



**FUNDING OPPORTUNITY ANNOUNCEMENT (FOA)
FY2018 VANNEVAR BUSH FACULTY FELLOWSHIP**

Acqtrak Deadline

Your registration must be completed no later than
Monday, 14 August 2017 at 11:59 PM Eastern Daylight Time

White Paper Deadline

Your white paper must be received no later than
Wednesday, 16 August 2017 at 11:59 PM Eastern Daylight Time

Inquiries and Questions Deadline

White Papers: **Wednesday, 26 July 2017**
Business related: **Wednesday, 3 January 2018**

Invited Proposal Deadline

Your proposal must be received no later than
Monday, 8 January 2018 at 11:59 PM Eastern Standard Time

INTRODUCTION:

This publication constitutes a Funding Opportunity Announcement (FOA) as contemplated in the Department of Defense Grants and Agreements regulations (DoDGARS) 22.315(a). A formal Request for Proposals (RFP), solicitation, and/or additional information regarding this announcement will not be issued.

The Office of Naval Research (ONR) will not issue paper copies of this announcement. The ONR reserves the right to select for award all, some or none of the proposals in response to this announcement. The ONR and other participating Department of Defense (DoD) agencies provide no funding for direct reimbursement of proposal development costs. Technical and cost proposals (or any other material)

submitted in response to this FOA will not be returned. It is the policy of ONR to treat all proposals as sensitive competitive information and to disclose their contents only for the purposes of evaluation.

Awards will take the form of grants. These awards will be governed by the guidance in 2 Code of Federal Regulations (CFR) part 200, "Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards," as modified and supplemented by the Department of Defense's (DoD) interim implementation found at 2 CFR part 1103, "Interim Grants and Cooperative Agreements Implementation of Guidance in 2 CFR part 200" (79 FR 76047, December 19, 2014), all of which are incorporated herein by reference.

A requirement that the project summary/abstract required in the submission of the proposal must be publically releasable is noted in [Part IV, Section B., Paragraph 5. iv. \(Field 7 – Project Summary/Abstract\)](#).

Applicants shall include responses to Representation Regarding an Unpaid Delinquent Tax Liability or a Felony Conviction Under any Federal Law-DoD Appropriations, Prohibition on Contracting with Entities that Require Certain Internal Confidentiality Agreements, and Certification Regarding Restrictions on Lobbying in proposal submission. See [Part VIII, Section B.](#)

Potential applicants may obtain information by checking the following websites:

Information regarding this FOA and amendments: www.grants.gov or <http://www.onr.navy.mil/Contracts-Grants/Funding-Opportunities/Broad-Agency-Announcements.aspx>

Information regarding submission of white papers and supporting documentation will also be posted at: <https://acqpass.noblis.org/ApplyVBFF>

Information regarding submission of full proposal packages can be found at <http://www.grants.gov/web/grants/applicants/apply-for-grants.html>

Information regarding Basic Research Office, Office of Assistant Secretary of Defense for Research & Engineering: http://www.acq.osd.mil/rd/basic_research/

Information regarding the Program overview and information: http://www.acq.osd.mil/rd/basic_research/program_info/vbff.html

Table of Contents

I. PROGRAM DESCRIPTION	4
A. Agency Name	4
B. Research Opportunity Title	4
C. Program Name	4
D. Research Opportunity Number	4
E. Response Dates	4
F. Research Opportunity Description	5
G. Points of Contact	9
H. Instrument Type(s)	9
I. Catalog of Federal Domestic Assistance (CFDA) Numbers	10
J. Catalog of Federal Domestic Assistance (CFDA) Titles	10
II. AWARD INFORMATION	10
A. Funding Amount and Period of Performance	10
B. Peer Reviews	10
III. ELIGIBILITY INFORMATION	10
IV. APPLICATION AND SUBMISSION INFORMATION	11
A. Application and Submission Process	11
B. Content and Format of White Paper, Proposal Package, and Supporting Documentation	12
C. Submission of Proposals through Grants.gov	18
D. Significant Dates and Times	20
E. Additional Submission Information	21
V. EVALUATION REVIEW INFORMATION	21
A. Evaluation Criteria	21
B. Evaluation Panel	22
VI. SUMMARY OF PROPOSAL SUBMISSION FORMS	23
VII. AWARD ADMINISTRATION INFORMATION	24
A. Administrative Requirements	24
B. Reporting	24
C. Access to your Grant Award	24
VIII. OTHER INFORMATION	25
A. Federal Funding Accountability and Transparency Act of 2006	25
B. Certification regarding Restrictions on Lobbying	25
C. Representation Regarding an Unpaid Delinquent Tax Liability or a Felony Conviction Under any Federal Law - DoD Appropriations	26
D. Representation Regarding the Prohibition on Using Funds with Entities that Require Certain Internal Confidentiality Agreements	26
E. Code of Conduct	27
F. Reporting	27
G. Requirements Concerning Live Organisms	29
H. Institutional Dual Use Research of Concern	30
I. Department of Defense High Performance Computing Program	30
J. Project Meetings and Reviews	30

I. PROGRAM DESCRIPTION

A. Agency Name

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

B. Research Opportunity Title

The Fiscal Year (FY) 2018 Vannevar Bush Faculty Fellowship (VBFF) program

C. Program Name

The name of the program formerly known as the National Security Science and Engineering Faculty Fellowship (NSSEFF) program has been changed to the Vannevar Bush Faculty Fellowship program (VBFF). <https://www.defense.gov/News/Article/Article/955536/dod-debuts-vannevar-bush-faculty-fellowship>

Dr. Vannevar Bush (1890-1974) was a forward-thinking policymaker who served as the director of the U.S. Defense Department's Office of Scientific Research and Development during World War II, coordinating the work of thousands of scientists in the service of ending the war. In his 1945 report to the President of the United States, *Science, The Endless Frontier*, Bush called for an expansion of government support for science, and he pressed for the creation of the National Science Foundation. Dr. Bush was concerned about how the scientific research supported by DoD during WWII could be sustained with a focus on peacetime goals. He believed that basic research was "the pacemaker of technological progress." "New products and new processes do not appear full-grown," Bush wrote. "They are founded on new principles and new conceptions, which in turn are painstakingly developed by research in the purest realms of science."

Prior to his DoD work, Dr. Bush was a professor and Dean of Engineering at the Massachusetts Institute of Technology, and founded a large defense and electronics company. Because Dr. Bush's life work embodies the spirit of the VBFF program, the program name was changed to the Vannevar Bush Faculty Fellowship program in his honor.

D. Research Opportunity Number

N00014-17-S-F015

E. Response Dates

Acquitrak Registration (See [Part IV. Section B. 1.](#)): No later than 11:59 pm Eastern Daylight Time on 14 August 2017.

White Papers and Supporting Documentation: No later than 11:59 pm Eastern Daylight Time on 16 August 2017

Full Proposal and Confidential Letters of Recommendation: No later than 11:59 pm Eastern Standard Time on 8 January 2018.

F. Research Opportunity Description

The Vannevar Bush Faculty Fellowship (VBFF) program is sponsored by the Basic Research Office, Office of the Assistant Secretary of Defense for Research and Engineering (ASD (R&E)). VBFF supports innovative basic research within academia, as well as opportunities intended to develop the next generation of scientists and engineers for the defense workforce.

The Office of Naval Research (ONR) manages the VBFF program for ASD (R&E). To accomplish this task, ONR is soliciting proposals for the VBFF program through this FOA. This FOA seeks distinguished researchers for the purpose of conducting innovative basic research in areas of interest to the DoD and fostering long-term relationships between the VBFF Fellows and the DoD.

As defined by the DoD, basic research is “systematic study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. It includes all scientific study and experimentation directed toward increasing fundamental knowledge and understanding in those fields of the physical, engineering, environmental, and life sciences related to long-term national security needs. It is farsighted high payoff research that provides the basis for technological progress.”

(http://comptroller.defense.gov/Portals/45/documents/fmr/Volume_02b.pdf) The DoD’s basic research program invests broadly in many scientific fields to ensure that it has early cognizance of new scientific knowledge.

VBFF is oriented towards bold and ambitious “blue sky” research that may lead to extraordinary outcomes such as revolutionizing entire disciplines, creating entirely new fields, or disrupting accepted theories and perspectives.

Objectives of the program are to:

- Support unclassified basic scientific and engineering research that could be the foundation for future revolutionary new capabilities for DoD
- Educate and train student and post-doctoral researchers for the defense workforce
- Foster long-term relationships between university researchers and the DoD
- Familiarize university researchers and their students with DoD’s current and projected future challenges
- Increase the number of talented technical experts that DoD can call upon.

This FOA is for single investigator grant proposals for basic research in one or more of the following technical subject categories of interest to the DoD.

1. Engineering Biology

Engineering biology is an emerging discipline that is positioned to become a powerful technology for the potential production of DoD-relevant materials, the development of new sensing modalities, and maintaining warfighter resilience and performance. Engineering biology applies biological principles to the engineering of living biological (natural or synthetic) or artificial systems to develop novel systems or products. Revolutionary basic research engineering biology could lead to new capabilities for the DoD in:

Specialty Materials- The commercial sector has examples of microorganisms engineered to produce commodity chemicals such as fuels and pharmaceuticals. However, can biological systems be engineered to produce more complex molecules or three-dimensional materials? Do biological systems have unique or more efficient capabilities to produce complex materials and chemicals?

Sensing- DOD has unique sensing needs including the need for detecting unusual signatures, clandestine sensing, and sensing environmental biological molecules and chemicals. Biological systems with their molecular interactions and precise control can have an impact in this capability. Antibodies and RNA aptamers have been traditionally applied in this space and are a relatively mature technology. VBFF is interested in new and unique approaches to biological sensing.

VBFF is particularly interested in innovative and fundamental approaches to understanding biological process with the eventual goal of facilitating the engineering of biological systems. Multidisciplinary as well as theoretical, physical, biophysical, biochemical, molecular, and synthetic biology approaches are likely necessary to overcome the technical hurdles that currently prevent biology from being a scalable top-down engineering discipline. Basic research that could employ more engineering principles to biology is relevant to VBFF. Ground-breaking basic research that would expand the repertoire of biological engineering platforms from lab-based domesticated prokaryotic and eukaryotic organisms (E. coli, for example) to more “wild” environmental organisms, microbial consortia, as well as single and multi-cellular eukaryotic systems that can be deployed into real-world environments are also of interest.

2. Quantum Information Science

Quantum Information Science (QIS) focuses on the creation, control, and manipulation of non-classical states of light and matter with potential for exceeding classical limits in communications, sensing, metrology, imaging, computing and simulation. The development of QIS was precipitated by the demonstration of a "quantum advantage" in computing due to development of Shor's factoring algorithm and Grover's search algorithm in the mid-1990s, which offered quantum speedups (in the former case, what seems to be an exponential speedup).

The potential impacts of QIS on DoD capabilities may include ensuring information security, enabling novel materials design, attaining precise navigation and positioning even without GPS, improved sensing, and accomplishing significant improvements in high resolution imaging.

Developments of new algorithms that provide a "quantum advantage" are needed for quantum computing to be more than a niche application. Beyond computing, and even beyond QIS per se, of great interest is the development of small- or medium-sized quantum systems to enable the study of exotic physics that could lead to novel future technologies. This program seeks ambitious proposals that are expected to either advance the knowledge of QIS, or to disrupt the current research directions of QIS. Exploration of the limitations of QIS is highly encouraged.

3. Cognitive Neuroscience

Maintaining human cognitive effectiveness and emotional resilience are important capabilities for the DOD since the physical, emotional stress and cognitive demands of warfighters is constantly increasing with the growing volume of data presented by today's technologies. Loss of neural function due to warfighter brain injury is also of concern. Understanding neural activity for motor and cognitive functions in humans is of interest to support development of neural interfaces for warfighters that lose capability due to brain injury. DOD has several research and development thrusts in the development of brain-machine interfaces (BMIs) to allow the control of prosthetics to restore warfighter capability after injury. Additionally, the identification of cognitive neuroscience principles of the mind that can be emulated for sensing, pattern recognition and control and as neuromorphic electronic designs are of interest to DOD.

Recent advancements in neuroscience have shown that neuronal activity is organized at the molecular, neuron, neural circuit, and brain structural levels. In particular, computational neuroscience work is

making strides to use empirical data to model functional activities at each of these brain structural levels. Fundamental neuroscience studies of the molecular and cellular processes that contribute to the cognitive activities are also making great strides to understand the human mind. The VBFF Program is interested in forward-thinking and hypothesis-driven theoretical, computational, neuronal, and molecular basic neuroscience research to study the mechanisms of human cognitive skills. Research on large-scale models of cortical systems and neural-based cognitive architectures capable of addressing human cognitive skills such as attention, memory, spatial cognition, complex motor skills and language processing are also encouraged.

4. Novel Engineered Materials

Engineered materials exhibit behaviors that are not observed in naturally occurring materials, but rather originate from careful designs of the structure. One example is meta-materials with negative index of refraction that can direct and focus light in ways that natural crystals cannot. Other engineered materials include superlattices, quantum dots, and ordered arrays of nanoholes which can form photonics waveguides. Recent demonstrations of structural meta-materials promise unique combinations of physical properties.

Understanding and controlling evolution of material behaviors is an area of interest. Conventional modeling and experimental techniques do not take far-from-equilibrium phenomena into account. Understanding and controlling irreversible material phenomena under extreme environments, e.g. high temperatures, high strain rates, radioactivity, etc., may lead to significant advances in materials design capabilities and in manufacturing process development.

This program seeks curiosity-driven research with the focus on discovery of new materials that enable transformative functionalities and performance under extreme conditions.

5. Applied Mathematics (theory and experiments) and Statistics

Many crucial DoD capabilities of the future will rely on mathematical breakthroughs made today. Basic research in applied mathematics can have broad-ranging impacts, by laying the basic foundations for progress in multiple areas. Examples of important areas that will require such foundations include, but are not limited to: generalized machine learning; mathematical foundations of deep learning network; common sense enabled artificial intelligence; the analysis and exploitation of very large data sets; the fundamental understanding of the behavior of sociotechnical networks; the understanding of systemic risk in complex endeavors; formal foundations for cybersecurity; new mathematics for encryption and authentication; and, theoretical foundations for compressive sensing. These are only some of the many areas that can benefit from new and innovative research in mathematics, and in turn enable important DoD capabilities in the longer-term future.

There is also a continuing need for fundamental mathematical advances that will increase the efficiency and efficacy of computational modeling of physical phenomena, both to understand those phenomena and, ultimately, to inform the engineering design process. Relevant areas of computational modeling include, but are not limited to, continuum mechanics of fluids and solids, computational electromagnetics, and many others."

6. Manufacturing Science

DoD is interested in innovative research in the broad area of manufacturing science, which is defined as increasing knowledge, understanding, and manipulative capability associated with materials and materials systems with a focus on the practical control of useful physical, chemical, or mechanical properties.

Research may include efforts at all length scales that deal with materials synthesis, processing, fabrication, or design of materials systems; modeling and simulation of the manipulation of structures and properties; or tools and instrumentation for characterization of manipulation and its effects. The product of the research should lead to enhanced understanding, knowledge, model materials/structures, or other outcomes that can enhance current fabrication or manufacturing processes or establish a foundation for new processes or fabricable products.

Research in materials has entered a new realm in which new functionalities are obtained through controlled processing and assembly of traditional materials, such as metals, alloys, ceramics, polymers, and composites by designing and assembling materials systems with precision. For example, metamaterials, which represent novel architectures of dissimilar materials, enable unprecedented manipulation of light, sound, and heat in ways that are not possible with natural homogenous materials. In many critical cases these architectures can only be achieved through precise and repeatable placement of dissimilar materials via processes that require discovery or new knowledge and understanding.

The emergence of new material assemblies and structures promises unprecedented capabilities for DoD related applications but poses great challenges to existing manufacturing paradigms. Despite the advancements in the 3D printing/additive process and polymeric self-assembly, it remains costly and time-consuming to manufacture complicated hierarchical and topological structures with dissimilar materials such as metals and oxides, or inorganics and organics. Basic research in processing to produce precision-engineered assemblies of functional organic and inorganic materials is desired to advance the state-of-the-art in this area. Advances in the science base are needed to enable the development of automated prototyping and other manufacturing techniques that robustly manipulate the next generation of designed materials with desired surface, interfacial, and bulk properties. Basic research in processing and modeling for scalable manufacturing techniques is required to permit meter-scale assembly and bulk structure with micro-scale or even nano-scale surface resolution.

DoD is also seeking basic research proposals on disruptive and flexible processing and processes potentially applicable to the manufacture of organic and inorganic materials and structures and on the fundamental limitations of scalability, ultimate length scale, and efficiency of manufacturing techniques.

7. Other fields of research with high potential

The list of subjects provided above is by no means a comprehensive list of topics for which white papers and proposals may be accepted. Proposed research in areas of relevance to DoD will be considered (e.g., fluid dynamics, propulsion, etc.) as long as there is a transformative science problem to be investigated and whose solution may open new ways of thinking about the phenomena that are being studied.

All applicants should ensure that they propose to conduct basic research as previously defined in this section. Proposed research should focus on developing a deep understanding of fundamental phenomena. Device development or equipment construction or integration is not a suitable end goal in itself; if proposed, it must be integral to research that will advance scientific knowledge. Risk-taking is encouraged; however, all proposals must demonstrate solid judgment and rationale.

All awardees will receive a research grant and the title of VBFF Fellow. VBFF Fellows and their students are provided with opportunities that are designed to enhance their understanding of DoD's critical research needs and interact with DoD senior Science and Technology (S&T) program leaders. Fellows and their students are expected to attend VBFF activities scheduled throughout the year. These activities may include an orientation meeting, site visits to DoD labs, technical workshops, and an annual meeting to report the progress of VBFF-sponsored research. VBFF Fellows may also be encouraged to serve as

members of DoD advisory boards, panels, or groups. For a list of current VBFF Fellows, refer to: http://www.acq.osd.mil/rd/basic_research/program_info/vbff.html

G. Points of Contact

VBFF Program Point of Contact:

Dr. Ellen Livingston
VBFF Program Manager
Office of Naval Research Code 03R
E-mail Address: ellen.s.livingston@navy.mil

Mailing address:
Office of Naval Research
Attn: Dr. Ellen Livingston
One Liberty Center
875 North Randolph Street, Suite 14
Arlington, VA 22203-1995

Business Points of Contact:

David Broadwell
Grants Officer
Office of Naval Research
E-Mail Address: david.broadwell@navy.mil

Questions concerning White Papers, Supporting Documentation should be submitted by 26 July 2017 to the VBFF program point of contact with a copy to the business point of contact.

Questions received after the deadlines may not be answered, and the due date for submission of application materials will not be extended.

Answers to substantive questions submitted in response to this FOA will be addressed in the form of an amendment and will be posted to one or more of the following web pages:

Grants.gov Webpage – <http://www.grants.gov/>
ONR Funding Opportunity Announcement (FOA) Webpage – <http://www.onr.navy.mil/Contracts-Grants/Funding-Opportunities/Broad-Agency-Announcements.aspx>

Applicants should be alert for any amendments that may modify the announcement.

H. Instrument Type(s)

It is anticipated that all awards resulting from this announcement will take the form of grants.

Grants awarded under this announcement will be governed by the award terms and conditions that conform to DoD's implementation of OMB circulars applicable to financial assistance.

Examples of model grants can be found on the ONR website at the following link:
<http://www.onr.navy.mil/en/contracts-Grants/submit-proposal/grants-proposal/model-grant.aspx>

I. Catalog of Federal Domestic Assistance (CFDA) Numbers

12.300

J. Catalog of Federal Domestic Assistance (CFDA) Titles

Basic and Applied Scientific Research (ONR)

II. AWARD INFORMATION

A. Funding Amount and Period of Performance

It is anticipated that awards will be made in the form of grants to U.S. institutions of higher education (universities). It is anticipated that the maximum award will be \$3 million per five years, with the actual amount contingent on availability of funds, the specific topic, and the scope of the proposed work.

There is no guarantee that any of the proposals submitted in a particular category will be recommended for funding. More than one proposal may be recommended for funding for a particular category. The Government reserves the right to select for negotiation all, some, one, or none of the proposals received in response to this announcement.

B. Peer Reviews

In the case of proposals funded as basic research, DoD may utilize peer reviewers from academia, industry, and Government agencies to assist in the periodic appraisal of performance under the awards, following the process outlined under ONR Instruction 3966.1A. Such periodic program reviews monitor technical performance of funded basic research efforts. 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.

III. ELIGIBILITY INFORMATION

Eligible Institutions

Accredited U.S. institutions of higher education (universities) with doctoral degree-granting programs are eligible to apply. DoD institutions are not eligible to apply.

All responsible sources from academia and industry may submit proposals under this FOA. Historically Black Colleges and Universities (HBCUs) and Minority Institutions (MIs) are encouraged to submit proposals and join others in submitting proposals. However, no portion of this FOA will be set aside for HBCU and MI participation, due to the impracticality of reserving discrete or severable items of this research for exclusive competition among such entities.

Non-profit and for-profit organizations may collaborate on proposed research and may receive VBFF funds via subaward or subcontract. However, the VBFF program is oriented towards funding research at universities. Universities must perform the majority of the proposed work and receive the majority of funds.

Government agencies, DoD laboratories and universities, and Federally Funded Research and Development Centers (FFRDCs) may collaborate on proposed research but may not receive VBFF funds,

directly or via subaward.

Grants to a university may be terminated if the principal investigator (PI) severs connections with the university or is unable to continue active participation in the research. Grants to a university may also be terminated if the university severs connections with the PI.

Eligible Individuals

Faculty with tenure and full-time research staff with the skills, knowledge, and resources necessary to conduct the proposed research as the principal investigator (PI) are invited to submit an application. Applicants should have a record of substantial scientific contributions.

The PI must be a U.S. citizen or permanent resident.

Other Eligibility Criteria

Number of Applications: The PI may submit only one (1) application in response to this FOA. There is no limit to the number of applications that an institution may submit.

Number of PIs: Only one (1) PI may be designated on the application. While collaborations are encouraged, co- PIs are not permitted. The lead investigator must direct the work. Collaboration may be achieved at the PI's institution or via a subaward. If there is such collaboration envisioned, the PI must explain how the proposed team fits the single PI structure.

Resubmissions: Applicants invited to submit full proposals who have submitted Recommendation Letters for the VBFF program in a prior year must obtain and submit new letters. Previously submitted letters will not be retrieved. Documents dated prior to the posting date of this FOA will not be accepted.

IV. APPLICATION AND SUBMISSION INFORMATION

A. Application and Submission Process

The application process is completed in three stages:

- (1) Online Registration via AcquTrak (required)
- (2) White Paper and Supporting Documentation submission via AcquTrak (required)
- (3) Full Proposal submission (via grants.gov) (by invitation only) and Confidential Letters of Recommendation (required)

If an Applicant does not register and submit a White paper and Supporting Documentation before the due dates and times, the Applicant will not be eligible to participate in the remaining Full Proposal submission process and is not eligible for funding.

B. Content and Format of White Paper, Proposal Package, and Supporting Documentation

White Papers Supporting Documentation, and Full Proposals submitted under this FOA are expected to be unclassified; classified proposals are not permitted.

All proposal 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.

IMPORTANT NOTE: Titles given to the White Papers/Full Proposals should be descriptive of the work they cover and not be merely a copy of the title of this solicitation.

1. AcquTrak Online Registration

The AcquTrak Online Registration portal opens on 19 June 2017. All applicants must register on the AcquTrak website by 11:59 pm Eastern Daylight Time on 14 August 2017. Note: Applicants who registered at the AcquTrak website in a prior competition must re-register for this competition. Usernames and passwords used to submit previous applications will not be retrieved.

Each applicant must provide the following information at the time of registration:

- PI's name, title, department, educational institution, phone number, and e-mail address
- Title of the PI's proposed research topic
- Technical subject category most appropriate for the proposed research from the list in [Part I, Section F. \(Research Opportunity Description\)](#).

2. White Paper and Supporting Documentation Content

Individual PIs must submit a Cover Page, Abstract, Basic Research Statement, White Paper, and Curriculum Vitae (CV). All documents must be submitted in PDF format in compliance with the guidelines below. When submitting the documents, the PI must upload the Cover Page, Abstract, Basic Research Statement, White Paper and CV as one PDF file.

3. Marking of White Papers and Full Proposals

ONR will make every effort to protect any proprietary information submitted in whitepapers and full proposals. Any proprietary information included in application materials must be identified. If the application includes such information, mark the white paper or full proposal as follows:

- (1) Include a cover page with the following legend: "The following contains proprietary/privileged information that (name of applicant) requests not be released to persons outside the Government, except for purposes of review and evaluation, or pre and post award administration."
- (2) Clearly mark each page containing the proprietary/privileged information with the legend: "Use or disclosure of data contained on this page is subject to the restriction on the cover page of this document."

However, applicants should be aware that under the Freedom of Information Act (FOIA) requirements, proprietary information contained in whitepapers and proposals (marked or unmarked) may still potentially be subject to release.

It is the applicant's responsibility to notify ONR of proposals containing proprietary information and to identify the relevant portions of their proposals that require protection. The entire proposal (or portions thereof) without protective markings or otherwise identified as requiring protection will be considered to be furnished voluntarily to ONR without restriction and will be treated as such for all purposes.

It is the intent of ONR to treat all white papers and full proposals as privileged information before the award and to disclose their contents only for the purpose of evaluation. Whitepapers may also be disclosed to reviewers for training purposes in future competitions.

4. White Paper and Supporting Documentation

- (1) Cover page: Include the PI's name and university. Include a protective legend for proprietary information, if applicable.
- (2) Abstract (not to exceed 300 words): Describe the research objective, technical approaches, and anticipated outcome of the specific research. A non-proprietary version of the abstract must be submitted without other restrictions. The non-proprietary abstract must be a version that is releasable under the Freedom of Information Act without changes.
- (3) Basic Research Statement (one (1) page limit, single-sided): Describe how the proposed research meets the DoD definition of basic research provided in [Part I. Section F. entitled, "Research Opportunity Description"](#) of this announcement. Describe the extraordinary outcomes that may be achieved as a result of the proposed project.
- (4) Identify anticipated human or animal subject research (where applicable).
- (5) White paper (three (3) page limit, single-sided): Describe the basic scientific or technical research to be undertaken. Describe the technical approach. Summarize the state of the field and describe what is innovative about the proposed approach. Given the successful completion of the course of investigation, what results, new knowledge, or insights might it afford compared to alternate approaches other researchers in this field have taken. Include approximate yearly costs for the project. Reference citations are not required but may be included within the three-page limit.
- (6) PI's Curriculum Vitae (CV) (two (2) page limit, single-sided) -The CV should include relevant experience, publications, and funding received in the area of interest, and any previous involvement and experiences with the DoD. **List all previous DoD funding including project titles within the last eight years.**

Documents must be submitted in the following format:

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

Do not include proprietary information in the Cover Page, Abstract, or CV. Include appropriate markings on each page of the Basic Research Statement and White Paper that contains proprietary information or other restrictions.

When submitting the White Paper and Supporting Documentation, the PI must provide the title of the proposed research project, contact information (name, e-mail address, and phone number) for the Sponsored Programs Office at the university, and indicate whether he or she is a US citizen or permanent resident. In addition, the PI must select one (and only one) technical subject category most appropriate for the proposed research from the list given in [Part I. Section F. \(Research Opportunity Description\)](#). The technical category designation will assist VBFF staff in assigning applications to appropriate reviewers.

The White Papers and Supporting Documentation must be submitted to AcquTrak (<https://acqpass.noblis.org/ApplyVBFF>) no later than **11:59 p.m. Eastern Daylight Time on 16 August 2017**. Persons submitting the White Papers and Supporting Documentation must register on the website by **11:59 pm Eastern Daylight Time on 14 August 2017**. The submission process could take several minutes depending on the network connection and the size of the file being submitted. The applicant is responsible for allowing enough time to complete the online form, upload the documents and press the submit button before the deadline. An e-mail confirmation will be sent to the applicant upon

receipt of the submission.

Documents submitted after the deadline or found to be non-compliant will not be reviewed.

Evaluation of the white paper will be issued via email notification. Any Applicant whose white paper was not identified as being of “particular value” to the DoD is ineligible to submit a full proposal under this FOA.

5. Full Proposal Package and Letters of Recommendation

Full Proposal Packages will only be accepted from PIs invited to submit full proposals. Proposal packages must be submitted electronically to Grants.gov (<http://www.grants.gov/>) no later than **11:59 p.m. Eastern Standard Time on 8 January 2018.**

Confidential Letters of Recommendation must be submitted via e-mail to Paula Barden for ONR, at paula.barden.ctr@navy.mil no later than **11:59 p.m. Eastern Standard Time on 8 January 2018.**

Full Proposal Package – Format

Proposal package format should be as follows:

- Paper Size – 8.5 x 11 inch paper
- Margins – 1 inch (excluding the Summary Chart)
- Spacing – single spaced (excluding the Summary Chart)
- Font – Times New Roman, 12 point
- PI’s name and institution in header or footer
- Appropriate markings on each page that contains proprietary or confidential information (see [Part IV. Section B., Paragraph 3 entitled, “Marking of White Papers and Full Proposals”](#))

Full Proposal Package – Content

The following information must be completed as follows in the SF 424 located in the application package to ensure the application is directed to the correct individual for review.

i. SF-424 Research & Related (R&R) Application for Federal Assistance Form. 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 fill out the SF-424 first, as some fields on the SF-424 are used to auto populate fields in other forms.

The completion of most fields is self-explanatory except for the following special instructions:

Field 3 - Date Received by State. The Date Received by State and the State Application Identifier are not applicable to research.

Field 4a - Federal Identifier. Enter N00014

Field 4b- Agency Routing Number. Enter 03R [Livingston, Ellen].

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 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 the “I agree” box in field 17, and attaching the representation to **Field 18** of the SF424 (R&R) as part of the electronic proposal submitted via Grants.gov, the Grant Applicant is providing the certification on lobbying required by 32 CFR Part 28 and representation regarding an unpaid delinquent tax liability or a felony conviction under any federal law – DoD appropriations. Refer to [Part VIII., Section B.](#)

ii. Research & Related Senior/Key Person Profile Form. Complete the R&R Senior/Key Person Profile form for those key persons who will be performing the research. Information about an individual is subject to the requirements of the Privacy Act of 1974 (Public Law 93 579). The information is requested under the authority of Title 10 USC, Sections 2358 and 8013. The principal purpose and routine use of the requested information are for evaluation of the qualifications of those persons who will perform the proposed research. Failure to provide such information will delay award. Attach curricula vitae (CVs) for the principal investigator and senior staff. The CV should list any previous involvement and experiences with the DoD.

Page limits for attachments:

- PI Curriculum Vitae (five (5) page limit)
- Key Personnel Curricula Vitae (two (2) page limit each)

iii. Project/Performance Site Locations Form. Complete all information as requested.

iv. Research And Related Other Project Information Form

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 subjects” as defined in DoDI 3216.02, prior to award, the Applicant must submit the documentation described in detail below in [Part VIII. G., “Use of Human Subjects in Research”](#).

Fields 2 and 2a - 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 in detail below in [Part VIII. G., “Use of Animals”](#).

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 various environmental requirements. The National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. Sections 4321-4370 (a), 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 an environmental impact statement (EIS), even if the agency does

no more than provide grant funds to the recipient. Questions regarding NEPA compliance should be referred to the applicable ONR Vannevar Bush Program Manager Dr. Ellen Livingston, at ellen.s.livingston@navy.mil. Most research efforts funded by ONR will, however, qualify for a categorical exclusion from the need to prepare an EIS. Navy instructions/regulations provide for a categorical exclusion for basic and applied scientific research usually confined to the laboratory, if the research complies with all other applicable safety, environmental and natural resource conservation laws. Each proposal shall address environmental impact by filling in Fields 4a through 4d of the R&R Other Project Information form. This information will be used by ONR to make a determination if the proposed research effort qualifies for categorical exclusion.

Field 7 – Project Summary/Abstract - Mandatory. The project summary/abstract should 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 4,000 character limit including spaces.

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>

To attach a Project Summary/Abstract, click “Add Attachment” and attach the project summary/abstract. (Applicants will not be able to type in the box, therefore, save the file to attach as “Project Summary/Abstract”).

Field 8 – Project Narrative - Mandatory. Describe clearly the research, including the objective and approach to be performed, keeping in mind the evaluation criteria listed in [Part V. Section A., entitled “Evaluation Criteria”](#). Attach the entire proposal narrative to R&R Other Project Information form in Field 8. To attach a Project Narrative in Field 8 click on “Add Attachment” and attach the technical proposal as a single PDF file. (Save the file as “Volume I- Technical Proposal,” as typing in the box is prohibited).

The narrative should describe the research in sections as described below.

- **Project Narrative - Statement of Objectives.** Summarize the actual research to be completed, including goals and objectives, on one page titled Statement of Objectives. This statement of objectives may be incorporated into the award instead of the entire technical proposal. Active verbs should be used in this statement (for example, “conduct” research into a topic, “investigate” a problem, “determine” to test a hypothesis). It should not contain proprietary information.
- **Project Narrative - Research Effort (15-page limit for this section, excluding list of references).** Describe the basic scientific or technical concepts that will be investigated, giving the complete research plan. Describe the technical approach and what is innovative about the proposed approach. How does the proposed approach compare to alternate approaches other researchers in this field have taken? Given the successful completion of the five-year course of investigation, what results, new knowledge, or insights, might it afford?
- **Project Narrative – 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.

- **Project Narrative – Principal Investigator (PI) Time.** PI time is required. A high level of PI engagement is critical to the success of this program. The full proposal should budget several trips per year to VBFF-related activities, which include attending program reviews, interacting with service lab researchers, and participating in DoD-organized workshops. List the estimate of time the principal investigator and other senior professional personnel will devote to the research. This shall include information pertaining to other commitments of time, such as sabbatical or extended leave; and proportion of time to be devoted to this research and to other research. State the number of undergraduate students, graduate students, and postdoctoral researchers for whom each senior staff member is responsible. If the principal investigator or other key personnel is currently engaged in research under other auspices, or expects to receive support from other agencies for research during the time proposed for VBFF support, state the title of the other research, the proportion of time to be devoted to it, the amount of support, name of agency, dates, etc. Send any changes in this information as soon as they are known. Submit a short abstract (including title, objectives, and approach) of that research and total amount of support for both current and pending research projects.

- **Project Narrative – Facilities.** Describe facilities available for performing the proposed research and any additional facilities or equipment the organization proposes to acquire at its own expense. Indicate government-owned facilities or equipment already possessed that will be used. Reference the facilities grant and/or contract number or, in the absence of a facilities grant/contract, the specific facilities or equipment and the number of the award under which they are accountable.

- **Project Narrative – Special Test Equipment.** List special test equipment or other property required to perform the proposed research. Segregate items to be acquired with award funds from those to be furnished by the Government. When practical, give a description or title and estimated cost of each item. When information on individual items is unknown or not available, group the items by class and estimate the values. In addition, state why it is necessary to acquire the property with award funds. 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. Include the proposed life expectancy of the equipment and whether it will be integrated with a larger assemblage or apparatus. If so, state who owns the existing apparatus.

v. Research & Related Budget Form. Estimate the total research project cost. Categorize funds by year. Provide separate annual budgets for each of the five years of the VBFF award. For planning purposes, assume that grants will start between June and September 2018. In addition to the Research & Related Budget forms available on Grants.gov, the budget proposal should include a budget justification for each year, clearly explaining the need for each item. The proposed budget should account for the participation of any subawardees or collaborators. Applicants who enter a fee on Part J of the budget will not be eligible to receive a grant. Educational organizations shall submit a spending profile with their cost proposal. Attach the budget justification and/or spending profile to Section K of the R&R Budget form.

vi. Attachments Form.

List of References - Identify and list three (and only three) persons who have been asked to submit confidential letters of recommendation. Also, provide the name, e-mail address, phone number, and professional relationship with these persons. Refer back to [Part IV., Section B., Paragraph 5., entitled, “Full Proposal Package and Letters of Recommendation”](#) for instructions on the submission of these letters. No more than three letters will be forwarded to evaluators.

Include letters of support from proposed collaborators or subawardees.

Summary Chart (one (1) page limit, single-sided) – A completed summary chart must be submitted with the full proposal. This summary chart should be in quad chart format which will include objectives, technical approach, anticipated DoD benefit, and budget.

C. Submission of Proposals through Grants.gov

This announcement package may be accessed from the Internet at the Grants.gov web site (<http://www.grants.gov/>) and on the ONR website at <http://www.onr.navy.mil/Contracts-Grants/Funding-Opportunities/Broad-Agency-Announcements.aspx>

Forms and instructions are available at Grants.gov. To access these materials, go to <http://www.grants.gov>, select “Apply for Grants,” followed by “Step 1 – Download a Grant Application Package.” In the search function, enter the funding opportunity number for this announcement (N00014-17-S-F015). In the search results, click on “download” under the heading “Instructions and Application” to download the instructions and application package. Applicants can also search for the CFDA Number “12.300” or Funding Opportunity Competition ID “VBFF” to download the instructions and application.

Detailed instructions entitled “Grants.Gov Electronic Application and Submission Information” on how to submit a Grant proposal through Grants.gov are under the Acquisition Department — Submitting a Proposal section of the website at <http://www.onr.navy.mil/Contracts-Grants/submit-proposal/grants-proposal/grants-gov.aspx>.

Due to high traffic volume, applicants are highly encouraged to submit applications early. Waiting until the due date and time may result in applications being late. Common closing dates include the first, fifteenth and last day of any month. Potential applicants are reminded to plan accordingly. Also, please check Grants.gov prior to submission for any notices posted on Grants.gov offering alternate submission options as a result of system saturation. Note: All attachments to all forms must be submitted in PDF format (Adobe Portable Document Format).

Full Proposal Packages will only be accepted from PIs invited to submit full proposals. Proposal packages must be submitted electronically to Grants.gov (<http://www.grants.gov/>) **no later than 11:59 p.m. Eastern Standard Time on 8 January 2018.**

For electronic submission of grant proposals, there are several one-time actions that must be completed in order to submit an application through Grants.gov. These include obtaining a Dun and Bradstreet Data Universal Numbering System (DUNS) number, registering with System for Award Management (SAM), registering with the credential provider, and registering with Grants.gov. See www.grants.gov, specifically www.grants.gov/GetStarted.

Use the Grants.gov Organization Registration Checklist at:

<http://www.grants.gov/web/applicants/organization-registration.html> which will provide guidance through the submission process. Designating an E-Business Point of Contact (E-Biz POC) and obtaining a special password called ‘MPIN’ are important steps in the SAM registration process. Applicants who are not registered with SAM.gov and Grants.gov should allow at least 21 days in order to complete these requirements. The process should be started as soon as possible. Any questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1- 800-518-4726 (1-606-545-5035 for foreign applicants) or support@grants.gov.

Special Notices Relative to Grant Applications to be submitted through Grants.Gov:

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.

Abstracts of all funded research projects will be posted on a public website. Do not include proprietary or confidential information in the abstract.

Proposal Receipt Notices:

After a full proposal is submitted through Grants.gov, the Authorized Organization Representative (AOR) will receive a series of three e-mails. It is extremely important that the AOR watch for and save each of the e-mails. You will know that your proposal has reached ONR when the AOR receives e-mail Number 3. You will need the Submission Receipt Number (e-mail Number 1) to track a submission. The three e-mails are:

- E-mail Number 1 – The applicant will receive a confirmation page upon completing the submission to Grants.gov. This confirmation page is a record of the time and date stamp that is used to determine whether the proposal was submitted.
- E-mail Number 2 – The applicant will receive an e-mail indicating that the proposal has been validated by Grants.gov within two days of submission (This means that all of the required fields have been completed). After an institution submits an application, Grants.gov generates a submission receipt via email and also sets the application status to “Received.” This receipt verifies the Application has been successfully delivered to the Grants.gov system. Next, Grants.gov verifies the submission is valid by ensuring it does not contain viruses, the opportunity is still open, and the applicant login and applicant DUNS number match. If the submission is valid, Grants.gov generates a submission validation receipt via email and sets the application status to “Validated.” If the application is not validated, the application status is set to "Rejected." The system sends a rejection email notification to the institution, and the institution must resubmit the application package. Applicants can track the status of their application by logging in to Grants.gov.
- E-mail Number 3 – The third notice is an acknowledgment of receipt in e-mail form from ONR within ten days from the proposal due date, if applicable. The e-mail is sent to the authorized representative for the institution. The e-mail for proposals notes that the proposal has been received and provides the assigned tracking number.

D. SIGNIFICANT DATES AND TIMES

Schedule of Events		
Event	Date	Time
AcquTrak website open for registration and submission	19 June 2017	
Questions Regarding White Paper and Supporting Documentation (submitted by)	26 July 2017	
AcquTrak Registration (required by)	14 August 2017	11:59 PM Eastern Daylight Time
White Paper and Supporting Documentation (required by)	16 August 2017	11:59 PM Eastern Daylight Time
Notification of White Paper Selection	27 October 2017**	
Proposal and Confidential Letters of Recommendation (by invitation only)	8 January 2018	11:59 PM Eastern Standard Time
Notification of Selection for Award	15 March 2018**	
Start Date of Grant	01 June 2018** to 30 September 2018**	

* Questions submitted after the Q&A deadline as noted in the table above may not be answered.

** These dates are estimates as of the date of this announcement.

E. ADDITIONAL SUBMISSION INFORMATION

1. Submission of Late Proposals

Any full proposal submitted and validated through Grants.gov where the time and date for submission (e-mail Number #2) is after the deadline for proposal submission in [Part IV., Section D., entitled, “Significant Dates and Times”](#) will be late and will not be evaluated unless the Grants.gov website was not operational on the due date and was unable to receive the proposal submission. If this occurs, the time specified for the receipt of proposals through Grants.gov will be extended to the same time of the day specified in this FOA on the first workday on which the Grants.gov website is operational.

Be advised that Grants.gov applicants have been experiencing system slowness and validation issues which may impact the time required submitting proposals. After proposals are uploaded to Grants.gov, the submitter receives an email indicating the proposal has been submitted and that grants.gov will take up to two days to validate the proposal. As it is possible for Grants.gov to reject the proposal during this process, it is **STRONGLY** recommended that any soft-copy proposals be uploaded at least two days before the deadline established in the solicitation so that it will not be received late and be ineligible for award consideration.

2. Intergovernmental Review

The funding opportunity is not subject to intergovernmental review.

3. Funding Restrictions

An institution may, at its own risk and without prior approval, incur obligations and expenditures to cover costs up to 90 days before the beginning date of the initial budget period of a new or renewal award if such costs: 1) are necessary to conduct the project, and 2) would be allowable under the grant, if awarded, without prior approval.

All pre-award costs are incurred at the recipient’s risk. DoD Research and Engineering Enterprise (ASD (R&E)) and ONR are under no obligation to reimburse such costs, if for any reason the institution does not receive an award or if the award is less than anticipated and inadequate to cover such costs.

Government agencies, DoD laboratories and universities, and Federally Funded Research and Development Centers (FFRDCs) may collaborate on the research but may not receive VBFF funds, directly or via subaward.

4. Other Submission Requirements

Other Submission Requirement application materials submitted in whole or in part by electronic media (computer disk or tape, facsimile machine, electronic mail, etc.) or in hard copy form to ASD (R&E) or ONR will not be accepted (unless the materials have also been submitted in accordance with the requirements outlined in this announcement).

V. EVALUATION REVIEW INFORMATION

A. Evaluation Criteria

The VBFF program seeks to invest in basic research and to identify challenging fundamental scientific areas of investigation that may have potential for long term benefit to DoD. Proposed research should describe cutting-edge efforts on basic scientific problems. White papers deemed to be applied research, as

opposed to basic research, will not advance to the proposal stage of the competition.

Subject to funding availability, white papers and proposals deemed to be basic research will be evaluated under the following criteria:

- Scientific and technical merits of the proposed research;
- The principal investigator's qualifications, ability to perform the proposed work, and the overall management approach;
- Relevance of the proposed research to the DoD and to its VBFF program; and
- The reasonableness of proposed costs.

The U.S. Government does not guarantee an award in each research area. Further, be advised that as funds are limited, otherwise meritorious proposals may not be funded.

All, some, one, or none of the applicants may be contacted after the full proposal review process by phone by the Director of the Basic Research Office, ASD(R&E) to clarify certain aspects of their proposed research efforts.

B. Evaluation Panel

White papers and proposals submitted under this FOA are evaluated through a peer or scientific review process. Evaluation will use merit-based competitive procedures according to Department of Defense Grant and Agreement Regulations (DoDGARs) citation of 32 C.F.R Sec 22.315. White papers and proposals will be evaluated by Government personnel and Non-Government reviewers. Non-Government reviewers will include university faculty and staff researchers. Each reviewer is required to sign a conflict-of-interest and confidentiality statement attesting that the reviewer has no known conflicts of interest, and that application and evaluation information will not be disclosed outside the evaluation panel. The names and affiliations of reviewers are not disclosed.

White papers that best fulfill the evaluation criteria will be identified by members of the white paper evaluation panels and recommended to the Assistant Secretary of Defense for Research & Engineering (ASD(R&E)). ASD(R&E) will invite individual PIs to submit full proposals. Feedback on white papers will only be provided to those invited to submit a full proposal.

Proposals that best meet the evaluation criteria will be recommended for funding. The Government reserves the right to select and fund for award all, some, one, or none of the proposals in response to this announcement.

Employees of commercial firms under contract to ASD(R&E) and ONR may be used to process white papers and proposals. By submitting a proposal, applicants consent to allowing access to their proposals by these support contractors, their support contracts include nondisclosure agreements prohibiting contractor employees from disclosing any information submitted by other contractors.

VI. SUMMARY OF PROPOSAL SUBMISSION FORMS

Form	Attachment	Action
SF-424 (R&R) Application for Federal Assistance	SF-LLL if there are lobbying activities to disclose	Enter appropriate information in the data fields as described in Part VIII. B. Attach SF-LLL to box 18 if necessary. (Last_Name_SFLLL.pdf) Attach Representation Regarding an Unpaid Delinquent Tax Liability or a Felony Conviction Under any Federal Law – DoD Appropriations to box 18 with other documentation.
R&R Senior/Key Person Profile Form	PI Curriculum Vitae	Attach to PI Biographical Sketch field (LastName_CV.pdf)
	Key Personnel Biographical Sketches	Attach to Biographical Sketch field for each senior/key person (LastName_Bio.pdf)
R&R Project/Performance Site Locations Form	None	Enter appropriate information in the data fields as described below.
R&R Other Project Information Form	Project Abstract	Attach to Field #7 (LastName_Abstract.pdf)
	Project Narrative	Attach to Field #8 (LastName_Narrative.pdf)
R&R Budget Form	Budget Justification	Enter appropriate information in the data fields as described below. Attach budget justification to Section K of the budget form for each applicable year (LastName_Budget.pdf)
Attachments Form	List of 3 Persons Submitting Letters of Recommendation	Upload as attachment 1
	Summary Chart	Upload as attachment 2

VII. AWARD ADMINISTRATION INFORMATION

A. Administrative Requirements

System for Award Management (SAM): All Applicants submitting proposals or applications must:

- 1) be registered in the SAM prior to submission;
- 2) 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
- 3) provide its DUNS number in each application or proposal it submits to the agency.

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

B. Reporting

In general, for each grant award, annual reports and a final report are required to summarize the technical progress and accomplishments during the performance period, as well as any other report requested by the Program Manager.

C. Access to your Grant Award

Hard copies of award/modification documents are no longer mailed to Applicants. ONR award/modification documents are only available via the DoD Electronic Document Access System (EDA) within the Wide Area WorkFlow e-Business Suite (<https://wawf.eb.mil/>).

EDA is a Web-based system that provides secure online access, storage and retrieval of awards and modifications to DoD employees and vendors. ONR creates an award notification profile for every award. For grants, the notification profile will use the email addresses from the Application for Federal Assistance, SF424, to notify the recipient of an award. ONR is using the following three email addresses entered by the grantee on the SF424 application to create the EDA notification profile:

- a. Applicant Information (Block 5 - Email)
- b. Project Director / Principal Investigator (Block 14 - Email)
- c. Authorized Representative (Block 19 - Email)

IMPORTANT: In some cases, EDA notifications are appearing in recipients' Junk Email folder. If you are experiencing issues receiving EDA notifications, please check your junk email. If found, please mark EDA notifications as "not junk."

If you do not currently have access to EDA, you may complete a self-registration request as a "Vendor" via <https://wawf.eb.mil/>. Registration questions may be directed to the EDA help desk toll free at 866-618-5988, commercial at 801-605-7095, or via email at disa.ogden.esd.mbx.cscassig@mail.mil

VIII. OTHER INFORMATION

A. 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, 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 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. Refer to 2 CFR Part 170, including Appendix A, for a detailed explanation of the requirements, exceptions, and exemptions.

B. Certification regarding Restrictions on Lobbying –

Grant and Cooperative Agreement awards greater than \$100,000, as well as OTAs not under Section 845, 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 Grants.gov (complete Block 17). The following certification applies likewise to each Cooperative Agreement and normal OTA applicant 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 Section 1352, title 31, U.S.C. 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.

C. Representation Regarding an Unpaid Delinquent Tax Liability or a Felony Conviction Under any Federal Law - DoD Appropriations –

All grant applicants are **required to complete** the "Representation on Tax Delinquency and Felony Conviction" found at <http://www.onr.navy.mil/Contracts-Grants/submit-proposal/grants-proposal.aspx> by checking the "I agree" box in block 17 and attaching the representation to block 18 of the SF424 (R&R) as part of the electronic proposal submitted via Grants.gov. The representation reads as follows:

(1) The applicant represents that it ____ is not ____ a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

(2) The applicant represents that it ____ is not ____ a corporation that was convicted of a felony criminal violation under any Federal law within the preceding 24 months. NOTE: If an applicant responds in the affirmative to either of the above representations, the applicant is ineligible to receive an award unless the agency suspension and debarment official (SDO) has considered suspension or debarment and determined that further action is not required to protect the Government's interests. The applicant therefore must provide information about its tax liability or conviction to the agency's SDO as soon as it can do so, to facilitate completion of the required consideration before award decisions are made.

D. Representation Regarding the Prohibition on Using Funds with Entities that Require Certain Internal Confidentiality Agreements –

Agreement with the representation below will be affirmed by checking the "I agree" box in block 17 of the SF424 (R&R) as part of the electronic proposal submitted via Grants.gov. The representation 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.

Note that, as applicable, the bases for this representation are the prohibition(s) as follow:

- i. Section 743 of the Financial Services and General Government Appropriation Act, 2015 (Division E of the Consolidated and Further Continuing Appropriations Act, 2015, Pub. L. 113-235).
- ii. Section 101(a) of the Continuing Appropriation Act, 2016 (Pub. L. 114-53) and any subsequent FY2016 appropriations act that extends to FY2016 the same restrictions as are contained in section 743 of Division E, title VII of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub L. 113-235).
- iii. Pub. L. 114-223, Continuing Appropriations Act, 2017, or any other Act that extends to fiscal year 2017 funds the same prohibitions as contained in section 743, Division E, title VII, of the Consolidated Appropriations Act, 2016 (Pub. L. 114-113).
- iv. Any successor provision of law on making funds available through grants and cooperative

agreements to entities with certain internal confidentiality agreements or statements.

The prohibitions stated above do not contravene requirements applicable to Standard Form 312, Form 4414, or any other form issued by a Federal department or agency governing the nondisclosure of classified information.

E. Code of Conduct –

Applicants for grants, cooperative agreements, or other transaction agreements as applicable 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.

F. Reporting –

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 U.S.C. 200 Appendix XII), is applicable as follows:

1. 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 section 872 of Public Law 110-417, as amended (41 U.S.C. 2313). As required by section 3010 of Public Law 111-212, 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.

2. 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:

(i) It could have led to an outcome described in paragraph 2.c.(1), (2), or (3) of this award term and condition;

(ii) It had a different disposition arrived at by consent or compromise with an acknowledgment of fault on your part; and

(iii) The requirement in this award term and condition to disclose information about the proceeding does not conflict with applicable laws and regulations.

3. 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.

4. 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.

5. 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.

G. Requirements Concerning Live Organisms -

1. Use of Animals:

If animals are to be utilized in the research effort proposed, the Applicant must submit a Full Appendix or Abbreviated Appendix with supporting documentation (copies of IACUC Approval, IACUC Approved Protocol, and most recent USDA Inspection Report) prior to award. For assistance with submission of animal research related documentation, contact the ONR Animal Use Administrator at (703) 696-4046. Guidance: <https://www.onr.navy.mil/About-ONR/compliance-protections/Research-Protections/animal-use>

2. Use of Human Subjects in Research:

a. You must protect the rights and welfare of individuals who participate as human subjects in research under this award and comply with the requirements of the Common Rule at 32 CFR part 219 and applicable provisions of DoD Instruction 3216.02, Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research (2011), the DON implementation of the human research protection program contained in SECNAVINST 3900.39D (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.

b. 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, and other material they considered); proof of completed human research training (e.g., training certificate or institutional verification of training for the principal investigator, co-investigators); and the Applicant’s Department of Health and Human Services (DHHS)-issued Federalwide Assurance (FWA#),

(ii) Any claimed exemption under 32 CFR 219 101(b), including the category of exemption, supporting documentation considered by your 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 human research protection program.

(iii) Any determinations that the proposal does not contain activities that constitute

research involving human subjects, including supporting documentation considered by your 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 human research protection program.

c. Documentation must be submitted to the ONR Human Research Protection Official (HRPO), by way of the ONR Program Officer. If the research is determined by the IRB to be greater than minimal risk, you also must provide the name and contact information for the independent research monitor and a written summary of the monitors' duties, authorities, and responsibilities as approved by the IRB. For assistance with submission of human subject research related documentation, contact the ONR Human Research Protection Official (HRPO) at (703) 696-4046.

d. Research involving human subjects must not be commenced under any award or modification or any subcontract or grant subaward or modification until awardee receives notification from the 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. See, DFARS 252.235-7004. Guidance: <https://www.onr.navy.mil/About-ONR/compliance-protections/Research-Protections/Human-Subject-Research>

3. Use of Recombinant DNA or Synthetic Nucleic Acid Molecules:

Proposals which call for experiments using recombinant or synthetic nucleic acid molecules must include documentation of compliance with NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules (NIH Guidelines), approval of the Institutional Biosafety Committee (IBC), and copies of the DHHS Approval of the IBC letter. Guidance: <https://www.onr.navy.mil/About-ONR/compliance-protections/Research-Protections/recombinant-or-synthetic-nucleic-acid-molecules>

H. 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>.

I. 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 contracts, 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 <http://www.hpcmo.hpc.mil/>.

J. Project Meetings and Reviews -

Individual program reviews between the sponsor and the performer may be held as necessary. Program status reviews may also be held to provide a forum for reviews of the latest results from experiments and

any other incremental progress towards the major demonstrations. These meetings will be held at various sites throughout the country. For costing purposes, applicants must assume that 40% of these meetings will be at or near the government sponsor location and 60% at other contractor or government facilities. Interim meetings are likely, but these will be accomplished via video telephone conferences, telephone conferences, or via web-based collaboration tools.