiate the budget costs with the selected applicant. Negotiations may include requesting that the applicant remove certain costs. Additionally, NIST may request that the applicant modify objectives or work plans and provide supplemental information required by the agency prior to award. NIST also reserves the right to reject a proposal where information is uncovered that raises a reasonable doubt as to the responsibility of the applicant. NIST may select part, some, all, or none of the proposals. The final approval of selected proposals and issuance of awards will be by the NIST Grants Officer. The award decisions of the Grants Officer are final.

- 3. **Anticipated Announcement and Award Dates.** Review, selection, and award processing is expected to be completed in March 2013. The earliest anticipated start date for awards under this FFO is expected to be May 1, 2013.

4. **Additional Information**

- a. **Safety.** Safety is a top priority at NIST. Graduate students participating in the GMSE Fellowship Program will be expected to be safety-conscious, to attend NIST safety training, and to comply with all NIST safety policies and procedures, and with all applicable NIST visitor policies.
- b. **Application Replacement Pages.** Applicants may not submit replacement pages and/or missing documents once an application has been submitted. Any revisions must be made by submission of a new application that must be received by NIST by the submission deadline.
- c. **Notification to Unsuccessful Applicants.** Unsuccessful applicants will be notified in writing.
- d. **Retention of Unsuccessful Applications.** One (1) copy of each non-selected application will be retained for three (3) years for record keeping purposes and the other two (2) copies will be destroyed. After three (3) years, the remaining copy will be destroyed.

VI. Award Administration Information

1. **Award Notices.** Successful applicants will receive an award from the NIST Grants Officer. The award cover page, i.e., CD-450, Financial Assistance Award is available at http://ocio.os.doc.gov/s/groups/public/@doc/@os/@ocio/@oitpp/documents/content/dev01_002513.pdf and the DoC Financial Assistance Standard Terms and Conditions (January 2013) are available at http://www.osec.doc.gov/oam/grants_management/policy/documents/DOC_Standard_Terms_and_Conditions_01_10_2013.pdf.

2. Administrative and National Policy Requirements

- a. **DoC Pre-Award Notification Requirements.** The DoC Pre-Award Notification Requirements for Grants and Cooperative Agreements, 77 FR 74634 (December 17, 2012), are applicable to this FFO and are available at <https://www.federalregister.gov/articles/2012/12/17/2012-30228/departments-of-commerce-pre-award-notification-requirements-for-grants-and-cooperative-agreements>.
- b. **Employer/Taxpayer Identification Number (EIN/TIN), Dun and Bradstreet Data Universal Numbering System (DUNS), and System for Award Management (SAM)** All applicants for Federal financial assistance are required to obtain a universal identifier in the form of DUNS number and maintain a current registration in the Federal government's primary registrant database, SAM. On the form SF-424 items 8.b. and 8.c., the applicant's 9-digit EIN/TIN and 9-digit DUNS number must be consistent with the information in SAM (<https://www.sam.gov/>) and Automated Standard Application for Payment System (ASAP). For complex organizations with multiple EIN/TIN and DUNS numbers, the EIN/TIN and DUNS numbers MUST be the numbers for the applying organization. Organizations that provide incorrect/inconsistent EIN/TIN and DUNS numbers may experience significant delays in receiving funds if their proposal is selected for funding. Confirm that the EIN/TIN and DUNS number are consistent with the information on the SAM and ASAP.

Per 2 C.F.R. Part 25, each applicant must:

- (1) Be registered in the CCR before submitting a proposal noting the CCR now resides in SAM;
- (2) Maintain an active CCR registration, noting the CCR now resides in SAM, with current information at all times during which it has an active Federal award or a proposal under consideration by an agency; and
- (3) Provide its DUNS number in each application or proposal it submits to the agency.

The applicant can obtain a DUNS number from Dun and Bradstreet. A DUNS number can be created within one business day. The CCR or SAM registration process may take five or more business days to complete. If you are currently registered with the CCR, you may not need to make any changes. However, please make certain that the TIN associated with your DUNS number is correct. Also note that you will need to update your CCR registration annually. This may take three or more business days to complete. Information about SAM is available at SAM.gov. See also 2 C.F.R. Part 25 and the *Federal Register* notice published on September 14, 2010, at 75 FR 55671.

- c. **Use of NIST Intellectual Property.** The nature of the GMSE Fellowship Program involves collaboration among NIST and GMSE Fellowship Program participants, which anticipates the potential use of NIST intellectual property by the applicant or the graduate students. If the applicant or graduate student specifically anticipates using any NIST-owned intellectual property to carry out the work proposed, the applicant should identify such intellectual property. This information will be used to ensure that no NIST employee involved in the development of the intellectual property will participate in the review process for that competition. In addition, if the applicant intends to use NIST-owned intellectual property, the applicant must comply with all statutes and regulations governing the licensing of Federal government patents and inventions, described at 35 U.S.C. §§ 200-212, 37 C.F.R. Part 401, 15 C.F.R. § 14.36, and in Section B.21 of the DoC Pre-Award Notification

Requirements, 77 FR 74634 (December 17, 2012). Questions about these requirements may be directed to the Chief Counsel for NIST, 301-975-2803.

Any use of NIST-owned intellectual property by an applicant is at the sole discretion of NIST and will be negotiated on a case-by-case basis if a project is deemed meritorious. The applicant should indicate within the statement of work whether it already has a license to use such intellectual property or whether it intends to seek one.

If any inventions made in whole or in part by a NIST employee arise in the course of an award made pursuant to this FFO, the United States government may retain its ownership rights in any such invention. Licensing or other disposition of NIST's rights in such inventions will be determined solely by NIST, and include the possibility of NIST putting the intellectual property into the public domain.

- d. **Research Projects Involving Human Subjects, Human Tissue, Data or Recordings Involving Human Subjects Including Software Testing.** Any proposal or resulting fellowship that includes research involving human subjects, human tissue/cells, data or recordings involving human subjects, including software testing, must meet the requirements of the Common Rule for the Protection of Human Subjects ("Common Rule"), codified for the Department of Commerce (DoC) at 15 C.F.R. Part 27. In addition, any such application or resulting fellowship that includes research on these topics must be in compliance with any statutory requirements imposed upon the Department of Health and Human Services (DHHS) and other Federal agencies regarding these topics, all regulatory policies and guidance adopted by DHHS, the Food and Drug Administration, and other Federal agencies on these topics, and all Executive Orders and Presidential statements of policy on these topics.

NIST reserves the right to make an independent determination of whether an applicant's or fellow's research involves human subjects. If NIST determines that your research project involves human subjects, you will be required to provide additional information for review and approval. If an award is issued, no research activities involving human subjects shall be initiated or costs incurred under the award until the NIST Grants Officer issues written approval. Retroactive approvals are not permitted.

NIST will accept applications that include exempt and non-exempt human subjects research activities. Non-exempt human subjects research activities will be required to have protocols approved by an Institutional Review Board (IRB) currently registered with the Office for Human Research Protections (OHRP) within the DHHS and that will be performed by entities possessing a currently valid Federal-wide Assurance (FWA) on file from OHRP that is appropriately linked to the cognizant IRB for the protocol. Information regarding how to apply for an FWA and register and IRB with OHRP can be found at <http://www.hhs.gov/ohrp/assurances/index.html>. ***The applicant should clearly indicate in the proposal, by separable task, all research activities believed to be exempt or non-exempt research involving human subjects and the expected institution(s) where the research activities involving human subjects may be conducted.***

Generally, NIST does not fund research involving human subjects in foreign countries. NIST will consider, however, the use of **preexisting** tissue, cells, or data from a foreign source on a limited basis if all of the following criteria are satisfied:

- (1) the scientific source is considered unique,
- (2) an equivalent source is unavailable within the United States,
- (3) an alternative approach is not scientifically of equivalent merit, and
- (4) the specific use qualifies for an exemption under the Common Rule.

Any award issued by NIST for the program announced in this FFO is required to adhere to all Presidential policies, statutes, guidelines, and regulations regarding the use of human embryonic stem cells. The DoC/NIST follows the NIH Guidelines by supporting and conducting research using only human embryonic stem cell lines that have been approved by NIH in accordance with the NIH Guidelines. Detailed information regarding NIH Guidelines for stem cells is located on the NIH Stem Cell Information website: <http://stemcells.nih.gov>. The DoC/NIST will not support or conduct any type

of research that the NIH Guidelines prohibit NIH from funding. The DoC/NIST will review research using human embryonic stem cell lines that it supports and conducts in accordance with the Common Rule and NIST implementing procedures, as appropriate.

Any request to support or conduct research using human embryonic stem cell lines not currently approved by the NIH, will require that the owner, deriver or licensee of the human embryonic stem cell line apply for and receive approval of the registration of the cell line through the established NIH application procedures: http://hescregapp.od.nih.gov/NIH_Form_2890_Login.htm. Due to the timing uncertainty associated with establishing an embryonic stem cell line in the NIH registry, the use of existing human embryonic stem cell lines in the NIH Embryonic Stem Cell Registry may be preferred by applicants or current award recipients. The NIH Embryonic Stem Cell Registry is located at: http://grants.nih.gov/stem_cells/registry/current.htm.

An applicant or current award recipient proposing to use a registered embryonic stem cell line will be required to document an executed agreement for access to the cell line with the provider of the cell line, and acceptance of any established restrictions for use of the cell line, as may be noted in the NIH Embryonic Stem Cell Registry.

If the applicant's proposal appears to include research activities involving human subjects the following information may be requested during the proposal review process:

- (1) The name(s) of the institution(s) where the research will be conducted;
- (2) The name(s) and institution(s) of the cognizant IRB(s), and the IRB registration number(s);
- (3) The FWA number of the applicant linked to the cognizant IRB(s);
- (4) The FWAs associated with all organizations engaged in the planned research activity linked to the cognizant IRB;
- (5) If the IRB review(s) is pending, the estimated start date for research involving human subjects;
- (6) The IRB approval date (if currently approved for exempt or non-exempt research);
- (7) If any FWAs or IRB registrations are being applied for, that should be clearly stated.

Additional documentation may be requested, as warranted, during review of the applicant's proposal, but may include the following for research activities involving human subjects that are planned in the first year of the award:

- (1) A signed (by the study principal investigator) copy of each applicable final IRB-approved protocol;
- (2) A signed and dated approval letter from the cognizant IRB(s) that includes the name of the institution housing each applicable IRB, provides the start and end dates for the approval of the research activities, and any IRB-required interim reporting or continuing review requirements;
- (3) A copy of any IRB-required application information, such as documentation of approval of special clearances (i.e., biohazard, HIPAA, etc.) conflict-of-interest letters, or special training requirements;
- (4) A brief description of what portions of the IRB submitted protocol are specifically included in the applicant's proposal submitted to NIST, if the protocol includes tasks not applicable to the proposal, or if the protocol is supported by multiple funding sources. For protocols with multiple funding sources, NIST will not approve the study without a non duplication-of-funding letter indicating that no other federal funds will be used to support the tasks proposed under the proposed research or ongoing project;
- (5) If a new protocol will only be submitted to an IRB if an award from NIST issued, a draft of the proposed protocol may be requested;
- (6) Any additional clarifying documentation that NIST may request during review of proposals to perform the NIST administrative review of research involving human subjects.

- e. **Research Projects Involving Live Vertebrate Animals.** Any application or resulting fellowship that includes participation in research involving live vertebrate animals, that are being cared for, euthanized, or used by the project participants to accomplish research goals, teaching, or testing, must be in compliance with the National Research Council's "Guide for the Care and Use of Laboratory Animals," which can be obtained from National Academy Press, 500 5th Street, N.W., Department 285, Washington, DC 20055. In addition, such applications or fellowships must meet the requirements of the Animal Welfare Act (7 U.S.C. § 2131 et seq.), 9 C.F.R. Parts 1, 2, and 3, and if appropriate, 21 C.F.R. Part 58. These regulations do not apply to proposed research using **preexisting** images of animals or to research plans that do not include live animals. These regulations also do not apply to obtaining animal materials from commercial processors of animal products or to animal cell lines or tissues from tissue banks. ***The applicant should clearly indicate in the proposal, by separable task, all research activities believed to include research involving live vertebrate animals and the institution(s) where the research activities involving live vertebrate animals may be conducted.***

NIST reserves the right to make an independent determination of whether your research involves live vertebrate animals. If NIST determines that your research project involves live vertebrate animals, you will be required to provide additional information for review and approval. If an award is issued, no research activities involving live vertebrate animals subjects shall be initiated or costs incurred under the award until the NIST Grants Officer issues written approval.

If the applicant's proposal appears to include research activities involving live vertebrate animals the following information may be requested during the proposal review process:

- (1) The name(s) of the institution(s) where the animal research will be conducted;
- (2) The assurance type and number, as applicable, for the cognizant IACUC where the research activity is located. [For example: Animal Welfare Assurance from the Office of Laboratory Animal Welfare (OLAW) should be indicated by the OLAW assurance number, i.e. A-1234; an USDA Animal Welfare Act certification should be indicated by the certification number i.e. 12-R-3456; and an Association for the Assessment and Accreditation of Laboratory Animal Care (AAALAC) should be indicated by AAALAC.]
- (3) The IACUC approval date (if currently approved);
- (4) If the review by the cognizant Institutional Animal Care and Use Committee (IACUC) is pending, the estimated start date for research involving vertebrate animals;
- (5) If any assurances or IACUCs need to be obtained or established, that should be clearly stated.

Additional documentation will be requested, as warranted, during review of the proposal, but may include the following for research activities involving live vertebrate animals that are planned in the first year of the award:

- (1) A signed (by the Principal Investigator) copy of the IACUC approved Animal Study Proposal (ASP);
- (2) Documentation of the IACUC approval indicating the approval and expiration dates of the ASP; and
- (3) If applicable, a nonduplication-of-funding letter if the ASP is funded from several sources.
- (4) If a new ASP will only be submitted to an IACUC if an award from NIST issued, a draft of the proposed ASP may be requested.
- (5) Any additional clarifying documentation that NIST may request during review of proposals to perform the NIST administrative review of research involving live vertebrate animals.

- f. **Funding Availability and Limitation of Liability.** Funding for the program listed in this FFO is contingent upon the availability of appropriations. In no event will NIST or DoC be responsible for application preparation costs if this program fails to receive funding or is cancelled because of agency priorities. Publication of this FFO does not oblige NIST or DoC to award any specific project or to obligate any available funds.

- g. Collaborations Making Use of Federal Facilities.** All proposals should include a description of any work proposed to be performed using Federal facilities.

If an applicant proposes use of NIST facilities, the statement of work should include a statement of this intention and a description of the facilities. Any use of NIST facilities must be approved by appropriate NIST management and is at the sole discretion of NIST. Prior to beginning the merit review process, NIST will verify the availability of the facilities and approval of the proposed usage. Any unapproved facility use will be stricken from the proposal prior to the merit review. Examples of some facilities that may be available for collaborations are listed on the NIST Technology Services Web site, <http://www.nist.gov/user-facilities.cfm>.

3. Reporting

- a. Reporting Requirements.** In lieu of the reporting requirements described in Sections A.01 Financial Reports and B.01 Performance (Technical) Reports of the DoC Financial Assistance Standard Terms and Conditions dated January 2013 (http://www.osec.doc.gov/oam/grants_management/policy/documents/DOC_Standard_Terms_and_Conditions_01_10_2013.pdf), the following reporting requirements shall apply:

- (1) **Financial Reports.** Each award recipient will be required to submit an SF-425, Federal Financial Report, in triplicate (an original and two (2) copies) on a semi-annual basis for the periods ending March 31 and September 30, or any portion thereof, unless otherwise specified in a special award condition. Reports are due no later than 30 days following the end of each reporting period. A final SF-425 will be required within 90 days after the expiration date of the award.
- (2) **Performance (Technical) Reports.** Each award recipient shall require each GMSE Fellowship Program graduate student participating in the program to submit a brief annual report describing their experiences and accomplishments by each August 31st of their fellowship terms. The GMSE Fellowship Program participants who leave the program without completing their fellowship terms will be required to submit their reports within 30 days of their departures. Additionally, the recipient will be required to submit a technical progress report in triplicate (an original and two (2) copies), on a semi-annual basis for the periods ending March 31 and September 30 of each year. Reports will be due within 30 days after the end of the reporting period. A final technical progress report shall be submitted within 90 days after the expiration date of the award. Two (2) copies of the technical progress report shall be submitted to the Project Manager and the original report to the NIST Grants Officer. Technical progress reports shall contain information as prescribed in 15 C.F.R. § 14.51.

- b. OMB Circular A-133 Audit Requirements.** Single or program-specific audits shall be performed in accordance with the requirements contained in OMB Circular A-133, "*Audits of States, Local Governments, and Non-Profit Organizations*," and the related *Compliance Supplement*. OMB Circular A-133 requires any non-Federal entity (i.e., including non-profit institutions of higher education and other non-profit organizations) that expends Federal awards of \$500,000 or more in the recipient's fiscal year to conduct a single or program specific audit in accordance with the requirements set out in the Circular. Applicants are reminded that NIST, the DoC Office of Inspector General or another authorized Federal agency may conduct an audit of an award at any time.
- c. Federal Funding Accountability and Transparency Act of 2006.** In accordance with 2 C.F.R. part 170, all recipients of a Federal award made on or after October 1, 2010, are required to comply with reporting requirements under the Federal Funding Accountability and Transparency Act of 2006 (Pub. L. No. 109-282). In general, all recipients are responsible for reporting sub-awards of \$25,000 or more. In addition, recipients that meet certain criteria are responsible for reporting executive compensation. Applicants must ensure they have the necessary processes and systems in place to

comply with the reporting requirements should they receive funding. Also see the *Federal Register* notice published September 14, 2010, at 75 FR 55663.

VII. Agency Contact(s)

Questions should be directed to the following contact persons:

Subject Area	Point of Contact
Programmatic and technical questions	Susan Heller-Zeisler Phone: 301-975-3111 E-mail: susan.heller-zeisler@nist.gov
Technical Assistance with Grants.gov submissions	Christopher Hunton Phone: 301-975-5718 Fax: 301-840-5976 E-mail: christopher.hunton@nist.gov or Grants.gov Phone: 800-518-4726 E-mail: support@grants.gov
Grant rules and regulations	Scott McNichol Phone: 301-975-5603 Fax: 301-840-5976 E-mail: scott.mcnichol@nist.gov