



## **FUNDING OPPORTUNITY ANNOUNCEMENT OVERVIEW INFORMATION**

This is a special Funding Opportunity Announcement (FOA) in support of the research objectives the Department of Defense (DoD) Space University Research Initiative (SURI), sponsored by the Air Force Office of Scientific Research (AFOSR) and the Air Force Research Laboratory (AFRL) Chief Technologist Office (hereafter collectively referred to as “DoD agencies”). DOD’s SURI program is focused on directing basic research toward applications that meet US Space Force (USSF) needs and challenges. The program was initiated as a pilot to foster engagements between various DoD agencies and the academic community in a developing USSF University Consortium, with the goal of improving the transition of critical concepts from the academic sector into revolutionary new military technologies. Key to the program’s success is the close management of the SURI projects by DoD agency program officers, and their role in providing research guidance and supporting transition of research products into DoD applications.

AFOSR anticipates making at least two awards of up to \$1,000,000 per year per award, for a maximum of five years. The first three years will be incremental funding, with an option to extend an additional two years providing pass of a “go/no-go” review at the 2.5-year point. AFOSR can ramp up funding in beginning years or ramp down funding in final years of the SURI. All funding projects are based on availability of funds.

Proposers are encouraged to confer with the designated AFOSR program officer prior to submitting a full proposal. We will evaluate proposals using an internal review panel. While AFOSR reserves the right to select and fund all, some, or none of the proposals, we anticipate making at least two Grant Agreement awards under this competition against one or both of the Topics below.

White papers briefly summarizing the proposing institution’s ideas are encouraged but not required. Submit white papers to the Qualtrics link listed below. The topic points of contact

(POCs) will coordinate to provide feedback to white papers.

The proposals will need to include a data management plan, outlining how samples and data collected in the program will be stored and managed. This includes but is not restricted to issues such as: standards for data and metadata collection, content and format, data archiving, database management, and data sharing within and outside the SURI awardee. This precondition is modeled on the National Science Foundation Data Management Plan requirement (e.g. [https://nsf.gov/eng/general/ENG\\_DMP\\_Policy.pdf](https://nsf.gov/eng/general/ENG_DMP_Policy.pdf)).

**Hyperlinks have been embedded within this document and appear as underlined, and or blue-colored words in the midst of paragraphs. The reader may “jump” to the linked section within this document by “clicking” (CTRL + CLICK, or CLICK).**

## **SUMMARY FUNDING OPPORTUNITY INFORMATION**

### **1. FEDERAL AWARDING AGENCY NAME**

Air Force Office of Scientific Research  
875 North Randolph Street, STE 325, Room 3112  
Arlington, VA 22203

### **2. FUNDING OPPORTUNITY TITLE**

Fiscal Year (FY) 2021 Department of Defense Space University Research Initiative

### **3. ANNOUNCEMENT TYPE**

Initial Announcement

### **4. FUNDING OPPORTUNITY NUMBER**

FOA-AFRL-AFOSR-2021-0004

### **5. CATALOG OF FEDERAL DOMESTIC ASSISTANCE (CFDA) NUMBER**

12.800 Air Force Defense Research Sciences Program

### **6. KEY DATES**

Pre-proposal inquiries and questions must be received in writing by electronic mail not later than **31 Mar 2021 at 11:59 PM Eastern Time** to be considered.

White papers must be received by submitting to

[https://afosr.gov1.qualtrics.com/jfe/form/SV\\_0H3VJnX9DV16Bee](https://afosr.gov1.qualtrics.com/jfe/form/SV_0H3VJnX9DV16Bee) by **28 Apr 2021 at 11:59 PM Eastern Time** to be considered. White paper evaluation is meant to initially assess the capability of a proposed effort and is NOT a selection process. White papers should be 2-3 pages in length plus references. White papers should minimally articulate:

1. An initial list of members of the proposed team.
2. The main technical components of the proposed research and how it aligns with the goals of the SURI solicitation.
3. The specific proposed activities.
4. The plans to engage substantively with AFOSR and the Space-affiliated AFRL units: the Space Vehicles Directorate (RV) and the Space Electro-Optics Division (RDS) of the Directed Energy Directorate (RD), both at Kirtland AFB, NM; and Rocket Propulsion Division (RQR) of the Aerospace Systems Directorate (RQ), at Edwards AFB, CA.

Government will respond on white paper determination before COB on **12 May 2021**.

Proposals must be received electronically through Grants.gov by **16 Jun 2021 at 11:59 PM Eastern Time** to be considered.

## **A. PROGRAM DESCRIPTION**

### **1. SUMMARY**

The SURI program is intended to support basic and applied research in Space-related science and engineering at U.S. institutions of higher education (hereafter referred to as "universities"), with potential transition to critical applications of DoD interest. As such, SURI differs from the Multidisciplinary University Research Initiative (MURI) that is funded by DoD basic research funds for basic research products. SURI is co-funded by applied research dollars, and thus expands the scope of work to include science and technology development. The SURI program supports multidisciplinary research efforts, ideally creating synergies to speed DoD-relevant research and development.

Basic and applied research are defined in the DoD Financial Management Regulation:

**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 (DoD 7000.14-R, vol. 2B, chap. 5, para. 050201.B).

**Applied research** is systematic study to understand the means to meet a recognized and

specific need. It is a systematic expansion and application of knowledge to develop useful materials, devices, and systems or methods. It may be oriented, ultimately, toward the design, development, and improvement of prototypes and new processes to meet general mission area requirements. Applied research may translate promising basic research into solutions for broadly defined military needs, short of system development. This type of effort may vary from systematic mission-directed research beyond that in Budget Activity 1 to sophisticated breadboard hardware, study, programming and planning efforts that establish the initial feasibility and practicality of proposed solutions to technological challenges. It includes studies, investigations, and non-system specific technology efforts. The dominant characteristic is that applied research is directed toward general military needs with a view toward developing and evaluating the feasibility and practicality of proposed solutions and determining their parameters. Applied research precedes system specific technology investigations or development. Program control of the applied research program element is normally exercised by general level of effort. Program elements in this category involve pre-Milestone B efforts, also known as Concept and Technology Development phase tasks, such as concept exploration efforts and paper studies of alternative concepts for meeting a mission need (DoD 7000.14-R, vol. 2B, chap. 5, para. 050201.C).

Detailed descriptions and the government point of contact (“Research Topic Chief”) for each of the two SURI topics can be found below. The descriptions are intended to provide the applicant a frame of reference, and are not meant to be restrictive to the possible approaches and component solutions to achieving the goals of the topic and the program. Innovative ideas addressing these research topics are highly encouraged.

Proposals from an investigator from multiple university departments and universities are warranted to assemble the expertise necessary to address the topics. Teams are also strongly encouraged to leverage industry collaborations, where appropriate, to demonstrate an ability to develop solutions that can be eventually applied to a specific application, similar to the Small Business Technology Transfer (STTR) program. Proposals shall name one Principal Investigator (PI) as the responsible technical point of contact. Similarly, one institution shall be the primary awardee for the purpose of award execution. The PI shall come from the primary institution. The relationship among participating institutions and their respective roles, as well as the apportionment of funds including sub-awards, if any, shall be described in both the proposal text and the budget.

In collaboration with AFRL, AFOSR invites proposals for research in the areas described in detail below. The schedule for this announcement is given in Section B, Award Information.

## 2. BACKGROUND

With the recent stand-up of the US Space Force as a separate DoD component, AFRL has a new mandate to create and transition cutting-edge S&T relevant to the Space realm. The described S&T spans a broad range of topics, similar to AFRL's legacy investments supporting the Air and Cyber domains. While AFRL has also delivered technology solutions and alternatives relevant to the Space domain for decades, the establishment of USSF has spurred AFRL to take a new look at its support of Space-related S&T, and to consider new vehicles for buttressing and enhancing that support in the coming years. SURI is one outgrowth of that effort, bringing together AFOSR and the AFRL Chief Technologist office to provide funds for a major investment in synergistically leveraging university and AFRL expertise. Importantly, SURI also envisions incorporating private sector expertise, since industry has played an outsize role in pushing the boundaries of Space S&T, for instance in the establishment of large satellite constellations in low-earth orbit. The three-way partnership envisioned in SURI is designed to play a major role in enhancing DoD-relevant capability in the Space domain, critical in the current environment of near-peer global competitors in the Space arena.

Rather than post an announcement agnostic of technology area, DoD is posting the present solicitation as targeting two specific topics, as described below. These areas have been selected as being particularly critical in advancing DoD's interest in developing its Space-related S&T capabilities.

## 3. OBJECTIVE AND RESEARCH CONCENTRATION AREAS

There are two topics associated with this Broad Agency Announcement, "Space Logistics and Mobility" and "Space Domain Awareness," as detailed below. A given university team may propose toward one or both of the topics. The AF intends to award at least one grant for each of the topics.

### **Topic 1: Space Logistics and Mobility**

**Background:** Logistics have always been an essential factor in any complex operation establishing coordination between systems, facilities, and supplies. For space, logistics has been quite limited to replacement of existing systems rather than maintaining functionality with the exception of manned platforms such as the International Space Station or the Hubble Telescope which required servicing via the shuttle program. Satellites however, are typically not subject to this treatment. Instead, systems are designed to survive long operational timelines well past their relevance to the current state of the art and engineered with safeguards designed in to minimize operational degradation. Still functioning systems are also retired due to requirements for station

keeping/disposal and no standard method to refuel. Damaged systems are only fixed with software solutions, as possible, rather than corrected on orbit. Issues like failed deployments or debris-damaged components are assessed to establish operational alternatives.

Currently, governmental agencies and private companies are investing in new technologies to bring terrestrial aspects of logistics to the space domain. Simple concepts like refueling are now being demonstrated to extend the service life of valuable assets. While refueling may seem simple for ground systems, the act of coordinating separate satellites thousands of miles away from human observers thus requiring precise location knowledge and robotic enabled fixtures presents numerous challenges. The extreme environment of space also poses difficulties in managing byproducts of space weather. Furthermore, non-traditional orbital mechanics as objects extend beyond the geosynchronous (GEO) orbits (~36,000 km) to include the entire space between earth and the moon (cislunar space) add additional challenges, and the new controls are driving up requirements in on-board processing and autonomy. Many novel ideas and technologies are needed to enable this new servicing paradigm of space logistics. This includes mobility without regret, coordination between multiple spacecraft including small agile servicing satellites to service large space constellations, logistic support centers in space to store and prepare for delivery of instrumentation, updated payloads and other needed supplies required for on-board servicing. New materials to support logistics concepts that are safe and appropriate for space and are robust in the harsh space environment are needed. Modeling capabilities and autonomy/machine learning software that enables human-on-the-loop monitoring of sensitive and risky space logistic activities will also be required for this new paradigm of space craft operations. Further, improved techniques are sought to more effectively evaluate the remaining functional lifetime of thrusters under arbitrary duty cycles and across multiple refuelings.

**Objective:** The intent of this topic is to identify science and technology enablers for the space logistics and servicing paradigm. While immediate interest and transition opportunities relate to the challenge of robotic enabled refueling, the broader On-Orbit Servicing, Assembly, and Manufacturing (OSAM) community has many other areas of interest from various public/private entities. These areas of interest relate to functions enabled by robotics to include, but not limited to: assembly, refueling, repairing and repurposing. These activities can have implications on many aspects of current satellites and the way they are both designed and operated. Proposed approaches may consider how research could transition across multiple logistics functions.

**Research Concentration Areas:** The basic and applied research challenges related to this application area are diverse and require similar multidisciplinary teams and solutions to address. These areas may include:

1. Robotics for spacecraft: controls and path planning for increasing 'N' degree-of-freedom (DOF) concepts (soft robotics may have up to effectively infinite DOF) and

- methodologies for end effectors to interact with other robotics or spacecraft
2. Autonomous operations that support human removed or human-on-the-loop operations
  3. Augmented reporting and displays for presenting OSAM functions
  4. Novel material approaches that enable long term logistic operations in a space environment
  5. Effective strategies to quantifiably evaluate State-of-Health and robustly assess remaining lifetime of chemical and/or EP thrusters.
  6. Modular spacecraft or on-orbit swappable units that can be used to build/repair/upgrade or modify a spacecraft on orbit
  7. Development of digital twins to accurately model spacecraft, orbits, controls and task planning for logistics related activities
  8. Consideration for other s/c systems that could impact a future space logistics model including: Power, thermal management, structures, electronics and electromagnetic apertures and sensors.

**Anticipated Resources:** It is anticipated that awards under this topic will be no more than \$1M per year for five years (3 years + 2 option years), supporting no more than seven faculty/industry researchers as (co-) principal investigators. Exceptions warranted by specific proposal approaches should be discussed with the topic chief during the white paper phase of the solicitation.

**Research Topic Chief:** Andrew Williams, AFRL/RV.

## **Topic 2: Space Domain Awareness**

**Background:** One of the most critical space related missions to ensure the safe operations in space is Space Domain Awareness (SDA). The traditional orbits monitored in SDA are largely limited to low-earth, medium-earth, and geosynchronous (GEO) orbits. Today, these orbits are monitored using both ground and space platforms to detect, track and characterize space objects. The data is primarily composed of imagery and light curves collected from optical and radar systems and requires extensive coordination of large data sets and complex processing algorithms.

Information from this data is typically limited to surface observations or what can be deduced from an image and/or intensity curve, and may not reveal the whole picture of the space object's health and status. Furthermore, extensive collection campaigns that extend over many days or weeks is often required to obtain enough data to meet specific information needs but even this data only provides very limited characterization of satellites. Characterization techniques that go beyond imagery and light curves and occur at the speed of relevance would significantly improve the current state of the art in SDA. This includes the assessment of the subsystems of the satellite, determining satellite health and status, identifying and quantifying a mass change over time,

characterization of the satellite propulsion, etc.

Detection and tracking of satellites is limited by the brightness of the object which is determined by the object's range and size. As the demand signal for very small satellites increases, current methods of detecting and tracking may not be adequate to meet SDA mission needs particularly for ground based space monitoring platforms. Improved detection and tracking that can identify very small objects persistently and rapidly are also needed.

Additionally, the new space paradigm, referred to as XGEO, expands the SDA mission into the entire cis-lunar sphere, well beyond GEO orbit. This growth in the space domain results in a ~1000-fold coverage volume increase over existing boundaries. As such, many new challenges will arise, presenting opportunities for novel solutions to improve or revolutionize how SDA is accomplished. In addition, new autonomous toolsets will be needed to deal with the increased workload and data analysis, so that large armies of personnel are not subsequently needed to assemble results. In addition, new autonomy tools will enable more responsive data fusion and reporting beyond the capabilities of human operators.

**Objective:** The intent of this topic is to identify science and technology enablers for potential space domain awareness applications. Solutions are expected to focus on elements pertaining to sensors and measurement strategies, data fusion and autonomy. However, novel solutions that enable SDA outside of these are also welcome. Ideally, solutions will also have a path to implementation and incremental demonstration utilizing legacy systems or concepts that can be prototyped within the time frame of the solicitation. Innovative approaches that go beyond the current state of operations are highly desirable.

**Research Concentration Areas:** The basic and applied research challenges related to this application area are diverse and require similar multidisciplinary teams and solutions to address. These areas may include:

1. Novel sensor phenomenology and algorithms to provide timely comprehensive health, status and capabilities of non-cooperative satellites and their subsystems
2. Characterization techniques that go beyond light curves or standard imagery
3. Sensors and algorithms for XGEO object detection, data association, uncertainty quantification, orbit determination, maneuver detection, or other related topics
4. Sensors that can provide actionable data regardless of environmental conditions
5. Low-cost rapidly fabricated sensors that can provide proliferated, pervasive monitoring
6. Satellite autonomy for monitoring, reporting, and responding as SDA is achieved
7. Constellation level autonomy and construct planning update with SDA
8. Data fusion and decision making tools



**Anticipated Resources:** It is anticipated that awards under this topic will be no more than \$1M per year for 5 years (3 years + 2 option years), supporting no more than seven faculty/industry researchers as (co-) principal investigators. Exceptions warranted by specific proposal approaches should be discussed with the topic chief during the white paper phase of the solicitation.

**Research Topic Chief:** Dr. Jaime Stearns, AFRL/RV.

#### **4. SPACE UNIVERSITY RESEARCH INITIATIVE**

Proposals for this SURI are sought that articulate the technical details of the proposed research as well as the planned mechanisms to enable collaboration. Below, we outline what a strong proposal should provide.

##### **4.1 Technical Details of Proposed Research**

A strong proposal should outline, as specifically as possible, the technical details of the proposed research. In addition, proposals should articulate how research goals align with the research topic being addressed. Because of the breadth of research that spans our challenge categories, it is anticipated that groups that submit proposals will include researchers of diverse technical perspectives and technical backgrounds. Finally, efforts integrating a variety of approaches, with a spectrum ranging from basic to applied, are preferred to those using a single approach, especially as these may provide increased opportunities for technology transfer to AFRL.

##### **4.2 Planned Mechanisms for Collaboration**

A strong proposal should outline specific activities that enable the proposers to work collaboratively with AFRL/RV, RDS, and/or RQR researchers to address the challenges outlined in the previous section. Examples of such activities include coordination of research projects, sharing information and best practices, and potentially authoring joint studies and publications with AFRL researchers. Examples of such activities also include workshops, and tutorials or short courses. Other activities of interest include embedding of graduate students and post-doctoral researchers at AFRL, embedding AFRL researchers at academic institutions, or other frequent interactions between academic and AFRL researchers that enable long-term collaboration.

Proposers are encouraged to confer with the designated points of contact. Coordination with AFOSR, RV, RDS, and/or RQR personnel prior to proposal submission is encouraged, but not required.

#### **5. ACCESS TO DOD RESOURCES**

Proposals may request access to AFRL facilities or DOD high performance computing resources in order to conduct the proposed research. If authorized, there is no cost to the research for these resources. Applicants are advised that routine access of educational institution researchers to

AFRL buildings and facilities is limited to U.S. citizens. Individuals eligible for access are subject to background checks.

Furthermore, although awards under this FOA are restricted in the use of US Citizens, a principal objective of SURI is to establish a close collaboration between researchers at the performing Universities and the relevant AFRL Directorates. If it is relevant, proposals should therefore clearly identify non-US personnel, describe their role in the research effort, and the mechanisms by which collaborations with AFRL personnel will be conducted. It is strongly recommended that the applicants contact the Agency Contacts provided in this solicitation to evaluate the feasibility of their collaboration plans prior to proposal submission.

## **B. FEDERAL AWARD INFORMATION**

Any grant agreement award(s) made under this competition will support a Space University Research Initiative and is subject to availability of funds. We execute discretionary research and development funds appropriated to the DAF for our awards. We can only make an award if sufficient funds are available.

The anticipated period of performance is a three-year base period, with one two-year option to continue performance. As a result, the period of performance if all options to continue performance are exercised could be five (5) years.

We anticipate that \$1,000,000 per year in funding will be made available to fund at least two awards from the proposals received. For a given award, the awardee should plan on up to \$5,000,000 base funding for the five-year duration if all options are exercised. Note that a given award may be supplemented if funds become available and the additional effort is within scope. In general, the total amount of funding and resources made available to fund a successful proposal may vary based on the quality of proposals received, and funds availability.

Cost sharing or matching is not required or considered as an evaluation criterion. You may propose voluntary committed or uncommitted cost sharing or matching; for example, additional support for students. Any voluntary committed cost sharing amount will be included in the total award value.

Our authority for an award under this competition is established at 10 U.S.C. 2192(b)(1)(B) and authorized by 10 U.S.C. 2194 for education partnerships; as well as 10 U.S.C. 2358 for basic and applied research. We discuss regulations, terms, and conditions that generally apply to our awards in Section F. Federal Award Administration Information.

We reserve the right to select and fund for award all, some, part, or none of the proposals

received. There is no guarantee of an award.

## **C. ELIGIBILITY INFORMATION**

### **1. ELIGIBLE APPLICANTS**

#### **a. Qualified and Responsible United States Educational Institutions**

You are eligible to submit an application if you are a qualified and responsible educational institution in the United States as defined at 10 U.S.C. 2194. Educational institution means a local educational agency, college, university, or any other nonprofit institution dedicated to improving science, mathematics, and engineering education. No other entities are eligible to submit applications under this competition.

We review your application, proposal, and Office of Management and Budget (OMB) designated repositories of government-wide public and non-public data, including comments you have made, as required by 31 U.S.C. 3321 and 41 U.S.C. 2313 and described in 2 CFR 200.205 and 32 CFR 22.410 to assess risk posed by applicants, and confirm applicants are qualified, responsible, and eligible to receive an award.

#### **b. HBCU/MI, Tribal College and University, and Small Business Applicants Encouraged**

Historically Black Colleges and Universities and Minority institutions (HBCU/MI), Tribal Colleges and Universities, and HBCU/MI affiliated medical centers are encouraged to submit research proposals and join others in submitting proposals. Small business concerns are also encouraged to join others in submitting proposals. However, no funds under this announcement are reserved or otherwise set-aside for any specific entity type. The Air Force will only use the E.1 Criteria for proposal selection.

### **2. COST SHARING OR MATCHING**

We do allow cost sharing or matching for proposals under this announcement. However, cost sharing or matching is not an evaluation or selection criterion.

### **3. OTHER**

#### **a. Research Personnel Facility Access Requirements and Restrictions**

AFRL contains facilities and equipment that could be useful to this Center. Access to these facilities will be restricted to US citizens.

#### **b. Acknowledgement of Support and Disclaimer Requirements**

You must include the F. 3.d. Acknowledgement of Research Support on all materials created or produced under our awards. The F. 3.e. Disclaimer Language must be included on materials as required. Our award document may provide additional instructions about specific distribution statements to use when you provide research materials to us. You are not eligible to submit a proposal if you cannot accept these terms.

**c. Expectation of Public Dissemination of Research Results**

We expect public dissemination of research results if you receive an award. This is a basic requirement for unclassified research results.

We intend, to the fullest extent possible, to make available to the public all unclassified, unlimited peer-reviewed scholarly publications and digitally formatted scientific data arising from research and programs funded wholly or in part by the DoD as described in the OUSD, AT&L Memorandum, “Public Access to Department of Defense-Funded Research” dated 09 Jul 2014.

We follow DoD Directive 5230.24 and DoD Instruction 5230.27 policies and procedures to ensure broad dissemination of unclassified research results to the public and within the Government. The DoD Instruction 5230.27 policy and procedures allowing publication and public presentation of unclassified fundamental research results will apply to all research proposed under this competition unless the Program Officer gives you an explicit, written exclusion to these policies with the Grants Officer’s advice and consent. All exclusions must be authorized or required by law, and must cite a valid legal authority.

**You must provide a copy of all peer-reviewed publications developed or produced from research conducted with Air Force funds to our Program Officer.**

*You are not eligible to submit a proposal if you cannot accept these terms.*

**d. Representation For Tax Delinquency, Felony Conviction, And Internal Confidentiality Agreements**

**You must complete the** “Representation for Tax Delinquency, Felony Conviction, and Internal Confidentiality Agreements” provided with the Grants.gov package. We provide more specific information about this requirement in section D.4.b.

**We cannot determine you are eligible for funding unless we receive this form**

## **e. Conflict of Interest**

### **(1) General Requirement for Disclosure**

You and your organization must disclose any potential or actual scientific or non- scientific conflict of interest(s) to us. You must also disclose any potential or actual conflict(s) of interest for any sub recipient you include in your proposal. You must provide enough information for us to evaluate your disclosure. We may have to ask you more questions if we need more information.

At our discretion, we may ask you for a conflict of interest mitigation plan after you submit your proposal. Your plan is subject to our approval.

### **(2) Scientific Conflict of Interest**

Scientific collaborations on research and development projects are generally the result of close collaboration prior to the submission of applications for support. Accordingly, virtually all of these collaborations might be considered to include a potential conflict of interest. The potential conflict is mitigated by the disclosure of these collaborations, and the list of current and pending support you provide for senior and key researchers.

## **D. APPLICATION AND SUBMISSION INFORMATION**

### **1. ADDRESS TO REQUEST APPLICATION PACKAGE**

All the application forms you need are available electronically on [Grants.gov](https://grants.gov). From the “View Grant Opportunity” page, you can click on the “Application Package” tab to download the application package.

You can find the electronic application package on [Grants.gov](https://grants.gov) by searching for the announcement number shown on page one. We will not issue paper copies of this announcement.

*Please contact us at [afosr.baa@us.af.mil](mailto:afosr.baa@us.af.mil) to request a reasonable accommodation for any accessibility requirements you may have.*

### **2. CONTENT AND FORM OF APPLICATION SUBMISSION**

#### **a. Pre-proposal Inquiries and Questions**

We encourage you to contact the Program Officer listed in section G.1. Technical Inquiries and Questions before you submit your proposal.

If you need help with general matters, you should contact the individual listed in G.2. General Announcement Questions.

Your pre-proposal inquiries and questions should be submitted not later than **11.59 pm Eastern Time on 31 Mar 2021**. We may not be able to answer questions received later. We discuss this more in Section D.7. Submission Dates and Times.

*The Program Officer does not have the authority to make commitments for the government. Grants and Contracting Officers acting within their warranted capacity are the only people authorized to make commitments for the Government.*

#### **b. The Application as a Whole**

You must submit your proposal electronically through Grants.gov. We will not accept or evaluate any proposal submitted by any means other than through Grants.gov. We must receive your proposal before the D.7.d. Proposal Submission Deadline.

You must use the electronic Standard Form (SF) 424 Research and Related (R&R) Form Family, OMB Number 4040-0001. The SF 424 (R&R) Application for Federal assistance form must be your cover page. No pages may precede the SF 424 (R&R).

You must mark your application with the announcement number.

#### **A summary of what is required for a complete proposal is summarized below:**

- We require the forms and attachments in bold text with all applications
- *Some applications* require the attachments in *italic*
- We provide more instructions in D.4. Component Pieces of the Application

| <b>R&amp;R FORM, OMB No. 4040-0001</b>                                                        | <b>FIELD</b> | <b>ATTACHMENT</b>                                                                                     |
|-----------------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------------------------|
| <b>SF 424 (R&amp;R) Application for Federal Assistance, including an authorized signature</b> | <b>18.</b>   | <b>Representation for Tax Delinquency, Felony Conviction, and Internal Confidentiality Agreements</b> |
|                                                                                               | <b>18.</b>   | <i>SFLLL Disclosure of Lobbying Activities</i>                                                        |
| <b>R&amp;R Other Project Information Form</b>                                                 | <b>7.</b>    | <b>Project Summary / Abstract</b>                                                                     |
|                                                                                               | <b>8.</b>    | <b>Project Narrative</b>                                                                              |
|                                                                                               | <b>9.</b>    | <b>Bibliography &amp; References Cited</b>                                                            |

|                                                              |            |                                                                  |
|--------------------------------------------------------------|------------|------------------------------------------------------------------|
|                                                              | <b>10.</b> | <i>Facilities and Other Resources</i>                            |
| <b>R&amp;R Other Project Information Form</b>                | <b>11.</b> | <i>Equipment</i>                                                 |
|                                                              | <b>12.</b> | <i>Other Attachments</i>                                         |
| <b>R&amp;R Senior / Key Person Profile Form</b>              |            | <b>Biographical Sketch<br/>Current &amp; Pending<br/>Support</b> |
| <b>R&amp;R Budget Form</b>                                   |            | <b>Budget Justification</b>                                      |
| <i>R&amp;R Sub award Budget Attachments Form</i>             |            | <i>Sub award Budget<br/>Justification</i>                        |
| <b>R&amp;R Project / Performance Site<br/>Locations Form</b> |            | <b>None</b>                                                      |
| <i>R&amp;R Personal Data (Optional)</i>                      |            | <b>None</b>                                                      |

The SF 424 (R&R) must include the signature of an authorized representative from your organization. The signature is affixed electronically by [Grants.gov](https://www.grants.gov) upon submission. This signature is considered the signature for the application as a whole.

#### c. Proposal Format

- Paper Size – 8.5 x 11-inch paper
- Margins – 1 inch
- Spacing – Single, 1.5, or 2.0-line spacing
- Font – Times New Roman or Garamond, 12 point
- Page Limitation – None.
- Attachments – Electronic Portable Document Format (PDF)
- Content – As described below

#### d. Proposal Length

You must not include elaborate brochures, reprints, or presentations beyond those sufficient to present a complete and effective proposal.

We created this table to help you understand how to calculate your page count.

#### INCLUDED IN PAGE COUNT NOT INCLUDED IN PAGE COUNT

- SF 424 (R&R) Application for Federal Assistance and all attachments except field 18 representations or disclosures
- R&R Budget and Budget Justification attachments, R&R Other Project Information Form, and all attachments
- R&R Sub award and Budget Justification attachments, R&R Senior / Key Person Profile Form, and all attachments for the personnel

- Documents that support the budget or particular items of cost R&R Project / Performance Site Locations Form
- Optional R&R Personal Data Form
- We do not include budget related information in the page count because we cannot make an award unless we can determine the cost of your proposal is reasonable and realistic, and complies with 2 CFR 200 Subpart E - Cost Principles.
- *Not having enough information in your proposal to understand if your costs are reasonable and realistic is the most common reason awards are delayed.*

**e. No Confidential or Proprietary Information**

You must not include confidential or proprietary information in your proposal.

We will not consider your proposal if you include confidential or proprietary information, or place restrictive markings on any part of your proposal.

**f. Electronic Form and Proposal Attachments**

Your application and proposal attachments must be in electronic file formats. You should use the Portable Document Format (PDF) for your attachments.

**DO NOT password protect any attachments.**

The website [http://www.grants.gov/help/download\\_software.jsp](http://www.grants.gov/help/download_software.jsp) offers a list of file converters available to convert your documents to the PDF format.

**3. GRANTS.GOV APPLICATION SUBMISSION AND RECEIPT PROCEDURES**

*This section provides the application submission and receipt instructions for AFOSR program applications. Please read the following instructions carefully and completely.*

**a. Electronic Delivery**

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

**b. How to Register to Apply through Grants.gov**

**Instructions:** Read the instructions below about registering to apply for AFOSR 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 impact 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/individual-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. 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>

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/organization-registration/step-3-username-password.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/organization-registration/step-4-aor-authorization.html>

5) **Track Role Status:** To track your role request, refer to:

<https://www.grants.gov/web/grants/applicants/organization-registration/step-5-track-aor-status.html>

6) **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 AFOSR via Grants.gov**

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 web forms 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>

#### **Create a Workspace**

Creating a workspace allows you to complete it online and route it through your organization for review before submitting.

#### **Complete a Workspace**

Add participants to the workspace, complete all the required forms, and check for errors before submission.

- (1) 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 administering agency 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>

- (2) **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.
- (3) **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.

### **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.

### **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](mailto:support@grants.gov). 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 ticket number. The Support Center ticket number will assist the administering agency with tracking your issue and understanding background information on the issue.

## **4. COMPONENT PIECES OF THE APPLICATION**

### **a. SF 424 (R&R) Application for Federal Assistance**

The SF 424 (R&R) Application for Federal assistance form must be your cover page. No pages may precede the SF 424 (R&R).

Complete all required fields in accordance with the “pop-up” instructions on the SF 424 (R&R) form. The completion of most fields is self-explanatory. You can turn on Grants.gov “Help Mode” to provide additional instructions for forms. “Help Mode” is turned on by the icon with the pointer and question mark at the top of the form.

We have special instructions for completion of several SF 424 (R&R) form fields in your application.

Our instructions are:

| FIELD | INSTRUCTION                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.    | You may leave “Applicant Identifier” blank                                                                                                                                                                                                                                                                                                                                                                                                      |
| 3.    | You may leave “Date Received by State” and “State Application Identifier” blank                                                                                                                                                                                                                                                                                                                                                                 |
| 9.    | You must list Air Force Office of Scientific Research as the reviewing agency if Grants.gov has not pre-populated this answer                                                                                                                                                                                                                                                                                                                   |
| 16.   | You should check “No.” and “Program is Not Covered by Executive Order 12372”                                                                                                                                                                                                                                                                                                                                                                    |
| 17.   | Select “I Agree” to certify that all statements in the proposal, your Representation for Tax Delinquency, Felony Conviction, and Internal Confidentiality Agreements are true, complete, and accurate to the best of your knowledge.<br><i>See section F.3. Administrative and National Policy Requirements for</i>                                                                                                                             |
| 18.   | You must attach the completed <u>D.4.b. Representation for Tax Delinquency, Felony Conviction, and Internal Confidentiality Agreements.</u><br>You must attach the completed lobbying certification as described in section <u>D.4.c. Lobbying Certification and SFLD Disclosure of Lobbying Activities.</u><br>You may have to attach the completed <u>SFLDL Disclosure of Lobbying Activities</u> if you have lobbying activity that you must |
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**b. Representation for Tax Delinquency, Felony Conviction, and Internal Confidentiality Agreements**

*You must attach this representation to field 18 of the SF 424 (R&R). This attachment is not included in your page count.*

You must complete and attach the “Representation for Tax Delinquency, Felony Conviction, and Internal Confidentiality Agreements” provided with the Grants.gov package. We cannot make an award if this information is not provided.

- (1) If you answer “is” a corporation with a felony conviction and/or “is” a corporation with a felony conviction on this representation, you may not be eligible for an award if your proposal is selected. You should contact us right away to discuss your situation to find out if you can submit your application.
- (2) If you do not attach this form to the SF 424, we may request the representation after you submit your application, but we are not required to do so. We may deem your

application ineligible for selection by citing an authority listed or referenced in DoD Class Deviation (CD) 2016-O0002 or CD 2015-O0005, and make an award to someone else.

**c. SFLLL Disclosure of Lobbying Activities Form**

*When required, attach this disclosure to field 18 of the R&R Other Project Information Form. This attachment is not included in your page count.*

If you have lobbying activity that you must disclose under 31 U.S.C. 1352 as implemented by the DoD at 32 CFR Part 28, you must attach the completed SFLLL Disclosure of Lobbying Activities.

You can find instructions for completing this form at <https://www.gsa.gov/forms-library/disclosure-lobbying-activities>

**d. Certification Regarding Lobbying Form**

Grant awards 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.

**e. R&R Other Project Information Form**

*Complete this form as indicated. You must include all necessary attachments described below. This form is included in your page count.*

|                          |
|--------------------------|
| <b>FIELD INSTRUCTION</b> |
|--------------------------|

- 1, 1a. You must address all prospective human subject involvement by answering these questions. Additional documentation pursuant to National Policy and U.S. Air Force standards is required for all proposals with human use or involvement. Your inquiries about our requirements should be sent by email directly to our Research Protections Officer at [afosrharp@us.af.mil](mailto:afosrharp@us.af.mil) with a copy to the Program Officer for the announcement topic.

2, 2a. You must address all prospective animal subject and/or recombinant deoxyribonucleic acid (rDNA) involvement by answering these questions. Additional documentation pursuant to National Policy and U.S. Air Force standards is required for all proposals with animal or rDNA use or involvement. Your inquiries about our requirements should be sent by email directly to our Research Protections Officer at [afosrharpo@us.af.mil](mailto:afosrharpo@us.af.mil) with a copy to the Program Officer for the announcement topic.

4a. For any proposal that has an actual or potential impact on the environment, answer yes and provide the answers and attachments required for fields 4b, 4c, and 4d. Additional documentation in accordance with National Policy and U.S. Air Force standards is required for any proposal with an actual or potential impact on the environment.

7. Attach your [D.4.f. Publicly Releasable Abstract](#)

8. Attach your [D.4.g. Project Narrative](#)

10. Attach a Facilities and Other Resources description document here if you need to supplement your [D.4.g. Proposal Narrative](#) facilities and resources section.

11. You may supplement your [D.4.i. Budget Justification](#) by attaching an Equipment Justification here. Do not duplicate information included on your budget justification. If you attach an Equipment Justification, make sure you reference the attachment in your budget justification.

## FIELD INSTRUCTION

---

9. Attach your [D.4.h. Bibliography and References Cited](#)

---

12. Attach the [D.4.m R&R Subaward Budget Attachments Form](#) if applicable and not attached elsewhere. You should have budgets for all subawards proposed attached within this form before attachment.  
Attach all [D.4.n Subaward Budget Justifications](#) as applicable [Attach your D.4.p Data Management Plan](#) here if applicable

#### **f. R&R Publicly Releasable Project Summary / Abstract**

*You must attach the Project Summary / Abstract to field 7 of the R&R Other Project Information form. This attachment is included in your page count.*

- (1) You must provide a concise abstract of 300 words or less with your proposal. You must mark this abstract **publicly releasable**. Your abstract should use terms the public can understand to describe the research objective, technical approach, anticipated outcome, and potential impact of the specific research.
- (2) Your abstract header should include the Program Officer's name and office symbol from section G.1. Technical Inquiries and Questions below.
- (3) If you receive an award, we must publish your abstract to a searchable website available to the general public in accordance with Public Law 113-235. The website address is <https://dodgrantawards.dtic.mil/grants>.

#### **g. Project Narrative**

*You must attach the Project Narrative to field 8 of the R&R Other Project Information Form. The narrative must be complete and self-contained to qualify for review. This attachment is included in your page count.*

You must clearly describe the research, including the research objective and approach. Your project narrative will be evaluated using the criteria listed in section E.1, Criteria. You should show strength in as many of the evaluation and selection areas as practicable to demonstrate maximum competitiveness.

You must describe any environmental impacts of your research outside the laboratory in any appropriate narrative section, including how you will ensure compliance with

environmental statutes and regulations.

Your narrative should include the following elements:

**(1) Statement of Objectives**

You must describe your proposed research on a single page titled “Statement of Objectives.” We may decide to incorporate your statement of objectives into the award instead of incorporating the whole technical proposal.

You should use active verbs when you prepare the statement of objectives, e.g. “conduct” research in a subject area, “investigate” a problem, “determine” to test a hypothesis.

**(2) Research Effort**

(a) You should describe the research you plan in detail. State the research objectives and approach, and the relationship and comparable objectives to research progress elsewhere. Describe your research team’s knowledge in the field, and provide a bibliography and list of literature citations. Discuss the nature of the expected results.

(b) The adequacy of this information will influence the overall evaluation in accordance with the criteria and procedures specified in section E. Application Review Information below.

**(3) Principal Investigator (PI) and Senior Personnel Time**

(a) You must provide an estimate of time the principal investigator and other senior professional personnel will devote to the research. Your estimate must include information pertaining to the proportion of time anticipated devoted to this research, to other research, and to other commitments of time such as sabbatical, extended leave, and teaching duties.

(b) State the number of graduate students for whom each senior staff member is responsible.

(c) If your principal investigator or other key personnel have current, pending, or expected research supported by other sponsors or agencies during the period you seek our 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.



You must attach a list of Current and Pending Support for each person listed on the D.4.i. R&R Senior / Key Person Profile Form. Each abstract should include research title, objectives, approach, and budget for both present and pending research projects.

Send any changes to this information to us as those changes become known.

**(4) Your Facilities**

(a) Describe the facilities available for performing the proposed research, and any additional facilities or equipment the organization proposes to acquire at its own expense for the work.

(b) Indicate any government-owned facilities that will be used. Indicate any government-owned equipment possessed presently that will be used. The facilities contract number, or in absence of a facilities contract, the specifics of the facilities or equipment, and the number of the award under which they are accountable are required.

**(5) Government Furnished Equipment**

You may list any special Government-owned property or test equipment required to complete the research. When possible and practicable, give a description or title for each item, the current location, and an estimated cost as applicable. If you do not have information about individual items, group items you require by class and provide an estimate of values.

**(6) High-Performance Computing Requirements**

You may be eligible to use DOD high-performance computing resources at no cost to your research. You should address utilization of this program if you need high-performance computing cycles to meet the needs of your research. This program provides access to a range of state-of-the-art high-performance computing assets and user training opportunities that can be used in some of our awards; special terms and conditions apply. You can review the details, capabilities, and requirements of the program at <http://www.hpc.mil>.

Our Program Officers will help you establish an account if your proposal is selected for an award, and can answer questions before you submit your proposal.

## **(7) Disclosure of Foreign National and Dual Citizenship Personnel**

As described in section C.3.a. Research Personnel Facility Access Requirements and Restrictions, you must identify any planned foreign national personnel, including information to support permanent resident status with work authorization. The following foreign national personal data must be included:

- (1) Full name and any other names used;
- (2) Country or countries of citizenship;
- (3) Date and place of birth;
- (4) Permanent Resident Card (Green Card) type; and
- (5) Green Card issue and expiration date.

## **h. Bibliography and References Cited**

*You must attach your narrative Bibliography and References to field 9 of the R&R Other Project Information Form. This attachment is included in your page count.*

## **i. R&R Senior / Key Person Profile Form**

*You must attach a short biographical sketch and list of significant publications (vitae) for each Senior / Key Person. You must also attach a list of current and pending support as discussed in Principal Investigator (PI) and Senior Personnel Time. This form is not included in your page count.*

You must list all key persons proposed for the research on the R&R Senior/Key Person Profile Form. Key persons are generally the PI, any Co-PIs, and senior staff. We use this information to evaluate the qualifications of you and your research team.

To evaluate compliance with Title IX of the Education Amendments of 1972 (20 U.S.C. A subsection 1681 Et. Seq.), the DoD 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. To enable this assessment, each applicant must include this form completed as indicated.

The Degree Type and Degree Year Fields will be used by DoD as the source for career information. In addition to the required fields on the form, applicants must complete these two fields for all individuals that are identified as having the project role of PD/PI or Co- PD/PI on the form. Additional senior/key persons can be added by selecting the “Next Person” button.

**j. R&R Budget Form**

*This form is not included in your page count.*

You must provide all information requested. You must estimate the total research project cost.

You must categorize funds by year and provide separate annual budgets for projects lasting more than one year.

A budget justification must be attached.

You must include enough budget related information in your proposal to support your costs as reasonable and realistic, and in compliance with 2 CFR 200 Subpart E - Cost Principles.

***Not having enough information in your proposal to understand if your costs are reasonable and realistic is the most common reason awards are delayed.***

**k. R&R Sub award Budget Form**

*This form is not included in your page count. Attachments to this form are not included in your page count.*

If you plan any sub award(s), you must provide a budget and budget justification using the same requirements established for your prime budget and budget justification.

We cannot make an award to you unless we can determine the sub award cost is reasonable and realistic, and complies with 2 CFR 200 Subpart E – Cost Principles.

Not having enough information in your sub award budget(s) or budget justification(s) can cause significant delays for awards.

**l. Budget Justification**

*This attachment is not included in your page count.*

**You must provide a detailed budget justification for each year that clearly explains the need for each item.** The entire budget justification and supporting documentation must be combined into a single file and attached to field L of the R&R Budget Form.

(1) You should itemize travel. State the purpose of each trip proposed, the number of

trips, the number of travelers, the destination, the duration, and the basis for calculating costs such as airlines and hotels.

Below is a sample of the travel portion:

| TRAVEL            | Unit      | Trips    | Travelers | Nights   | Days | Unit Cost      | Total Travel      |
|-------------------|-----------|----------|-----------|----------|------|----------------|-------------------|
| Airfare           | roundtrip | 1        | 1         |          |      | \$900.00       | \$900.00          |
| Lodging           | day       | 1        | 1         | 3        |      | \$75.00        | \$225.00          |
| Per Diem          | day       | 1        | 1         |          | 3    | \$40.00        | \$120.00          |
| Automobile Rental | day       | 1        | 1         |          | 3    | \$45.00        | \$135.00          |
| Subtotal Travel   |           | <b>4</b> | <b>4</b>  | <b>3</b> |      | <b>\$1,060</b> | <b>\$1,380.00</b> |

- (2) You should itemize materials, supplies, and equipment. List all material/equipment by type and kind with associated costs. Indicate what your costs are based on, such as vendor quotes, historical data and/or engineering estimates. **You should include vendor quotes and/or catalog pricing data.**
- (3) If you have any sub award(s), you should describe how you determined sub award costs were determined fair and reasonable. Your business office usually makes this determination.

**DHHS/ONR Rate Agreement:**

- (4) If you use a Government rate agreement to propose indirect cost rates and/or fringe benefit rates, you should attach a copy of the agreement you used.
- (5) Helpful Cost Principle Reference Information
  - (a) Grants Application
    - (i) 2 CFR 200, Subpart E – Cost Principles
    - (ii) General Provisions for Selected Items of Cost in 2 CFR 200.420 through 2 CFR 200.475

**m. R & R Subaward Budget Attachments Form**

*You must attach all subaward budgets to Field 12 of the R&R Other Project Information Form.* You must provide a budget at the same level of detail as your D.4.j. Prime budget for each proposed subaward. A subaward budget justification must be attached.

**n. Subaward Budget Justification**

*You must attach all subaward budget justification to field 12 of the R&R Other Project Information Form.*

You must provide a subaward budget justification at the same level of detail as your D.4.1. prime budget justification for each proposed subaward.

**o. R&R Project / Performance Site Locations Form**

*This form is included in your page count.*

You must complete all information as requested. You must include the ZIP+4 for each performance location you list.

**p. Data Management Plan (Optional)**

*You can decide if you want to include a Data Management Plan with your application. If you do, attach your Data Management Plan to field 12 of the R&R Other Project Information Form.*

Your “Data Management Plan” should be two (2) pages or less in length and discuss:

- (a) The types of data, software, and other materials to be produced in the course of the project, and include a notation marking items that are publicly releasable;
- (b) How the data will be acquired;
- (c) Time and location of data acquisition if they are scientifically pertinent;
- (d) How the data will be processed;
- (e) The file formats and the naming conventions that will be used;
- (f) A description of the quality assurance and quality control measures during collection, analysis, and processing;
- (g) If existing data are to be used, a description of their origins;
- (h) A description of the standards to be used for data and metadata format and content;
- (i) Plans and justifications for archiving the data;
- (j) The timeframe for preservation; and
- (k) If for legitimate reasons the data cannot be preserved, the plan must include a justification citing such reasons.

**q. R&R Personal Data Form**

*This attachment is not included in your page count.*

To evaluate compliance with Title IX of the Education Amendments of 1972 (20 U.S.C. A subsection 1681 Et. Seq.), The DoD 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. To enable this assessment, each applicant must include this form completed as indicated.

This form will be used by DoD 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, provisions of the demographic information in the form is voluntary. If completing the form for multiple individuals, each Co-Project Director/Co-Principal Investigator can be added by selecting the “Next Person” button. The demographic information, if provided, will be used for statistical purposes only and will not be made available to merit reviewers. Applicants who do not wish to provide some or all of this information should check or select the “Do not wish to provide” option.

## **5. INFORMATION YOU MUST SUBMIT IF SELECTED FOR POSSIBLE AWARD**

Our Grants Officer may request additional necessary information from you during negotiations, or as required to inform their consideration for award.

*“You must respond promptly”.*

If you not fully comply with our information requests by the time we are ready to make an award, we may determine that you are not qualified to receive an award and use that determination as a basis for making an award to another applicant.

Foreign national personnel may be asked to provide a copy of the front and back of their green card by secure means such as DoDSAFE.

If your proposal includes human, animal, or rDNA use or involvement you must submit all documentation requested during negotiations or you may not receive an award. Foreign recipients must complete a payment information form to receive wire transfer payments.

## **6. DUNS UNIQUE ENTITY IDENTIFIER, CAGE, AND SYSTEM FOR AWARD MANAGEMENT (SAM)**

### **a. SAM Registration Required**

As required in 2 CFR 25.110 all applicants, unless exempted, must:

- (1) Be registered in SAM.gov before submitting its application;

- (2) Provide a valid DUNS unique entity identifier; and
- (3) Continue to maintain an active SAM registration with current information at all times any Federal award is active, or any application is under consideration by a Federal awarding agency.

A Commercial and Government Entity (CAGE) code is obtained or specified as part of the SAM registration process. A CAGE code is required.

**b. SAM Exemption or Exceptions Not Available Under This Announcement**  
**We will not issue an Agency level exemption to SAM registration under 2 CFR 25.110(d)(1) for applicants under this announcement.**

You must comply with SAM registration requirements and include a DUNS and CAGE code on your application or we cannot make an award.

**c. Questions about SAM Registrations and Updates**

You can get questions about SAM registration and entity updates answered by live chat at <https://www.fsd.gov/fsd-gov/home.do> and telephone at (866) 606-8220 or (324) 206-7828. Top help topics for SAM.gov are available at [https://www.fsd.gov/fsd-gov/learning-center-system.do?sysparm\\_system=SAM](https://www.fsd.gov/fsd-gov/learning-center-system.do?sysparm_system=SAM).

**d. Consequences of Non-Compliance with SAM Registration Requirements**

We cannot make an award to you unless you comply with SAM requirements. If you are non-compliant, we may determine you are not qualified to receive an award, and use that determination to make an award to someone else as authorized by 2 CFR 25.205(b). You cannot receive payments without an active SAM record and CAGE code.

## **7. SUBMISSION DATES AND TIMES**

**a. Pre-Proposal Inquiries and Questions Deadline**

You must submit all pre-proposal inquiries and questions not later than **31 Mar 2021 at 11:59 PM Eastern Time**. Responses will be emailed by **14 Apr 2021 at 11:59 PM**.

**b. How Submission Time for Pre -Proposal Inquiries and Questions is Determined**

We use the date and time stamp on your email to determine when you submitted pre-proposal correspondence.

**c. Effect of Missing Pre-Proposal Inquiries and Questions Deadline**

We may not be able to provide responses or answers to late inquiries or questions.

**d. Proposal Submission Deadline**

We must receive your proposal electronically through Grants.gov not later than **16 Jun 2021 at 11:59 PM Eastern Time** to be considered for selection. This is the final due date. We recommend you submit applications early.

You are responsible for making sure your application is submitted, received, and validated by Grants.gov before the application deadline. If you submit your application late, your proposal is not eligible for consideration.

**e. How Proposal Submission Time is Determined**

We use the system-generated Grants.gov time stamp to determine when you submitted your successfully validated proposal. Grants.gov policies and procedures for application submission and processing apply. *We will only accept applications submitted electronically through Grants.gov.*

**f. Grants.gov Tracking Number is Application Receipt**

Grant.gov generates a confirmation page when you submit your application. A second confirmation is provided by email when your application has passed Grants.gov validations and the status is updated from received to validated.

The confirmation page includes a system-generated Grants.gov tracking number; this serves as your receipt. You should keep a copy of all confirmations.

You can verify the submission time and application status with your tracking number through Grants.gov at <https://www.grants.gov/applicants/track-my-application.html>

**g. Effect of Missing the Proposal Submission Deadline**

Grants.gov will not accept your proposal after the submission deadline. We will not accept proposals submitted other than electronically through Grants.gov.

**8. INTERGOVERNMENTAL REVIEW**

N/A - This program is excluded from coverage under Executive Order (E.O.) 12372.

**9. FUNDING RESTRICTIONS**

**a. Proposal Preparation Costs**

Your proposal or application preparation costs are not considered an allowable direct charge to any award under this announcement. Your costs are, however, an allowable expense to the normal bid and proposal indirect cost as specified in 2 CFR 200.460 Proposal costs.



**b. Air Force Office of Scientific Research No-cost Extension (NCE) Policy**

AFOSR grants NCE's only in situations in which the extension is truly warranted and properly documented. AFOSR requires prior written approval to extend the period of performance, without additional funds, beyond the expiration date of the grant. For an extension to be granted recipients are to provide notice in writing, and with the supporting reasons, and revised expiration date, at least thirty (30) days prior to the expiration of the award, and Standard Form (SF) 425 Federal Financial Report with amount of remaining funds. In no event will the period of performance be extended merely for the purpose of using unobligated balances. Institutions should make every effort to ensure work is completed on time. If an institution deems an NCE is truly warranted, it should submit its request for an extension and supporting reasons to the relevant Program Officer. You should make every effort to ensure work is completed on time.

**c. Prohibition on Contracting with Entities that Require Certain Internal Confidentiality Agreements or Statements--Representation**

(a) *Definition.* As used in this provision--

"Internal confidentiality agreement or statement", "subcontract", and "subcontractor", are defined in the clause at [52.203-19](#), Prohibition on Requiring Certain Internal Confidentiality Agreements or Statements.

(b) In accordance with section 743 of Division E, Title VII, of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113-235) and its successor provisions in subsequent appropriations acts (and as extended in continuing resolutions), Government agencies are not permitted to use funds appropriated (or otherwise made available) for agreements with an entity that requires employees or sub recipients of such entity seeking to report waste, fraud, or abuse to sign internal confidentiality agreements or statements prohibiting or otherwise restricting such employees or sub recipients from lawfully reporting such waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information.

(c) The prohibition in paragraph (b) of this provision does not contravene requirements applicable to Standard Form 312, (Classified Information Nondisclosure Agreement), Form 4414 (Sensitive Compartmented Information Nondisclosure Agreement), or any other form issued by a Federal department or agency governing the nondisclosure of classified information.

(d) Representation. By submission of its offer, the Grantor represents that it will not require its employees or sub recipients to sign or comply with internal confidentiality agreements or statements prohibiting or otherwise restricting such employees or sub recipients from lawfully reporting waste, fraud, or abuse related to the performance of a Government agreement to a designated investigative or law enforcement representative of

a Federal department or agency authorized to receive such information (e.g., agency Office of the Inspector General).

(e) Agreement with the representation above will be affirmed by checking the “I agree” box in block 17 of the SF424 as part of the electronic proposal submitted via Grants.gov.

## **10. OTHER SUBMISSION REQUIREMENTS**

If Grants.gov rejects your electronic application submission for any reason, you must correct all errors and resubmit your application before the D.7.d. Proposal submission deadline.

## **E. APPLICATION REVIEW INFORMATION**

### **1. CRITERIA**

Basic and Applied Research: The SURI Program is funded by both basic and applied research appropriations. White papers and proposals, in order to be considered for funding, are therefore required to show both the basic research elements and the application of the research toward advanced technology.

Note that basic research includes “scientific study and experimentation directed toward increasing fundamental knowledge and understanding” while applied research deals with the development of “useful materials, devices, and systems or methods” and “the design, development, and improvement of prototypes and new processes to meet general mission area requirements.” The full definitions of these terms are contained in document: (DoD 7000.14-R, vol. 2B, chap. 5, para. 050201.B)

The assessment of the white papers will primarily focus on scientific and technical merits, potential for the research to significantly advance fundamental understanding in the topic area, and the likelihood of research to be applied in a manner that meets the needs of the associated topic.

Proposals need to show strength in as many of the evaluation and selection areas as practicable to demonstrate maximum competitiveness.

### **a. Principal Evaluation and Selection Criteria**

Our selection criteria meet the minimum requirements of 32 CFR 22.315(c). Our principal selection criteria are as follows:

- Scientific and technical merit of the proposed basic and applied science and/or engineering research;
- Potential for the research to significantly advance fundamental understanding in the

- topic area;
- Potential for the research to address DoD mission requirements in the topic area; and
- Potential for the research to address broader DoD mission requirements.

**b. Secondary selection criteria are as follows:**

- Qualifications and expertise of lead university and participating university personnel;
- Qualifications and expertise of industry/non-academic research partners;
- Adequacy of current or planned facilities and equipment to accomplish research;
- Inclusion of an HBCU/MI lead or partner institution;
- Plans for engagement with AFRL;
- Realism and reasonableness of cost. (While permitted, cost sharing is not a factor in the evaluation);
- Risk (see Section F(3)(b) below)

**2. REVIEW AND SELECTION PROCESS**

**a. Merit-based, Competitive Procedures**

The ultimate recommendation for award of proposals is made by the DoD's scientific/technical community. Recommended proposals will then be forwarded to AFOSR Contracts and Grant Awards Management office. Any notification received from the DoD agency that indicates that the Applicant's 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 Grants 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 commencing negotiations with the applicant.

We intend to select two or more proposals for possible funding on a competitive basis according to 10 USC 2361, and 10 USC 2374 using the merit-based, competitive procedures described in 32 CFR 22.315, incorporated here by reference. However, we do not guarantee that any award will be made under this competition.

**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 grant performance.

**c. Evaluation Panel**

**White paper** submissions will be reviewed either solely by the responsible Research Topic Chief for the specific topic, or by an evaluation panel chaired by the responsible Research

Topic Chief. An evaluation panel will consist of technical experts who are Government employees or who are detailed under the Intergovernmental Personnel Act (IPA).

Restrictive notices notwithstanding, one or more support contractors or advisors external to the US Government may be utilized as subject-matter-expert technical consultants. These individuals will sign a conflict of interest statement and a non-disclosure agreement prior to receiving proposal information.

**Proposals** will undergo a multi-stage evaluation procedure. The Research Topic Chief and other Government scientific experts will perform the evaluation of technical proposals first. Cost proposals will be evaluated by Government business professionals. Restrictive notices notwithstanding, one or more support contractors or advisors external to the US Government may be utilized as subject-matter-expert technical consultants. However, proposal selection and award decisions are solely the responsibility of Government personnel. Support contractor employees and advisors external to the US Government having access to technical and cost proposals submitted in response to this FOA will be required to sign a non-disclosure and a conflict of interest statement prior to receipt of any proposal submission. Findings of the evaluation panels will be forwarded to senior DoD officials who will make funding recommendations to the awarding officials.

Due to the nature of the SURI program, the evaluation panels and reviewing officials may on occasion recommend that less than an entire SURI proposal be selected for funding. This may be due to several causes, such as insufficient funds, research overlap among proposals received, or potential synergies among proposals under a research topic. In such cases, proposal adjustments will be agreed to by the Principal Investigator and the Government prior to final award.

#### **d. Cost Analysis for Reasonableness and Realism**

If your proposal is selected for possible award, we will analyze the cost of the work for realism and reasonableness. The cost of your proposal is considered, but is not an evaluation factor or criterion.

We must make sure the costs you propose are reasonable, realistic, and allocable to this work before we can make an award. All costs must be allowable to be reasonable. We may analyze your technical and cost information at the same time.

### **3. DISCLOSURE OF ADMINISTRATIVE PROCESSING BY CONTRACTOR PERSONNEL**

We use support contractor personnel to help us with administrative proposal processing. Our contractor personnel are employees of commercial firms that have a contract with us. We make sure all of our support contracts include nondisclosure agreements that prohibit disclosure of any information you submit to other parties.

#### **4. NO GUARANTEED AWARD**

We do not guarantee that any award will be made under this competition.

### **F. FEDERAL AWARD ADMINISTRATION INFORMATION**

#### **1. SELECTION NOTICES**

##### **a. Electronic Notification**

If your proposal is selected for possible award, an email will be sent to the principal investigator.

##### **b. Selection for Possible Award Does Not Authorize Work**

Our selection notice **is not** an authorization to start work, and **is not** an award guarantee. We will contact your business office to get answers to any questions we have about your proposal, and negotiate specific award terms. Negotiations may result in funding levels that are less than those in the proposal.

#### **2. AWARD NOTICIES**

##### **a. Federal Award Document**

A grant or contract signed by a warranted Grants or Contracting Officer is the only official notice that an award has been made.

##### **b. Electronic Federal Award Distribution**

We send award documents to your business office by email. This is called award distribution. We always ask your business office to forward the award to the Principal Investigator indicated on the award document.

#### **3. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS**

##### **a. Reporting of Matters Related to Recipient Integrity and Performance**

You must report recipient integrity and performance information as required by Appendix XII to 2 C.F.R. Part 200 – Award Term and Condition for Recipient Integrity and Performance Matters, incorporated here by reference. You should read the full text of this award term now using the link above to make sure you understand our requirements. You can also find this term at <http://www.ecfr.gov>.

##### **b. Agency Review of Risk Posed by Applicants**

- (1) We must review information available about you and entities included in your proposal through the Office of Management and Budget (OMB) designated repositories of government- wide eligibility qualification and financial integrity information. Our risk review is required by 31 U.S.C. 3321 and 41 U.S.C. 2313, and includes both public and non-public information. You must be qualified as described by 32 C.F.R. 22.415, Standards to receive an award.
- (2) We must consider the non-public segment of the Federal Awardee Performance and Integrity Information System (FAPIIS) for all awards exceeding the current simplified acquisition threshold of \$250,000.
- (3) At a minimum, the information in the system for a prior Federal award recipient must demonstrate a satisfactory record of executing programs or activities under Federal grants, cooperative agreements, or procurement awards; and integrity and business ethics. We will consider any comments you provide, in addition to the other information in the designated integrity and performance system, when making our risk judgment about your integrity, business ethics, and record of performance under Federal awards.
  - (a) We may make an award to a recipient who does not fully meet our standards as described at 2 CFR 200.205(a)(2) if it is determined that the information is not relevant to the current Federal award under consideration or there are specific conditions that can appropriately mitigate the effects of the non- Federal entity's risk in accordance with 2 CFR 200.207 Specific conditions.
- (4) We must comply with the guidelines on government-wide suspension and debarment described in 2 CFR 200.213, and must require you to comply with these provisions for all work we fund.

These provisions restrict Federal awards, sub-awards and contracts with certain parties that are debarred, suspended or otherwise excluded from or ineligible for participation in Federal programs or activities.

### **c. Cross-Cutting National Policy Requirements**

You must comply with all applicable national policy requirements as a condition of award. Key national policy requirements may be found in the [DoD Research and Development General Terms and Conditions, January 2021](#); and [Appendix B to 32 CFR Part 22 – “Suggested Award Provisions for National Policy Requirements that Often Apply”](#), incorporated here by reference.

#### **d. Acknowledgement of Research Support**

You must acknowledge support provided by the Government in all materials based on or developed under our awards. The requirement extends to copyrighted and non-copyrighted materials published or displayed in any medium.

The following language must be used unless the award document provides different instructions:

*“This material is based upon work supported by the Air Force Office of Scientific Research under award number FAXXXX-XX-X-XXXX”.*

You must require any sub recipients or subcontractors under your award to include this acknowledgement too.

#### **e. Disclaimer Language for Research Materials and Publications**

Some materials based on or developed under our awards must include special disclaimer language. You must to include this language in all materials except scientific articles or papers published in scientific journals unless your award document provides different instructions:

*“Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the U.S. Department of Defense.”*

#### **f. Uniform Administrative Requirements, Cost Principles, and Audit Requirements**

Our grants are governed by the guidance in [Title 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 in [2 CFR Part 1103](#) [79 FR 76047, December 19, 2014] and [2 CFR Part 1125](#). Provisions of [Chapter 1, Subchapter C of Title 32, CFR](#), “DoD Grant and Agreement Regulations” other than parts 32 and 33 continue to be in effect and apply as stated.

These regulations are incorporated by reference into this announcement. Awardee shall incorporate these regulations into all subcontract(s) made under this award, and shall further guarantee to flow-down these regulations into all lower-tier contracts.

#### **g. DoD Research and Development General Terms and Conditions**

The “DoD Research and Development General Terms and Conditions, January 2021”

(DoD T&C) found at <https://www.onr.navy.mil/work-with-us/manage-your-award/manage-grant-award/grants-terms-conditions> will apply to any award made under this announcement. These terms and conditions are incorporated by reference into this announcement. If we publish updated terms and conditions, the updated terms and conditions may apply to any award under this announcement. Awardee shall incorporate these terms and conditions into all subcontract(s) made under this award, and shall further guarantee to flow-down these terms and conditions into all lower-tier contracts.

#### **h. Conditions of Award for Recipients Other Than Individuals**

You must agree to comply with the requirements at 2 CFR Part 182, Subpart B “Requirements for Recipients Other Than Individuals” as a condition of award.

#### **i. Minimum Record Retention Requirements**

You must keep records related to our awards for at least three years after completion and the final Federal Financial Report is submitted. This requirement is described further in 2 C.F.R. 200.333, incorporated here by reference. The DoD T&C OAR Article II, Records retention and access describes additional requirements.

Sometimes records must be retained for more than three years.

### **4. REPORTING**

#### **a. Monitoring and Reporting Program Performance**

All of our awards require at least annual and final technical performance reports as required in 2 C.F.R. 200.328 as further implemented by DoD T&C REP Article I. Performance, management, monitoring, and reporting. Some of our awards require more frequent technical reports.

**You must provide your reports on time.** Our awards include a schedule specifying the latest date for submission of each required report.

#### **b. Standard Form (SF) 298 Report Documentation Page**

(1) SF 298 Optional for Interim and Annual Technical Reports

You may use a SF 298 Report Documentation Page for interim progress reports.

(2) SF 298 Required for Final Technical Reports

You must use a completed SF 298 Report Documentation Page as the first page of the final



report. You can download an electronic SF 298 from <http://www.gsa.gov/portal/forms/download/116146>.

### **c. Technical Performance Report Format**

1. ANSI Standard Z39.18-2005

Use the AFRL Scientific & Technical Reports – Preparation, Presentation and Preservations Format Guidelines (June 2010) for your final report unless your award states different requirements. You can download the AFRL standard guide from the Related Documents tab in Grants.gov for this announcement.

2. Institutional Formats for Thesis and Dissertations

If your institution has a format for thesis and dissertations, you can use that format unless your award states different requirements.

3. Pending Federal-wide Research Progress Performance Report (RPPR) Format

We are working on a [Federal-wide Research Progress Performance Report \(RPPR\)](#) for interim, annual, and final research performance reports. You do not have to use the RPPR right now. [DoD plans to use the report in the future](#).

We may issue an award modification that requires you to use the Government- wide RPPR after a final notice is issued in the Federal Register.

### **d. Department of Defense (DD) Form 882 Report of Inventions and Subcontracts**

1. Invention Reports

a. You must provide at least a final invention report on DD Form 882. We may ask for annual reports. Our award documents specify the due date. You can get the form at <https://www.esd.whs.mil/Portals/54/Documents/DD/forms/dd/dd0882.pdf>.

b. You must submit invention reports even if you do not have a patent to report.

2. Sub-Award and Subcontract Reporting

You must use the DD Form 882 to tell us about any subawards or subcontracts. Your award will provide specific instructions. You can get the form at <https://www.esd.whs.mil/Portals/54/Documents/DD/forms/dd/dd0882.pdf>.

### **i. Standard Form (SF) 425 Federal Financial Report**

Our awards require a final SF 425 Federal Financial Report. You can get the form at [http://www.whitehouse.gov/sites/default/files/omb/assets/grants\\_forms/SF-425.pdf](http://www.whitehouse.gov/sites/default/files/omb/assets/grants_forms/SF-425.pdf).

- (1) If you request any advance payment(s) under your award, you must submit quarterly SF 425 reports for the life of the grant. Our awards include specific instructions.
- (2) You do not have to submit quarterly SF 425 reports if you only request payments by reimbursement.

## **ii. Electronic Payment Requests and Electronic Payment**

You must submit payment requests electronically using the Invoicing, Receipt, Acceptance, and Property Transfer (iRAPT) application unless your award specifies different instructions. Domestic grant payments must be made using the electronic funds transfer (EFT). We prefer to make foreign payments by wire transfer.

To submit electronic payment requests you must register to use iRAPT in the Wide Area Workflow (WAWF) e-Business Suite at <https://wawf.eb.mil>. The website includes registration instructions.

If you have WAWF or iRAPT questions or problems, you can get help by telephone at (866) 618-5988 or (801) 605-7095, by electronic mail at [disa.ogden.esd.mbx.cscassig@mail.mil](mailto:disa.ogden.esd.mbx.cscassig@mail.mil), or the website <https://wawf.eb.mil/xhtml/unauth/web/homepage/vendorCustomerSupport.xhtml>.

## **iii. Property Reports**

If we furnish any property owned by the Government under an award, you must submit periodic property status reports as described in 2 CFR 200.329 and further implemented by the DoD T&C REP Article III. Reporting on Property.

## **iv. Other Reports**

Our Program Officers may ask for informal technical reports as needed. We use these informal reports for program purposes, such as preparation for meetings and other technical purposes. We highly recommend you provide this information in a timely manner by electronic mail directly to the Program Officer.

## **v. Electronic Submission of Reports**

You must plan on submitting reports electronically. You can submit most reports through the internet application at <http://afosr.reports.sgizmo.com/s3/>. Some reports must be sent using electronic mail. Our award documents provide specific instructions that you must follow.

## **G. AGENCY CONTACTS**

### **1. TECHNICAL INQUIRES AND QUESTIONS**

You should submit all questions in writing by electronic mail. You should include the FOA number in the subject line.

*If you submit a question by telephone call, fax message, or other means you may not receive a response.*

**You should include the announcement number in the subject line.**

DR. STACIE WILLIAMS, AFRL/AFOSR  
SPACE SCIENCE ARCHITECT  
Email: Stacie.Williams.1@us.af.mil

DR. JAMES DODD, AFRL/AFOSR  
DEPUTY CHIEF SCIENTIST  
Email: James.Dodd.1@us.af.mil

DR. ANDREW WILLIAMS, AFRL/RV  
Email: Andrew.Williams.24@us.af.mil

DR. JAIME STEARNS, AFRL/RV  
Email: Jaime.Stearns.1@us.af.mil

DR. DEREK DOYLE, AFRL/RV  
Email: Derek.Doyle@us.af.mil<mailto:arthur.edwards@us.af.mil>

### **2. GENERAL INQUIRIES AND QUESTIONS**

You must send all general questions about this announcement to us by email. Your questions will generally be consolidated with other questions and posted on Grants.gov so everyone gets the same information. We may provide an individual response by email if your question does not apply to anyone else.

MS. BHAWANA SHARMA  
Grants Officer  
Email: [bhawana.sharma@us.af.mil](mailto:bhawana.sharma@us.af.mil)

MS. ALEAH PARKER  
Contract Specialist  
Email: [aleah.parker@us.af.mil](mailto:aleah.parker@us.af.mil)

## **H. OTHER INFORMATION**

### **1. OMBUDSMAN**

- (a) An ombudsman has been appointed to hear and facilitate the resolution of concerns from offeror, potential offerors, and others for this acquisition. When requested, the ombudsman will maintain strict confidentiality as to the source of the concern. The existence of the ombudsman does not affect the authority of the program officer, grants officer, contracting officer, or source selection official. Further, the ombudsman does not participate in the evaluation of proposals, the source selection process, or the adjudication of protests or formal grant or contract disputes. The ombudsman may refer the party to another official who can resolve the concern.
- (b) Before consulting with an ombudsman, interested parties must first address their concerns, issues, disagreements, and/or recommendations to the grants or contracting officer for resolution. Consulting an ombudsman does not alter or postpone the timelines for any other processes (e.g., agency level bid protests, GAO bid protests, requests for debriefings, employee-employer actions, contests of OMB Circular A-76 competition performance decisions).
- (c) If resolution cannot be made by the GO, concerned parties may contact the AFRL Ombudsman, Director of Contracting, HQ AFRL/PK. The AFRL Alternate Ombudsman is the Deputy Director of Contracting, HQ AFRL/PK. Please send an email to [afrl.pk.workflow@us.af.mil](mailto:afrl.pk.workflow@us.af.mil) with the subject of "Ombudsman".
- (d) The ombudsman has no authority to render a decision that binds the agency.
- (e) Do not contact the ombudsman to request copies of the solicitation, verify offer due date, or clarify technical requirements. Such inquiries shall be directed to the grants or contracting officer.

### **2. GRANTS AND CONTRACTING OFFICERS AUTHORITY**

Grants and Contracting Officers acting within their warranted capacity are the only individuals legally authorized to make commitments or bind the Government.

No other individuals are authorized to make commitments or otherwise bind us.

### **3. ADDITIONAL FUNDING OPPORTUNITIES**

We post new funding opportunities throughout the year looking for today's breakthrough science for tomorrow's Air Force. You can find more information about Air Force Office of Scientific Research interests and funding opportunities on our website at <http://www.wpafb.af.mil/afrl/afosr>.

Thank you for your interest in this announcement.