



ONR Announcement N00014-21-S-F005

FY21 Funding Opportunity Announcement (FOA) for the Office of Naval Research (ONR) Science, Technology, Engineering and Mathematics (STEM) Program

Amendment 0002: The purpose of this amendment is to update the point of contact in section G.2. Federal Award Agency Contact and Section C.1. Eligible Applicants.
This amendment supersedes all previous versions of the FOA.

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I. OVERVIEW OF THE RESEARCH OPPORTUNITY

This publication constitutes a Funding Opportunity Announcement (FOA) as contemplated in the Department of Defense Grants and Agreements regulations (DoDGARS) 32 CFR 22.315(a). The ONR reserves the right to fund all, some, or none of the proposals received under this FOA. ONR provides no funding for direct reimbursement of proposal development costs. Technical and budget proposals (or any other material) submitted in response to this FOA will not be returned. It is the policy of ONR to treat all white papers and proposals submitted under this FOA as sensitive competitive information and to disclose their contents only for the purposes of evaluation.

Hyperlinks have been embedded within this document and appear as underlined, blue-colored words. The reader may “jump” to the linked section by clicking the hyperlink.

A. Overview

1. Federal Awarding Agency Name

Office of Naval Research
One Liberty Center
875 N. Randolph Street
Arlington, VA 22203-1995

2. Funding Opportunity Title-

FY21 Funding Opportunity Announcement (FOA) for the Office of Naval Research (ONR) STEM Program

3. Announcement Type

Amendment 0002

4. Funding Opportunity Number

N00014-21-F-F005

5. Catalog of Federal Domestic Assistance (CFDA Numbers)

12.330 - Science, Technology, Engineering, & Mathematics (STEM) Education, Outreach, and Workforce Program

6. Key Dates

This announcement will remain open for approximately one (1) year from the date of publication, or until replaced by a successor. FOA proposals may be submitted at any time during this period. Selections for award will be made throughout this FOA open period of **March 31, 2021 through March 30, 2022**. Submission of Late Proposals (Applicable to White Papers and Full Proposals) - The Government reserves the right not to review proposals submitted after 31 March 2022, or after a successor to this FOA is issued, whichever occurs first.

IMPORTANT NOTE: Offerors should consult the cognizant ONR STEM Point of Contact for each technology area regarding the desirability of White Paper submissions

7. Grants Officer

The Grants Officer for this announcement is identified in Section G.2.

II. DETAILED INFORMATION ABOUT THE RESEARCH OPPORTUNITY

A. Program Description

The Office of Naval Research (ONR) seeks a broad range of applications for augmenting existing and/or developing innovative solutions that directly maintain and/or cultivate a diverse, world-class Science, Technology, Engineering and Mathematics (STEM) workforce to maintain the U.S. Navy and Marine Corps' technological superiority. The goal of proposed efforts must provide solutions that establish, build, and/or maintain STEM educational pathways and workforce opportunities for diverse U.S. citizens directly relevant to ONR science and technology areas.

As the capacity of the Department of the Navy (DoN) Science and Technology (S&T) workforce is interconnected with STEM education and outreach, ONR recognizes the need to support efforts that can jointly improve STEM student outcomes and align education and outreach efforts with Naval S&T current and future workforce needs. This announcement explicitly encourages projects that improve the capacity of education systems and communities to create impactful STEM educational experiences for students of all ages and the naval-related workforce. Projects must aim to increase engagement in STEM, from students to the current workforce, and enhance people with needed Naval STEM skills, knowledge and abilities. ONR encourages applications to utilize current STEM educational research for informing project design and advancing STEM careers and opportunities of naval relevance.

This FOA is specifically seeking STEM education and outreach projects that address scientific and technical areas identified in the following thrust areas. Project scope may range in size and complexity. While not a formal requirement or program focus of this FOA, applicants are strongly encouraged to consider under-represented and under-served populations including women and minorities in project plans. Special audience priority areas may include, but not be limited to, military connected students, veteran initiatives, and education systems integral to naval science and technology.

STEM cybersecurity education and cyber awareness focused on 6th to 12th grade students. In particular, efforts that:

- Stimulate analytical/thinking skills
- Target age groups may require different levels of educational tools.
- Provide information and an environment to exercise, develop and understand cyber skills and training
- Focus on elements that are key to understanding cybersecurity issues, such as
 - Host level security
 - Network level security
 - Software application development
 - Phishing
 - Suspicious activity intuition

Point of Contact: Dr. Daniel P. Koller, Code 311, daniel.koller1@navy.mil

STEM interests supporting warfighter performance include:

- Human Physiology and Performance
- Medical and Biology
- Bio-centric Technologies
- Artificial Intelligence and Autonomy
- Training and Education
- Social and Cultural
- Command and Control

Point of Contact: Dr. Sandra Chapman, Code 342, sandra.chapman@navy.mil

ONR Global STEM interests include:

- Materials Engineering, in particular, corrosion
- Medical Sciences, Mental and Physical health
- Artificial intelligence
- Alternate Position Navigation & Time
- Self-paced software coding course for students in grades 6 through 12
- Courses to expose students to job opportunities available to computer programmers and software engineers

Point of Contact: Mr. William H Ellis, Code 310, William.h.ellis@navy.mil

Naval Accelerator STEM interests include a broad range of STEM educational and training opportunities for career and workforce development, including but not limited to

- Internships for veterans and underrepresented groups in STEM.
- National security innovation and entrepreneurial education programs to include:
 - Materials to recruit participants, including veterans and underrepresented groups
 - Model curriculum
 - Training materials
 - Best practices
 - Experimental learning opportunities for program participants to interact with operational forces to better understand national security challenges.
- Coordinating and partnering with activities and organizations that employ Hacking for Defense, and related efforts

Point of contact: Dr. Richard T. Carlin, Code 036, richard.carlin1@navy.mil

Applicants are **STRONGLY ENCOURAGED** to contact the appropriate point of contact for each specific technical area to discuss their STEM proposal.

B. Federal Award Information

1. Eligibility for Competition

Proposals for supplementation of existing projects are eligible to compete with applications for new Federal awards under this FOA.

2. Contracted Fundamental Research

With regard to any restrictions on the conduct or outcome of work funded under this FOA, ONR will follow the guidance on and definition of “contracted fundamental research” as provided in the Under Secretary of Defense (Acquisition, Technology and Logistics) (USD AT&L) Memorandum of 24 May 2010. The memorandum can be found at

[https://www.acq.osd.mil/dpap/dars/pgi/docs/2012-D054%20Tab%20D%20USD%20\(ATL\)%20memorandum%20dated%20May%202024%202010.pdf](https://www.acq.osd.mil/dpap/dars/pgi/docs/2012-D054%20Tab%20D%20USD%20(ATL)%20memorandum%20dated%20May%202024%202010.pdf)

As defined therein the definition of “contracted fundamental research,” in a DoD contractual context, includes research performed under grants and contracts that are (a) funded by RDT&E Budget Activity 1 (Basic Research), whether performed by universities or industry or (b) funded by Budget Activity 2 (Applied Research) and performed on campus at a university.

Pursuant to DoD policy, research performed under grants and contracts that are (a) funded by Budget Activity 2 (Applied Research) and NOT performed on-campus at a university or (b) funded by Budget Activity 3 (Advanced Technology Development) or Budget Activity 4 (Advanced Component Development and Prototypes) does not meet the definition of “contracted fundamental research.” In conformance with the USD (AT&L) guidance and National Security Decision Directive 189 found at <https://fas.org/irp/offdocs/nsdd/nsdd-189.htm>, ONR will place no restriction on the conduct or reporting of unclassified “contracted fundamental research,” except as otherwise required by statute, regulation or executive order. The research shall not be considered fundamental in those rare and exceptional circumstances where the applied research effort presents a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense, and where agreement on restrictions have been recorded in the contract or grant. For certain research projects, it may be possible that although the research being performed by the prime contractor is restricted research, a subcontractor may be conducting “contracted fundamental research.” In those cases, it is the prime contractor’s responsibility in the proposal to identify and describe the subcontracted unclassified research and include a statement confirming that the work has been scoped, negotiated, and determined to be fundamental research according to the prime contractor and research performer.

Normally, fundamental research is awarded under grants with universities and under contracts with industry. Non-fundamental research is normally awarded under contracts and may require restrictions during the conduct of the research and DoD pre-publication review of such research results due to subject matter sensitivity. Potential applicants should consult with the appropriate ONR Technical Points of Contact (POCs) to determine whether the proposed effort would constitute fundamental or non-fundamental research.

3. Funded Amount and Period of Performance

The funded amount and period of performance of each proposal selected for award may vary depending on the technology area and the technical approach to be pursued by the offeror selected.

4. Instrument Type

Grants awarded under this announcement will be governed by the award terms and conditions that conform to DoD's implementation of Office of Management and Budget (OMB) guidance applicable to financial assistance. The DoD Terms and Conditions are located at <https://www.onr.navy.mil/work-with-us/manage-your-award/manage-grant-award/grants-terms-conditions>

C. Eligibility Information

1. Eligible Applicants

All responsible sources from academia, non-profit organization and industry (for-profit) organizations may submit applications under this FOA. ***Foreign entities will not be considered.***

Historically Black Colleges and Universities, Hispanic-serving institutions, Tribal Colleges or Universities, Alaska Native-serving institutions, Native-Hawaiian-serving institutions, Asian American and Native American Pacific Islander-serving institutions, Native American-serving nontribal institutions, Minority Institutions, and covered educational institutions in 10 USC 2362 are especially encouraged to apply.

Federally Funded Research & Development Centers (FFRDCs), including Department of Energy National Laboratories, are not eligible to receive awards under this FOA. However, teaming arrangements between FFRDCs and eligible principal applicants are allowed so long as they are permitted under the sponsoring agreement between the Government and the specific FFRDC.

Navy laboratories, military universities, and warfare centers as well as other DoD and civilian agency laboratories are also not eligible to receive awards under this FOA and must not submit

either white papers or applications in response to this FOA.

University Affiliated Research Centers (UARC) are eligible to submit white papers under this FOA unless precluded from doing so by their DoD UARC contract.

2. Cost Sharing or Matching

Cost sharing is not expected and will not be used as a factor during the merit review of any application hereunder. However, the Government may consider voluntary cost sharing if proposed.

D. Application and Submission Information

1. Address to Request Application Package

This FOA may be accessed from the sites below. Amendments, if any, to this FOA will be posted to these websites when they occur. Interested parties are encouraged to periodically check these websites for updates and amendments.

- a. Grants.gov (www.grants.gov)
- b. ONR website <https://www.onr.navy.mil/work-with-us/funding-opportunities>

2. Content and Form of Application Submission

a. General Information

All submissions will be protected from unauthorized disclosure in accordance with applicable law and DoD/DoN regulations. Applicants are expected to appropriately mark each page of their submission that contains proprietary information.

Titles given to the submissions should be descriptive of the work they cover and not be merely a copy of the title of this announcement.

White Papers are frequently desired by ONR Program Officers. Offerors should consult the cognizant ONR STEM Point of Contact for each technology area regarding the desirability of White Paper submissions.

b. White Papers

i. Content

White papers shall include the following:

- Cover Page (MANDATORY): The Cover Page can be found at <https://www.onr.navy.mil/work-with-us/how-to-apply/submit-grant-application> for grant submissions. FedConnect will not accept a white paper unless the Cover Sheet is included. The Program Officer's

information is a required field on the cover sheet. The Program Officer can be found in Section II. A.

- Technical Approach – A description of the proposed effort. The project must address the Funding Opportunity Description stated in Section II. A
- Naval relevance- A description of how the program aligns with and advances the DON mission. This may include Naval partnerships, community partnerships, and naval need.
- Metrics of Evaluation – A description of a set of program specific measures of performance and measures of effectiveness appropriate to the goals of the project.
- Rough Order of Magnitude (ROM)

ii. Format

- Paper Size – 8.5 x 11 inch
- Margins – 1 inch
- Spacing – single-spaced
- Font – Times New Roman, 12-point
- Page limit – 4 pages, excluding cover page

iii. Submissions

ONR utilizes FedConnect for the submission of white papers. FedConnect is a web portal that bridges the gap between government agencies and performers to streamline the process of doing business with the government. Through this portal, performers will be able to review opportunities and submit white papers. To access FedConnect go to <https://www.fedconnect.net/FedConnect/default.htm>.

a) How to register for FedConnect

FedConnect how to guide can be found at https://www.fedconnect.net/FedConnect/Marketing/Documents/FedConnect_Ready_Set_Go.pdf.

- 1) Obtain a DUNS Number: All entities submitting a proposal, must have a Data Universal Numbering System (DUNS) number from Dun & Bradstreet (D&B). Proposers must enter the DUNS number in the data entry field labeled "Company DUNS". If you do not have a DUNS number, one can be obtained at <http://fedgov.dnb.com/webform>.
- 2) Register with SAM: In addition to having a DUNS number, organizations applying online through Grants.gov must register with the System for Award Management (SAM). All organizations must register with SAM in order to apply online. If you have not registered in SAM, go to <https://www.sam.gov/SAM/>.

If you are the first person in your organization to register in FedConnect, your SAM Marketing Partner ID (SAM MPIN) will also be required. It is the number that is set up by your organization as part of the registration in SAM.gov.

- 3) Create a FedConnect account: The next step in the registration process is to create an account with FedConnect.

b) FedConnect Assistance

If you need assistance, the FedConnect Support Team is standing by to assist you.

Email: support@fedconnect.net

Phone: 1-800-899-6665

Hours: Monday – Friday, 8 a.m. to 8 p.m. EDT. Closed on Federal holidays.

FedConnect Frequently Asked Questions can be found on the ONR website at <https://www.onr.navy.mil/work-with-us/how-to-apply/frequently-asked-questions>.

Do not use the Message Center within FedConnect to submit questions, please email the technical point of contact identified in Section G Federal Awarding Agency Contacts.

c. Full Proposals

Prospective applicants must complete the mandatory forms in accordance with the instructions provided on the forms and the additional instructions below. Files that are attached to the forms must be in Adobe Portable Document Format (.PDF); cannot contain macros; and cannot be password protected. **If your attachments are not PDF, contain macros or are password protected, they will not pass ONR’s automated acceptance check and will need to be resubmitted. Block 2, “Type of Application” on the SF 424 should be marked “New” on the resubmission.**

i. Format

- Paper Size – 8.5 x 11-inch paper
- Margins – 1 inch
- Spacing – single spaced
- Font – Times New Roman, 12 point
- Page limit – 25.5 pages

A technical proposal must include the following sections:

- Cover Page
- Table of Contents

- Technical Approach and Justification – no more than 13 pages
- Project Schedule and Milestones – no more than 2 pages
- Reports – no more than one-half page
- Metrics and Evaluation – no more than 2 pages
- Management Approach – no more than 2 pages
- Qualifications – no more than 2 pages
- Responsibility – no more than 2 pages
- Project Schedule and Milestones- no more than 2 pages

NOTE: The following components are excluded from the 25.5-page limit:

- Cover page,
- Table of Contents,
- Curriculum Vitae (CV),
- Letters of support and interest,
- Cited references,
- Current/pending project submissions

ii. Content

NOTE: The electronic file name for all documents submitted under this FOA must not exceed 68 characters in length, including the file name extension.

Mandatory SF-424 Research and Related (R&R) Family Forms

The mandatory forms are found at <https://www.grants.gov/web/grants/forms.html>.

(1) SF-424 (R&R)

The SF-424 (R&R) form must be used as the cover page for all proposals. Complete all required fields in accordance with the “pop-up” instructions on the form and the following instructions for specific fields. Please complete the SF-424 first, as some fields on the SF-424 are used to auto-populate fields on other forms. Guidance:

<https://www.grants.gov/web/grants/forms/r-r-family.html>.

The completion of most fields is self-explanatory with the exception of the following special instructions:

- Field 3 - Date Received by State: Leave Blank
- Field 4a - Federal Identifier: For new proposals, enter N00014. If the application is a renewal or expansion of an existing award, enter the ONR award number. Note: There is a space between the code and the first [and between the , and the First Name. There is no space between the first [and the last name.
- Field 4b - Agency Routing Number: Enter the three (3) digit Program Office Code and the Program Officer’s name, last name first, in brackets (e.g., 331 [Smith, John]). Go to

the Technology areas that ONR is pursuing at <https://www.onr.navy.mil/our-research/technology-areas>. Click on the technology area of interest and the Program Officer's name and code will be found under the Program Contact Information Section.

- **Where the Program Office Code only has two digits, add a “0” directly after the Code (e.g., Code 31 would be entered as 310)**
- Use Code 310 for ONRG.

Applicants who fail to provide a Program Officer Code identifier may receive a notice that their proposal is rejected.

- Field 4c - Previous Grants.gov Tracking ID: If this submission is for a Changed/Corrected Application, enter the Grants.gov tracking number of the previous proposal submission; otherwise, leave blank.
- Field 5 – Application Information: Email address entered by the grantee on the SF424 application to create the EDA notification profile. ONR recommends that organizations provide a global business address.
- Field 7 - Type of Applicant. Complete as indicated: If the organization is a Minority Institution, select “Other” and under “Other (Specify)” note that the institution is a Minority Institution (MI).
- Field 9 - Name of Federal Agency: List the Office of Naval Research as the reviewing agency. This field is pre-populated in Grants.gov.
- Field 11 – Descriptive Title of Applicant’s Project: Include the ONR White Paper Tracking Number provided to the applicant by ONR.
- Field 14 – Project Director/Principal Investigator: Email address entered by the grantee on the SF424 application to create the EDA notification profile
- Field 16 - Is Application Subject to Review by State Executive Order 12372 Process? Choose “No”. Check “Program is Not Covered by Executive Order 12372.”
- Field 17 – Certification: All awards require some form of certifications of compliance with national policy requirements. By checking “I Agree” on the SF 424 (R&R) block 17 you agree to abide by the following statement: “By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. code, Title 218, Section 1001).
- Field 19 – Authorized Representative: Email address entered by the grantee on the SF424 application to create the EDA notification profile.

(2) PROJECT/ABSTRACT

The project summary/abstract must identify the research problem and objectives, technical approaches, anticipated outcome of the research, if successful, and impact on DoD capabilities. Use only characters available on a standard QWERTY keyboard. Spell out all Greek letters, other non-English letters, and symbols. Graphics are not allowed and there is a one page or 4,000-character including spaces limit whichever is less.

Do not include proprietary or confidential information. The project summary/ abstract must be marked by the applicant as “Approved for Public Release”. Abstracts of all funded research projects will be posted on the public DTIC website: <https://dodgrantawards.dtic.mil/grants>

(3) RESEARCH AND RELATED OTHER PROJECT INFORMATION

- Fields 1 and 1a – Human Subject Use: Each proposal must address human subject involvement in the research by completing Fields 1 and 1a of the R&R Other Project Information form. For proposals containing activities that include or may include “research involving human subject” as defined in DoDI 3216.02, prior to award, the Applicant must submit the required documentation under “Use of Human Subjects in Research” (Section F).
- Fields 2 and 2a – Vertebrate Animal Use: Each proposal must address animal use protocols by addressing Fields 2 and 2a of the R&R Other Project Information form. If animals are to be utilized in the research effort proposed, the applicant must submit the documents described under “Use of Animals” (Section F).
- Fields 4a through 4d – Environmental Compliance: Address these fields and briefly indicate whether the intended research will result in environmental impacts outside the laboratory, and how the applicant will ensure compliance with environmental statutes and regulations.

Federal agencies making grant or cooperative agreement awards and recipients of such awards must comply with all applicable environmental planning and regulatory compliance requirements. The National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. § 4321 et seq. for example, requires that agencies consider the environmental impact of “major Federal actions” prior to any final agency decision. With respect to those awards which constitute “major Federal actions,” as defined in 40 CFR 1508.18, federal agencies may be required to comply with NEPA and prepare environmental planning documentation such as an environmental impact statement (EIS), even if the agency does no more than provide grant funds to the recipient. Most field research funded by ONR, however, constitute activities covered by a NEPA categorical exclusion that do not require preparation of further environmental planning documentation. This is particularly true with regard to basic and applied scientific research conducted entirely within the confines of a laboratory, if the research complies with all other applicable safety, environmental and natural resource conservation laws. Questions regarding

NEPA or other environmental planning or regulatory compliance issues should be referred to the technical point of contact.

- Field 7 – Project Summary/Abstract: Leave Field 7 blank; complete Form SF 424 Project Abstract. If an error message occurs when leaving Block 7 blank, upload the Project Abstract.
- Field 8 – Project Narrative: Clearly describe the research, including the objective and approach to be performed, keeping in mind the evaluation criteria. Attach the entire proposal narrative to R&R Other Project Information form in Field 8. To attach a Project Narrative to Field 8, click on “Add attachment” and attach the technical proposal as a single PDF file. Save the file as “Technical Proposal” as typing in the box is prohibited.

Technical Proposals exceeding the page limit may not be evaluated.

- **Cover Page:** This must include the words “Technical Proposal” and the following:
 - FOA Number: N00014-21-S-F005;
 - Title of proposal;
 - Identity of prime applicant and complete list of subawardees, if applicable;
 - Technical contact (name, address, phone/fax, electronic mail address);
 - Administrative/business contact (name, address, phone/fax, electronic mail address); and
 - Proposed period of performance (identify both the base period and options, if included).
- **Table of Contents:** An alphabetical/numerical listing of the sections within the proposal, including corresponding page numbers.
- **Technical Approach and Justification:** Describe the scientific or technical concepts that will be investigated, providing the complete research plan. Describe what is innovative about the proposed approach. Provide the proposed approach compared to alternate approaches other researchers in the field have taken. Given the successful completion, describe the results, new knowledge, or insights. **No more than 13 pages**
 - **Naval Relevance:** A description of potential Naval relevant and contributions of the effort to the agency’s specific mission.
 - **Project Schedule and Milestones:** A summary of the schedule of events and milestones.
 - **Reports:** The Applicant must acknowledge that the following reports are required under an ONR funded STEM effort:

- Annual Reports – A template will be provided to each starting grant. A complete annual Research Performance Progress Report is mandated by ONR.
- Annual ONR STEM Program Data Call Form – A manual and templates will be provided to each starting grant. These forms will include information about the organizations and program specifics (overview, metrics, budget information, accomplishments, etc.)
- Final Report – Detail the full programmatic accomplishments summarized from prior reports and a forecast for ongoing program sustainability and contribution to naval needs as the funding ends. Include, as feasible, examples of solutions to ONR STEM needs.

Grants do not include the delivery of software, prototypes or other hardware deliverables.

- **Management Approach:** Describe the overall management approach and provide rationale for participation of key team members. Describe the planned relationships with any subawardees or collaborators. This is a single PI award; if there are subawardees or collaborators, explain how the proposed team fits the single PI structure. If appropriate, briefly describe anticipated schedule.
- **Current and Pending Project and Proposal Submissions:** Applicants are required to provide information on all current and pending support for ongoing projects and proposals, including subsequent funding in the case of continuing contracts, grants, and other assistance agreements. Applicants shall provide the following information of any related or complementary proposal submissions from whatever sources (e.g., ONR, Federal, State, local or foreign government agencies, public or private foundations, industrial or other commercial organizations). Concurrent submission of a proposal to other organizations will not prejudice its review by ONR.
 - Title of Proposal and Summary;
 - Source and amount of funding (annual direct costs; provide contract and/or grant numbers for current contracts/grants);
 - Percentage of effort devoted to each project;
 - Identity of prime applicant and complete list of subawards, if applicable;
 - Technical contact (name, address, phone, electronic mail address);
 - Period of performance (differentiate basic effort);
 - The proposed project and all other projects or activities requiring a portion of time of the Principal Investigator and other senior personnel must be included, even if they receive no salary support from the project(s);
 - The total award amount for the entire award period covered (including indirect costs) must be shown as well as the number of person-months or labor hours per year to be devoted to the project, regardless of source of support; and

- State how project(s) is/are related to the proposed effort and indicate degree of overlap.
- **Principal Investigator Qualifications:** A discussion of the qualifications of the proposed Principal Investigator and any other key personnel. Include resumes or curricula vitae for the Principal Investigator, other key personnel and consultants. The resumes/curricula vitae shall be attached to the proposal.
- **Responsibility:** Applicants must provide the following information to ONR in order to assist in ONR's evaluation of the applicant's responsibility:
 - Describe how you have adequate resources or the ability to obtain such resources as required to complete the activities proposed.
 - Describe how you have the ability to comply with the grant conditions, taking into account all existing and currently prospective commitments of the applicant, nongovernmental and governmental.
 - Describe your performance history; specifically, your record in managing Federal awards and the extent to which any previously awarded amounts will be expended prior to future awards.
 - Describe your record of integrity and business ethics.
 - Describe qualifications and eligibility to receive an award under applicable laws and regulations.
 - Describe your organization, experience, accounting, and operational controls and technical skills, or the ability to obtain them (including as appropriate such elements as property control systems, quality assurance measures, and safety programs applicable to the efforts to be performed).
- **Facilities and Equipment:** Describe facilities available for performing the proposed research and any additional facilities or equipment the applicant proposes to acquire at its own expense. Indicate government-owned facilities or equipment already possessed that will be used. Justify the need for each equipment item. (Additional facilities and equipment will not be provided unless the research cannot be completed by any other practical means.)
 - **Letter(s) of support or interest:** There is no specified format or content required for the letter(s) other than being authored by the appropriate representative.
 - **References:** Literature citations

(4) RESEARCH AND RELATED BUDGET

The applicant must use the Grants.gov forms (including the Standard Form (SF) Research and Related (R&R) Budget Form) from the application package template associated with the FOA on the Grants.gov web site located at <http://www.grants.gov/>. If options are proposed, the cost proposal must provide the pricing information for the option periods; failure to include the proposed costs for the option periods will result in the options not being included in the award.

The applicant shall provide a detailed cost breakdown of all costs, by cost category

A separate Adobe .pdf document should be included in the application that provides appropriate justification and/or supporting documentation for each element of cost proposed. This document shall be attached under Section K. "Budget Justification" of the Research and Related Budget form. Click "Add Attachment" to attach.

- Part 1: The itemized budget should include the following. All costs should be rounded to the nearest dollar.
 - Direct Labor – Individual labor categories or persons, with associated labor hours and unburdened direct labor rates. Provide escalation rates for out years.
 - Administrative and Clerical Labor – Salaries of administrative and clerical staff are normally indirect costs (and included in an indirect cost rate). Direct charging of these costs may be appropriate when a major project requires an extensive amount of administrative or clerical support significantly greater than normal and routine levels of support. Budgets proposing direct charging of administrative or clerical salaries must be supported with a budget justification which adequately describes the major project and the administrative and/or clerical work to be performed.
 - Fringe Benefits and Indirect Costs – (Facilities and Administration (F&A), Overhead, G&A, etc.) – The proposal should show the rates and calculation of the costs for each rate category. If the rates have been approved/negotiated by a Government agency, provide a copy of the memorandum/agreement. If the rates have not been approved/negotiated, provide sufficient detail to enable a determination of allowability, allocability and reasonableness of the allocation bases, and how the rates are calculated. Additional information may be requested, if needed. If composite rates are used, provide the calculations used in deriving the composite rates.
 - Travel – The proposed travel cost must include the following for each trip: the purpose of the trip, origin and destination if known, approximate duration, the number of travelers, and the estimated cost per trip must be justified based on the organizations historical average cost per trip or other reasonable basis for estimation. Such estimates and the resultant costs claimed must conform to the applicable Federal cost principles. Applicants may include travel costs for the Principal Investigator to attend the peer

reviews described in Section II of this FOA.

- Subawards/Subcontracts – Provide a description of the work to be performed by the subrecipient/subcontractor. For each subaward, a detailed cost proposal is required to be submitted by the subrecipient(s). A proposal and any supporting documentation must be received and reviewed before the Government can complete its cost analysis of the proposal and enter negotiations. ONR's preferred method of receiving subcontract information is for this information to be included with the Prime's proposal. However, a subcontractor's cost proposal can be provided in a sealed envelope with the recipient's cost proposal or via e-mail directly to the Program Officer at the same time the prime proposal is submitted. The e-mail should identify the proposal title, the prime Applicant and that the attached proposal is a subcontract.
- Consultants – Provide a breakdown of the consultant's hours, the hourly rate proposed, any other proposed consultant costs, a copy of the signed Consulting Agreement or other documentation supporting the proposed consultant rate/cost, and a copy of the consultant's proposed statement of work if it is not already separately identified in the prime contractor's proposal.
- Materials & Supplies – Provide an itemized list of all proposed materials and supplies including quantities, unit prices, and the basis for the estimate (e.g., quotes, prior purchases, catalog price lists).
- Recipient Acquired Equipment or Facilities – Equipment and/or facilities are normally furnished by the Recipient. If acquisition of equipment and/or facilities is proposed, a justification for the purchase of the items must be provided. Provide an itemized list of all equipment and/or facilities costs and the basis for the estimate (e.g., quotes, prior purchases, catalog price lists). Allowable items normally are limited to research equipment not already available for the project. General purpose equipment (i.e., equipment not used exclusively for research, scientific or other technical activities, such as personal computers, laptops, office equipment) should not be requested unless they will be used primarily or exclusively for the project. For computer/laptop purchases and other general purpose equipment, if proposed, include a statement indicating how each item of equipment will be integrated into the program or used as an integral part of the research effort.
- Other Direct Costs – Provide an itemized list of all other proposed other direct costs such as Graduate Assistant tuition, laboratory fees, report and publication costs, and the basis for the estimate (e.g., quotes, prior purchases, catalog price lists).

Fee/Profit – Fee/profit is unallowable under assistance agreements at either the prime or subaward level but may be permitted on contracts issued by the prime awardee.

(5) RESEARCH AND RELATED SENIOR/KEY PERSON PROFILE (EXPANDED)

To evaluate compliance with Title IX of the Education Amendments of 1972 (20 U.S.C. § 1681 *et. seq.*), the Department of Defense is collecting certain demographic and career information to be able to assess the success rates of women who are proposed for key roles in applications in STEM disciplines. In addition, the National Defense Authorization Act (NDAA) for FY 2019, Section 1286, directs the Secretary of Defense to protect intellectual property, controlled information, key personnel, and information about critical technologies relevant to national security and limit undue influence, including foreign talent programs by countries that desire to exploit United States' technology within the DoD research, science and technology, and innovation enterprise.

The R&R Senior/Key Person Profile (Expanded) form will be used to collect the following information for all senior/key personnel, including Project Director/Principal Investigator and Co-Project Director/Co-Principal Investigator, whether or not the individuals' efforts under the project are to be funded by the DoD:

- Degree Type and Degree Year fields as the source for career information.
- A list of all current projects the individual is working on, in addition to any future support the individual has applied to receive, regardless of the source.
- Title and objectives of the other research projects.
- The percentage per year to be devoted to the other projects.
- The total amount of support the individual is receiving in connection to each of the other research projects or will receive if other proposals are awarded.
- Name and address of the agencies and/or other parties supporting the other research projects
- Period of performance for the other research projects.

Additional senior/key persons can be added by selecting the “Next Person” button. Note that, although applications without these fields completed may pass Grants.gov edit checks, if ONR receives an application without the required information, ONR may determine that the application is incomplete and may cause it to be returned without further review. DoD reserves the right to request further details from the applicant before making a final determination on funding the effort. If the bio-sketch field requires an attachment, upload the resumes.

(6) RESEARCH AND RELATED PERSONAL DATA

This form will be used by ONR as the source of demographic information, such as gender, race, ethnicity, and disability information for the Project Director/Principal Investigator and all other persons identified as Co-Project Director(s)/Co-Principal Investigator(s). Each application must

include this form with the name fields of the Project Director/Principal Investigator and any Co-Project Director(s)/Co-Principal Investigator(s) completed; however, provision of the demographic information in the form is voluntary. If completing the form for multiple individuals, each Co-Director/Co-Principal Investigator can be added by selecting the “Next Person” button. The demographic information may be accessible to the reviewer, but will not be considered in the evaluation. Applicants who do not wish to provide some or all of the information should check or select the “Do not wish to provide” option.

3. Unique Entity Identifier and System for Award Management (SAM)

All applicants submitting proposals or applications must:

- a. Be registered in SAM prior to submission;
- b. Maintain an active SAM registration with current information at all times during which it has an active Federal award or an application under consideration by any agency; and
- c. Provide its DUNS number in each application or proposal it submits to the agency.
- d. **Registration in SAM and acceptance of Federal Assistance Certifications is required by primes and subcontractors.**

SAM may be accessed at <https://www.sam.gov/SAM>

4. Submission Dates and Times

See Section A.6 above, “Key Dates” for information.

Submission of Late Proposals (Applicable to White Papers and Full Proposals)

Any white paper, proposal, modification, or revision, that is received at the designated Government office after **11:59 PM on March 30, 2022** is “late” and will not be considered unless it is received before award is made, the grants officer determines that accepting the late proposal would not unduly delay the acquisition and

- (a) If it was transmitted through an electronic commerce method authorized by the announcement, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or
- (b) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of proposals and was under the Government’s control prior to the time set for receipt of proposals; or
- (c) It was the only proposal received.

However, a late modification of an otherwise timely and successful proposal that makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.

Acceptable evidence to establish the time or receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the Government office designated for receipt of proposals by the exact time specified in the announcement, and urgent Government requirements preclude amendment of the announcement closing date, the time specified for receipt of proposals will be deemed to extend to the same time of day specified in the announcement on the first work day on which normal Government processes resume.

The grants officer must promptly notify any applicant if its proposal, modifications, or revision was received late and must inform the applicant whether its proposal will be considered.

5. Intergovernmental Review

RESERVED

6. Funding Restrictions

RESERVED

7. Other Submission Requirements

Grants.gov Application Submission and Receipt Procedures

This section provides the application submission and receipt instructions for the Office of Naval Research (ONR) program applications. Please read the following instructions carefully and completely.

a. Electronic Delivery

ONR is participating in the Grants.gov initiative to provide the grant community with a single site to find and apply for grant funding opportunities. ONR encourages applicants to submit their applications online through Grants.gov.

b. How to Register for Grants.gov

- i. Instructions:** Read the instructions below about registering to apply for ONR funds. Applicants should read the registration instructions carefully and prepare the information requested before beginning the registration process. Reviewing and assembling the required information before beginning the registration process will alleviate last-minute searches for required information.

The registration process can take up to four weeks to complete. Therefore, registration should be done in sufficient time to ensure it does not affect your ability to meet required application submission deadlines.

If individual applicants are eligible to apply for this grant funding opportunity, refer to:

<https://www.grants.gov/web/grants/applicants/registration.html>

Organization applicants can find complete instructions here:

<https://www.grants.gov/web/grants/applicants/organization-registration.html>

1) *Obtain a DUNS Number*: All entities applying for funding, including renewal funding, must have a Data Universal Numbering System (DUNS) number from Dun & Bradstreet (D&B). Applicants must enter the DUNS number in the data entry field labeled "Organizational DUNS" on the SF-424 form.

For more detailed instructions for obtaining a DUNS number, refer to:

<https://www.grants.gov/web/grants/applicants/organization-registration/step-1-obtain-duns-number.html>

2) *Register with SAM*: In addition to having a DUNS number, organizations applying online through Grants.gov must register with the System for Award Management (SAM). All organizations must register with SAM in order to apply online. Registrations in SAM now includes the acceptance of Certifications and Assurances. Entities creating new registrations and existing entities completing their annual registration renewals will be required to review financial assistance representations and certification before their registration can be activated. Failure to register with SAM will prevent your organization from applying through Grants.gov.

For more detailed instructions for registering with SAM, refer to:

<https://www.grants.gov/web/grants/applicants/organization-registration/step-2-register-with-sam.html>

The Federal Assistance Certifications Report is an attestation that the entity will abide by the requirements of the various laws and regulations and the supplemental at F.2.iv; therefore, as applicable, you are still required to submit any documentation, including the SF LLL Disclosure of Lobby Activities (if applicable), and disclosure of any unpaid delinquent tax liability or a felony conviction under any Federal law.

3) *Create a Grants.gov Account*: The next step in the registration process is to create an account with Grants.gov. Applicants must know their organization's DUNS number to complete this process. Completing this process automatically triggers an email request for applicant roles to the organization's E-Business Point of Contact (EBiz POC) for review. The EBiz POC is a representative from your organization who is the contact listed for SAM. To apply for grants on behalf of your organization, you will need the Authorized Organizational Representative (AOR) role.

For more detailed instructions about creating a profile on Grants.gov, refer to:

<https://www.grants.gov/web/grants/applicants/registration.html>

4) *Authorize Grants.gov Roles*: After creating an account on Grants.gov, the EBiz POC receives an email notifying them of your registration and request for roles. The EBiz POC will then log in to Grants.gov and authorize the appropriate roles, which may include the AOR role, thereby giving you permission to complete and submit applications on behalf of the organization. You will be able to submit your application online any time after you have been approved as an AOR.

For more detailed instructions about creating a profile on Grants.gov, refer to:
<https://www.grants.gov/web/grants/applicants/registration/authorize-roles.html>

5) *Track Role Status*: To track your role request, refer to:
<https://www.grants.gov/web/grants/applicants/registration/track-role-status.html>

(a) *Electronic Signature*: When applications are submitted through Grants.gov, the name of the organization's AOR that submitted the application is inserted into the signature line of the application, serving as the electronic signature. The EBiz POC **must** authorize individuals who are able to make legally binding commitments on behalf of the organization as an AOR; **this step is often missed and it is crucial for valid and timely submissions.**

c. **How to Submit an Application to the Office of Naval Research via Grants.gov**

White Papers must NOT be submitted through the Grants.gov application process. White paper submissions must be submitted through FedConnect.

All attachments to grant applications submitted through Grants.Gov must be in Adobe Portable Document Format. Proposals with attachments submitted in word processing, spreadsheet, or any format other than Adobe Portable Document Format will not be considered for award.

Grants.gov applicants can apply online using Workspace. Workspace is a shared, online environment where members of a grant team may simultaneously access and edit different webforms within an application. For each funding opportunity announcement (FOA), you can create individual instances of a workspace.

Below is an overview of applying on Grants.gov. For access to complete instructions on how to apply for opportunities, refer to:

<https://www.grants.gov/web/grants/applicants/apply-for-grants.html>

1) *Create a Workspace*: Creating a workspace allows you to complete it online and route it through your organization for review before submitting.

2) *Complete a Workspace*: Add participants to the workspace, complete all the required forms, and check for errors before submission.

a. *Adobe Reader*: If you decide not to apply by filling out web forms, you can download individual PDF forms in Workspace so that they will appear similar to other Standard or ONR forms. The individual PDF forms can be downloaded and saved to your local device storage, network drive(s), or external drives, then accessed through Adobe Reader.

NOTE: Visit the Adobe Software Compatibility page on Grants.gov to download the appropriate version of the software at:

<https://www.grants.gov/web/grants/applicants/adobe-software-compatibility.html>

b. *Mandatory Fields in Forms*: In the forms, you will note fields marked with an asterisk and a different background color. These fields are mandatory fields that must be completed to successfully submit your application.

c. *Complete SF-424 Fields First*: The forms are designed to fill in common required fields across other forms, such as the applicant name, address, and DUNS number. To trigger this feature, an applicant must complete the SF-424 information first. Once it is completed, the information will transfer to the other forms.

3) *Submit a Workspace*: An application may be submitted through workspace by clicking the Sign and Submit button on the Manage Workspace page, under the Forms tab. Grants.gov recommends submitting your application package at least 24-48 hours prior to the close date to provide you with time to correct any potential technical issues that may disrupt the application submission.

4) *Track a Workspace*: After successfully submitting a workspace package, a Grants.gov Tracking Number (GRANTXXXXXXXX) is automatically assigned to the package. The number will be listed on the Confirmation page that is generated after submission.

For additional training resources, including video tutorials, refer to:

<https://www.grants.gov/web/grants/applicants/applicant-training.html>

Applicant Support: Grants.gov provides applicants 24/7 support via the toll-free number 1-800-518-4726 and email at support@grants.gov. (Foreign applicants should contact 1-606-545-5035.) For questions related to the specific grant opportunity, contact the number listed in the application package of the grant you are applying for.

If you are experiencing difficulties with your submission, it is best to call the Grants.gov Support Center and get a number. The Support Center ticket number will assist ONR with tracking your issue and understanding background information on the issue.

d. Timely Receipt Requirements and Proof of Timely Submission

i. Online Submission.

All applications must be received by 11:59 pm Eastern time on March 30, 2022. Proof of timely submission is automatically recorded by Grants.gov. An electronic date/time stamp is generated within the system when the application is successfully received by Grants.gov. The applicant AOR will receive an acknowledgement of receipt and a tracking number (GRANTXXXXXXXX) from Grants.gov with the successful transmission of their application. Applicant AORs will also receive the official date/time stamp and Grants.gov Tracking number in an email serving as proof of their timely submission.

When the Office of Naval Research successfully retrieves the application from Grants.gov, and acknowledges the download of submissions, Grants.gov will provide an electronic acknowledgment of receipt of the application to the email address of the applicant with the AOR role. Again, proof of timely submission shall be the official date and time that Grants.gov receives your application.

Applications received by Grants.gov after the established due date for the program will be considered late and will not be considered for funding the Office of Naval Research

Applicants using slow internet, such as dial-up connections, should be aware that transmission can take some time before Grants.gov receives your application. Again, Grants.gov will provide either an error or a successfully received transmission in the form of an email sent to the applicant with the AOR role. The Grants.gov Support Center reports that some applicants end the transmission because they think that nothing is occurring during the transmission process. Please be patient and give the system time to process the application.

E. Application Review Information

1. Criteria

Awards under this FOA will be made to Applicants on the basis of the evaluation criteria listed below. The primary basis for selecting proposals for acceptance will be technical merit, importance to agency programs, and fund availability. Cost realism and reasonableness will also be considered when selecting proposals. ONR reserves the right to request and require any additional information and documentation after it makes the type of award instrument determination. ONR reserves the right to remove Applicants from award consideration when the parties fail to reach agreement on award terms, conditions, and cost/price within a reasonable time, or when the Applicant fails to timely provide requested or required additional information.

Applicant's proposals will be evaluated against the following criteria defined by the thrust area point of contact.

- (1) Overall scientific and technical merits of the proposal and responsiveness to the topic, i.e., the degree of innovation, soundness of technical concept, Applicant's awareness of the state of the art and understanding of the scope of the problem, significance and originality of the technical approach and effort needed to address/solve the problem, and anticipated scientific impact within the field. The following areas will also be considered: (A) the Applicant's capabilities, related experience, facilities, techniques or unique combinations of these which are integral factors for achieving the proposal objectives, and (B) the qualifications, capabilities and experience of the proposed Principal Investigator (PI), team leader and key personnel who are critical to achieving the proposal objectives.
- (2) Potential Naval relevance and contribution to the ONR and DON mission.
- (3) Potential contribution to advance STEM education, outreach and workforce opportunities.

Criteria 1, 2, and 3 are equally important.

2. Review and Section Process

a. Evaluation

Proposals will not be evaluated against each other since they are not submitted in accordance with a common work statement. ONR's intent is to review all proposals received as soon as possible after they arrive; however, proposals may be reviewed periodically for administrative reasons.

The thrust area point of contact makes the ultimate recommendation for award of proposals. Recommended proposals will then be forwarded to the ONR Contracts and Grant Awards Management office. Any notification received from ONR that indicates that the Applicant's full proposal has been recommended does not ultimately guarantee an award will be made. This notice indicates that the proposal has been selected in accordance with the evaluation criteria stated above and has been sent to the Grant's Department to conduct cost analysis, determine the Applicant's responsibility, to confirm whether funds are available, and to take other relevant steps necessary prior to making an award.

b. Options

The Government will evaluate options for award purposes by adding the total cost for all options to the total cost for the basic requirement. Evaluation of options will not obligate the Government to exercise the options during contract or grant performance. The Government reserves the right to exercise options at time of award.

c. Evaluation Panel

Technical and cost proposals submitted under this FOA will be protected from unauthorized disclosure. The cognizant Program Officer and other Government scientific experts will perform the evaluation of technical proposals. Restrictive notices notwithstanding, one or more support contractors may be utilized as subject-matter-expert technical consultants. However, proposal selection and award decisions are solely the responsibility of Government personnel. Each support contractor's employee having access to technical and cost proposals submitted in response to this FOA will be required to sign the ONR Non-Disclosure Agreement (NDA) for Contractor Support prior to receipt of any proposal submissions. This NDA includes third-party beneficiary language giving the submitter of proprietary information a right of direct action against the contractor employee and/or his/her employer in the event that the NDA is violated.

3. Recipient Qualifications

a. *Recipient Qualifications:* The Grants Officer is responsible for determining a recipient's qualification prior to award. In general, a Grants Officer will award grant, cooperative agreements, only to qualified recipients that meet the standards at 32 CFR 22.415. To be qualified, a potential recipient must:

- (1) Have the management capability and adequate financial and technical resources, given those that would be made available through the grant or cooperative agreement, to execute the program of activities envisioned under the grant or cooperative agreement;
- (2) Have a satisfactory record of executing such programs or activities (if a prior recipient of an award);
- (3) Have a satisfactory record of integrity and business ethics; and
- (4) Be otherwise qualified and eligible to receive a grant or cooperative agreement under applicable laws and regulations. Applicants are

requested to provide information with proposal submissions to assist the Grants Officer's evaluation of recipient qualification.

- b. *FAPIIS*:** In accordance with OMBOMB guidance in parts 180 and 200 of Title 2, CFR, it is DoD policy that DoD Components must report and use integrity and performance information in the Federal Awardee Performance and Integrity Information System (FAPIIS), or any successor system designated by OMB, concerning a grant is as follows:
If the total Federal share will be greater than the simplified acquisition threshold on and Federal award under a notice of funding opportunity (see 2 CFR 200.88 Simplified Acquisition Threshold):
- i. The Federal awarding agency, prior to making a Federal award with a total amount of Federal share greater than the simplified acquisition threshold, will review and consider any information about the applicant that is in the designated integrity and performance system accessible through SAM (currently FAPIIS) (see 41 U.S.C. 2313);
 - ii. An applicant, at its option, may review information in the designated integrity and performance systems accessible through SAM and comment on any information about itself that a Federal awarding agency previously entered and is currently in the designated integrity and performance system accessible through SAM;
 - iii. The Federal awarding agency will consider any comments by the applicant, in addition to the other information in the designated integrity and performance system, in making a judgment about the applicant's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants as described in 2 CFR 200.205 Federal awarding agency review of risk posed by applicants.

F. Federal Award Administration Information

1. Federal Award Notices

- a.** All applicants will receive a notification email advising if their proposal has been selected or not selected for award.

Applicants whose proposals are recommended for award may be contacted by a Grant Specialist to discuss additional information required for award. This may include representations and certifications, revised budgets or budget explanations, and/or other information as applicable to the proposed award.

The notification e-mail must not be regarded as an authorization to commit or expend funds. The Government is not obligated to provide any funding until a Government Grants Officer, as applicable, signs the award document.

The award document signed by the Grants Officer is the official and authorizing award instrument.

- b. Office of Naval Research (ONR) award/modification documents are only available via the Department of Defense (DoD) Electronic Document Access System (EDA) within the Procurement Integrated Enterprise Environment (PIEE) (<https://piee.eb.mil/piee-landing/>).

2. Administrative and National Policy Requirements

a. Export Control:

Applicants should be aware of recent changes in export control laws. Applicants are responsible for ensuring compliance with all U.S. export control laws and regulations, including the International Traffic in Arms Regulation (ITAR)(22 CFR Parts 120 - 130) and Export Administration Regulation (EAR) (15 CFR Parts 730 – 774), as applicable. In some cases, developmental items funded by the Department of Defense are now included on the United States Munition List (USML) (22 CFR Part 121) and are therefore subject to ITAR jurisdiction. In other cases, items that were previously included on the USML have been moved to the EAR Commerce Control List (CCL). Applicants should address in their proposals whether ITAR or EAR restrictions apply to the work they are proposing to perform for ONR. The ITAR and EAR are available online at <http://www.ecfr.gov/cgi-bin/ECFR?page=browse>. Additional information regarding the President's Export Control Reform Initiative can be found at <https://export.gov/ecr/index.asp>.

Applicants must comply with all U.S. export control laws and regulations, including the ITAR and EAR, in the performance of any award or agreement resulting from this FOA. Applicants shall be responsible for obtaining any required licenses or other approvals, or license exemptions or exceptions if applicable, for exports of hardware, technical data, and software (including deemed exports), or for the provision of technical assistance.

b. Requirements Concerning Live Organisms:

i. Use of Animals:

The DoD policies and requirements for the use of animals in DoD-supported research are described in the current version of DoD Instruction 3216.01, Use of Animals in DoD Conducted and Supported Research and Training and its implementing instruction, DHA-MSR 6025.02, “The Care And Use Of Animals In DoD Research, Development, Test, And Evaluation (RDT&E) Or Training Programs,” the version of which is current at the time of award. If animals are to be utilized in the research effort proposed, the Applicant must submit a Full Appendix or Abbreviated Appendix (see Guidance link below) with supporting documentation (such as copies of Institutional Animal Care and Use Committee (IACUC) Approval, IACUC Approved Protocol, and most recent United States Department of Agriculture (USDA) Inspection Report) prior to award. For assistance with submission of animal research related documentation, contact the ONR

Animal Use Administrator at (703) 696-4318. Guidance: <https://www.onr.navy.mil/About-ONR/compliance-protections/Research-Protections/animal-use>

ii. Use of Human Subjects in Research:

1. Applicants must protect the rights and welfare of individuals who participate as human subjects in research awarded pursuant to this FOA and must comply with the requirements of the Common Rule at 32 CFR part 219 (the DOD implementation of 45 CFR part 46) and applicable provisions of DoD Instruction 3216.02, Protection of Human Subjects and Adherence to Ethical Standards in DoD-Conducted and -Supported Research (April 15, 2020, the DON implementation of the human research protection program contained in SECNAVINST 3900.39E Change 1, (or its replacement), 10 USC 980 “Limitation on Use of Humans as Experimental Subjects,” and when applicable, Food and Drug Administration (FDA) and other federal and state law and regulations.
2. For proposals containing activities that include or may include “research involving human subjects” as defined in DoDI 3216.02, prior to award, the Applicant must submit documentation of:
 - i. Approval from an Institutional Review Board (IRB) (IRB-approved research protocol, IRB- approved informed consent document, documentation showing the IRB considered the scientific merit of the research and other material considered by the IRB); proof of completed human research training (e.g., training certificate for the principal investigator, and institutional verification that the principal investigator, co-investigators and research support personnel have received appropriate training to be considered qualified to execute the research); and the Applicant’s Department of Health and Human Services (DHHS)-issued Federal Wide Assurance (FWA#), including notifications of any FWA suspensions or terminations.
 - ii. Any claimed exemption under 32 CFR 219.104), including the category of exemption, supporting documentation considered by the Applicant’s institution in making the determination (e.g., protocol, data collection tools, advertisements, etc.). The documentation shall include a short rationale supporting the exemption determination. This documentation should be signed by the IRB Chair or IRB vice Chair, designated IRB administrator or official of the Applicant’s human research protection program.
 - iii. Any determinations that the proposal does not contain activities that constitute research involving human subjects or contains only activities that are deemed not to be research under 32 CFR 219.102(1), including supporting documentation considered by the Applicant’s institution in making the determination. This documentation should be issued by the IRB Chair or IRB vice Chair, designated IRB administrator or official of the Applicant’s human research protection program.
 - iv. Documentation must be submitted to the ONR Human Research Protection Official (HRPO), by way of the ONR Program Officer. The HRPO retains final judgment on whether the documentation satisfies the use of human subjects in research requirements. For assistance with submission of human subject research related documentation, contact the ONR Human Research Protection Official (HRPO) at (703) 696-4318.

- v. Grant awards and any subawards or modifications will include a statement indicating successful completion of the HRPO review. Research involving human subjects must not be commenced under any contract award or modification or any subcontract or grant subaward or modification until awardee receives notification from the Contracting or Grants Officer that the HRPO has approved the assurance as appropriate for the research under the award or modification and that the HRPO has reviewed the protocol and accepted the IRB approval or determination for compliance with Federal, DoD and DON research protection requirements. The Government will not reimburse or otherwise pay for work performed in violation of this requirement. See, DFARS 252.235-7004. Guidance: <http://www.onr.navy.mil/About-ONR/compliance-protections/Research-Protections/Human-Subject-Research.aspx>
- c. ***Biosafety and Biosecurity Requirements:*** Applicants must comply with applicable provisions of the current version of DODM 6055.18, Safety Standards for Microbiological and Biomedical Laboratories, including ensuring compliance with standards meeting at least the minimum applicable requirements of the current edition of Centers for Disease Control and Prevention, “Biosafety in Microbiological and Biomedical Laboratories (BMBL),” and National Institutes of Health, “The NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules (NIH Guidelines).”
- d. ***Research Involving Recombinant (rDNA) or Synthetic Nucleic Acid Molecules:*** Applicants must not begin performance of research within the scope of “The NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules (NIH Guidelines)” until receiving notice from the Contracting or Grants Officer that ONR has reviewed and accepted the Applicant’s documentation. In order for ONR to accomplish that review, an applicant must provide the Contracting or Grants Officer, generally as part of an original proposal prior to award, sufficient documentation to enable the review, including: be
- (1) A written statement that the Applicant is in compliance with NIH Guidelines. This statement should be made by an official of the institution other than the Principal Investigator and should be on university or company letterhead.
- (2) Evidence demonstrating that the proposed research protocol has been approved (or determined exempt from the NIH Guidelines) by an Institutional Biosafety Committee (IBC); and a copy of the Department of Health and Human Services (DHHS) Letter of Approval of the IBC, or the most recent letter from DHHS stating the IBC is in compliance with the NIH Guidelines. For assistance with requirements involving countries outside the United States, please contact the ONR HRPO at (703) 696-4318.
- e. ***Institutional Dual Use Research of Concern:*** As of September 24, 2015, all institutions and United States Government (USG) funding agencies subject to [the United States Government Policy for Institutional Oversight of Life Sciences Dual Use Research of Concern](#) must comply with all the requirements listed therein. If your research proposal directly involves certain biological agents or toxins, contact the cognizant Technical Point of Contact. U.S. Government Science, Safety, Security (S3) guidance may be found at <http://www.phe.gov/s3/dualuse>.

- f. ***Department of Defense High Performance Computing Program:*** The DoD High Performance Computing Program (HPCMP) furnishes the DoD S&T and RDT&E communities with use-access to very powerful high performance computing systems. Awardees of ONR grants and other assistance instruments may be eligible to use HPCMP assets in support of their funded activities if ONR Program Officer approval is obtained and if security/screening requirements are favorably completed. Additional information and an application may be found at <https://www.hpc.mil/>.
- g. ***Project Review Meetings and Program Review Meetings:*** Individual Project Review Meetings between the ONR sponsor and the performer may be held as necessary. Project Review Meetings typically last approximately one day. Typically, there are 2 in-person Project Review Meetings each year. Additional Project Review Meetings are likely, but these will be accomplished by video telephone conferences, telephone conferences, or web-based collaboration tools.

In addition to Project Review Meetings, Program Review Meetings may be held to provide a forum for reviews of the latest results from individual project experiments and any other incremental project progress towards major demonstrations. Program Review Meetings are generally held once per year and last two to three days.

For cost estimating purposes, applicants should assume that in FY21 most of the reviews will be virtual and in FY22 and beyond 40% of the review meetings will be at or near ONR, Arlington VA, and 60% will be held at other government or non-government facilities within the continental United States.

The Government sometimes finds it advantageous to hold Program Review Meetings at a performer's facility. Applicants interested in hosting such meetings should include an estimated cost and the following language in their proposals, which become part of any award (note: if a contract is awarded, use of the facility will be included as an option):

[Name of entity] offers the use of its facilities for an ONR Program Review Meeting to discuss the status of programs related to the subject of this proposal. Such meetings may include attendees representing multiple research efforts. The meetings will discuss only "contracted fundamental research" as provided in the Under Secretary of Defense (Acquisition, Technology and Logistics) Memorandum of 24 May 2010, the results of which are open to the public. No fee will be charged Program Review Meeting attendees. [Name of entity] understands it will not be asked to host a Performance Review Meeting more than once per year, if at all.

Applicants are not required to include the foregoing term in their proposals, and whether they do or not will not affect their selection for award.

h. Federal Funding Accountability and Transparency Act of 2006:

The Federal Funding Accountability and Transparency Act of 2006 (Public Law 109-282), as amended by Section 6202 of Public Law 110-252 and expanded by the Digital Accountability and Transparency Act of 2014 (Public Law 113-101), requires that all agencies establish requirements for recipients reporting information on subawards and executive total compensation as codified in 2 CFR Part 170. Any company, non-profit agency or university that applies for financial assistance (either grants, cooperative agreements or TIAs) as either a

prime or sub-recipient under this FOA must provide information in its proposal that describes the necessary processes and systems in place to comply with the reporting requirements identified in 2 CFR Part 170 Appendix A. Entities are required to meet reporting requirements unless an exception or exemption applies. Please refer to 2 CFR Part 170, including Appendix A, for a detailed explanation of the requirements, exceptions, and exemptions.

i. Certification regarding Restrictions on Lobbying:

Grant awards greater than \$100,000 require a certification of compliance with a national policy mandate concerning lobbying. Grant applicants shall provide this certification by electronic submission of SF424 (R&R) as a part of the electronic proposal submitted via <https://www.grants.gov/>(complete Block 17). The following certification applies likewise to each grant seeking federal assistance funds exceeding \$100,000:

(1) No Federal appropriated funds have been paid or will be paid by or on behalf of the applicant, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the Federal contract, grant, loan, or cooperative agreement, the applicant shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The applicant shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

j. Certification Regarding the Prohibition on Using Funds with Entities that Require Certain Internal Confidentiality Agreements (Grant Information Circular (GIC) 19-02 November 2019) (Supplement to SF424 (R&R), block 17, Financial Assistance Certifications and Representations)

By checking "I Agree" on the SF 424 (R&R) block 17, you agree to abide by the following statement: "By signing this application, I certify (1) to the statements contained in the list certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. code, Title 218, Section 1001).

The certification reads as follows:

By submission of its proposal or application, the applicant represents that it does not require any of its employees, contractors, or subrecipients seeking to report fraud, waste, or abuse to sign or comply with internal confidentiality agreements or statements prohibiting or otherwise restricting those employees, contractors, subrecipients from lawfully reporting that waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information.

k. Code of Conduct:

Applicants for assistance are required to comply with 2 CFR 200.318(c), Codes of Conduct, to prevent real or apparent conflicts of interest in the award and administration of any contracts supported by federal funds. This provision will be incorporated into all assistance instruments awarded under this FOA.

l. Peer Review

In the case of proposals funded as basic research, ONR may utilize peer reviewers from academia, industry, and Government agencies to assist in the periodic appraisal of performance under the awards, as outlined in ONR Instruction 3966.1A. Such periodic peer reviews monitor the quality of funded basic research efforts. The reviews are used in part to determine which basic research projects will receive continued ONR funding. Peer reviewers who are not U.S. Government employees must sign nondisclosure agreements before receiving full or partial copies of proposals and reports submitted by the basic research performers. Applicants may include travel costs for the Principal Investigator (PI) to attend the peer review. Peer reviews may consider information derived from individual project or program review meetings (see FOA Section F.2.a.viii for further guidance).

m. Section 889 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2019

Section 889 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2019 (Public Law 115-232) prohibits the head of an executive agency from obligating or expending loan or grant funds to procure or obtain, extend, or renew a contract to procure or obtain, or enter into a contract (or extend or renew a contract) to procure or obtain the equipment, services, or systems prohibited systems as identified in section 889 of the NDAA for FY 2019.

1. In accordance with 2 CFR 200.216 and 200.471, all awards that are issued on or after August 13, 2020, recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:
 - (1) Procure or obtain;
 - (2) Extend or renew a contract to procure or obtain; or
 - (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications

equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(ii) Telecommunications or video surveillance services provided by such entities or using such equipment.

(iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

2. In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.
3. See Public Law 115-232, section 889 for additional information.
COVERED FOREIGN COUNTRY means the People's Republic of China.

3. Reporting

- a. If the Federal share of any Federal award may include more than \$500,000 over the period of performance, the post award reporting requirements, Award Term and Condition for Recipient Integrity and Performance Matters (2 CFR Part 200 Appendix XII), is applicable as follows:
 - i. Reporting of Matters Related to Recipient Integrity and Performance
 - a) General Reporting Requirement. If the total value of your currently active grants, cooperative agreements, and procurement contracts from all Federal awarding agencies exceeds \$10,000,000 for any period of time during the period of performance of this Federal award, then you as the recipient during that period of time must maintain the currency of information reported to the System for Award Management (SAM) that is made available in the designated integrity and performance system (currently the Federal Awardee Performance and Integrity Information System (FAPIIS)) about civil, criminal, or administrative proceedings described in paragraph 2 of this award term and condition. This is a statutory requirement under 41 U.S.C. 2313. All information posted in the

designated integrity and performance system on or after April 15, 2011, except past performance reviews required for Federal procurement contracts, will be publicly available.

- ii. Proceedings About Which You Must Report. Submit the information required about each proceeding that:
 - a) Is in connection with the award or performance of a grant, cooperative agreement, or procurement contract from the Federal Government;
 - b) Reached its final disposition during the most recent five-year period; and
 - c) Is one of the following:
 - 1) A criminal proceeding that resulted in a conviction, as defined in paragraph 5 of this award term and condition;
 - 2) A civil proceeding that resulted in a finding of fault and liability and payment of a monetary fine, penalty, reimbursement, restitution, or damages of \$5,000 or more;
 - 3) An administrative proceeding, as defined in paragraph 5. of this award term and condition, that resulted in a finding of fault and liability and your payment of either a monetary fine or penalty of \$5,000 or more or reimbursement, restitution, or damages in excess of \$100,000; or
 - 4) Any other criminal, civil, or administrative proceeding if:
 - a. It could have led to an outcome described in paragraph 2.c. (1), (2), or (3) of this award term and condition;
 - b. It had a different disposition arrived at by consent or compromise with an acknowledgment of fault on your part; and
 - c. The requirement in this award term and condition to disclose information about the proceeding does not conflict with applicable laws and regulations.
- iii. Reporting Procedures. Enter in the SAM Entity Management area the information that SAM requires about each proceeding described in paragraph 2 of this award term and condition. You do not need to submit the information a second time under assistance awards that you received if you already provided the information through SAM because you were required to do so under Federal procurement contracts that you were awarded.
- iv. Reporting Frequency. During any period of time when you are subject to the requirement in paragraph 1 of this award term and condition, you must report proceedings information through SAM for the most recent five-year period, either to report new information about any proceeding(s) that you have not reported previously or affirm that there is no new information to report. Recipients that have Federal contract, grant, and cooperative agreement awards with a cumulative total value greater than \$10,000,000 must disclose semiannually any information about the criminal, civil, and administrative proceedings.
- v. Definitions. For purposes of this award term and condition:

- a) Administrative proceeding means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (e.g., Securities and Exchange Commission Administrative proceedings, Civilian Board of Contract Appeals proceedings, and Armed Services Board of Contract Appeals proceedings). This includes proceedings at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include audits, site visits, corrective plans, or inspection of deliverables.
- b) Conviction, for purposes of this award term and condition, means a judgment or conviction of a criminal offense by any court of competent jurisdiction, whether entered upon a verdict or a plea, and includes a conviction entered upon a plea of nolo contendere.
- c) Total value of currently active grants, cooperative agreements, and procurement contracts includes—
 - 1) Only the Federal share of the funding under any Federal award with a recipient cost share or match; and
 - 2) The value of all expected funding increments under a Federal award and options, even if not yet exercised.

b. Post Award Report Requirements

The post award reporting requirements can be found under the relevant ONR Addendum to the DoD R&D General Terms and Conditions and ONR Programmatic Requirements located at the following link: <https://www.onr.navy.mil/work-with-us/manage-your-award/manage-grant-award/grants-terms-conditions>.

G. Federal Awarding Agency Contacts

All UNCLASSIFIED communications shall be submitted via e-mail to the Technical Point of Contract (POC) with a copy to the designated Business POC, as designated below.

Comments or questions submitted should be concise and to the point, eliminating any unnecessary verbiage. In addition, the relevant part and paragraph of the Funding Opportunity Announcement (FOA) should be referenced.

1. **Questions of a technical nature** should be submitted to the ONR POC in Section II. A. whose technology area best matches the offeror's field of interest
or contact

Mr. William (Bill) Ellis, Federal Action Officer
Office of Naval Research
ONR Code 31
One Liberty Center
875 N. Randolph Street
Arlington, VA 22203-1995
Email: william.h.ellis@navy.mil

2. **Questions regarding Grants proposal submissions** should be submitted to:

Veronica Lacey, Grants Officer
Office of Naval Research
ONR Code 253
One Liberty Center
875 N. Randolph Street
Arlington, VA 22203-1995
Email Address: veronica.lacey@navy.mil