

BAA Call N0001424SBC08
Special Program Announcement for Office of Naval Research
Research Opportunity:
FY25 Communications and Networking Applied Research

I. INTRODUCTION

This announcement describes a technology area, entitled Communications and Networking, under the N0001424SB001, Long Range Broad Agency Announcement for Navy and Marine Corps Science and Technology which can be found at <https://www.nre.navy.mil/work-with-us/funding-opportunities/announcements>. The submission of proposals, their evaluation and the placement of research grants and contracts will be carried out as described in the above Long Range Broad Agency Announcement.

The purpose of this announcement is to focus attention of the scientific community on (1) the area to be studied, and (2) the planned timetable for the submission of white papers and full proposals.

II. TOPIC DESCRIPTION

The proposed topic will develop and mature Communications and Networks technologies for naval operations.

Background:

A Design for Maritime Superiority (2018) describes an operational architecture for distributed maritime operations (DMO) that "... will provide accurate, timely, and analyzed information to units, warfighting groups, and fleets." A critical component of this architecture is the Naval Tactical Grid (NTG) to connect distributed units into groups and distributed groups into fleets. Communications and networking technologies that can provide seamless, robust, connectivity are key enablers for the NTG. These technologies will be deployed on a variety of platforms, both manned and unmanned, operating under challenging environmental and operational warfare conditions (lack of infrastructure, mobility, spectrum limitations, interference, multipath, atmospherics, jamming, electronic intercept, size/weight/power constraint, etc.) in different domains (land, maritime [includes both surface and undersea], cyber, and space). Successful Command and Control (C2) and decision making, at all levels of command, for DMO is critically dependent on these communications and networking technologies.

Objective:

The goal of the Communications and Networking Program within the Office of Naval Research (ONR 311) is to support the Navy's Information Warfare vision by developing measurable advances in technology that can directly enable and enhance end-to-end connectivity and quality-

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of-service for mission-critical information exchange among widely dispersed naval, joint, and coalition forces. The vision is to provide high throughput robust communications and networking to ensure all warfighters – from the operational command to the tactical edge – have access to information, knowledge, and decision-making necessary to perform their assigned tasks. The ONR is interested in white papers for potential FY24 Applied Research (Budget category 6.2) projects under the following focus areas:

1. Novel antennas / arrays – at frequencies from Very high Frequency (VHF) to Sub 6 Giga Hertz (GHz) – for tactical platforms or unmanned systems with constrained size, weight, and power;
2. Robust and agile optical Time Division Multiple Access (TDMA) burst-mode receiver (signal) acquisition and synchronization techniques for high data rate mobile free space optics (FSO) networking;
3. Energy-efficient wireless protocols/algorithms/implementations for unmanned / unattended systems;
4. Innovative approaches and technologies for low probability-of-detection communications against advanced electronic threats; and
5. Advanced techniques for distributed network control, synchronization, and/or scheduling.

The ONR is receptive to innovative ideas, which are not within the above focus areas, but nonetheless are important to the Navy/Marine Corps communications and networking, as otherwise described in this Topic Description.

III. WHITE PAPER SUBMISSION

Although not required, white papers are strongly encouraged for all offerors seeking funding. Each white paper will be evaluated by the Government to determine whether the technology advancement proposed appears to be of particular value to the Department of the Navy. Initial Government evaluations and feedback will be issued via e-mail notification from the Technical Point of Contact. The initial white paper appraisal is intended to give entities a sense of whether their concepts are likely to be funded. White papers will be evaluated by the Government to determine whether the technology advancement proposed appears to be of particular value to the Department of the Navy. Initial Government evaluations and feedback will be issued via e-mail notification from the Technical Point of Contact. The initial white paper appraisal is intended to give entities a sense of whether their concepts are likely to be funded.

Detailed Full Proposal (Technical and Cost volumes) will be subsequently encouraged from those Offerors whose proposed technologies have been identified through the above referenced e-mail as being of “particular value” to the Government. However, any such encouragement does not assure a subsequent award. Full Proposals may also be submitted by any offeror whose white paper was not identified as being of particular value to the Government or any offeror who did not submit a white paper.

For white papers that propose efforts that are considered of particular value to the Navy but either exceed available budgets or contain certain tasks or applications that are not desired by the Navy, ONR may suggest a full proposal with reduced effort to fit within expected available budgets or an effort that refocuses the tasks or application of the technology to maximize the benefit to the Navy.

White papers should not exceed 5 single-sided pages, exclusive of cover page, references, and resume of principal investigator, and should be in 12-point Times New Roman font with margins not less than one inch. White papers shall be in Adobe PDF format (preferred) or in Microsoft Word format compatible with at least Microsoft Word 2016.

The Cover Page can be found at

<https://www.nre.navy.mil/work-with-us/how-to-apply/submit-contract-proposal> for contract submissions and at <https://www.nre.navy.mil/work-with-us/how-to-apply/submit-grant-application> for grant submissions.

The 5-page body of the white paper should include the following information:

- Technical Concept: A description of the technology innovation and technical risk areas.
- Future Naval Relevance (where applicable) – A description of potential Naval relevance and contributions of the effort to the agency's specific mission.
- Operational Naval Concept (where applicable) – A description of the project objectives, the concept of operation for the new capabilities to be delivered, and the expected operational performance improvements.
- Operational Utility Assessment Plan (where applicable) – A plan for demonstrating and evaluating the operational effectiveness of the Offeror's proposed products or processes in field experiments and/or tests in a simulated environment.
- Rough Order of Magnitude (ROM) cost estimate

A resume of the principal investigator, not to exceed 1 page, should also be included after the 5-page body of the white paper.

White papers must be submitted through Fedconnect at www.fedconnect.net in accordance with Section D. Application and Submission Information, Section 2. Content and Form of Application Submission, paragraph d. White Paper Requirements, ii. White Paper Submission in N0001424SB001.

To ensure full, timely consideration for funding, white papers should be submitted **no later than July 17, 2024**. White papers received after that date will be considered as time and availability of funding permit.

The planned date for completing the review of white papers is **July 24, 2024**.

An expanded oral presentation will be requested from those Offerors whose proposed technologies have been identified as being of "particular value" to the Government. However, a positive email response to the oral presentation does not assure a subsequent award. The purpose of the oral presentation is to better acquaint the Government with the Offeror's proposal, especially in its understanding of the technical approach and impact. The oral presentations are tentatively scheduled for **August 8, 2024**.

The Government will issue selection notification, via email, on or about **August 23, 2024**, of selection for a full proposal.

V. FULL PROPOSAL SUBMISSION AND AWARD INFORMATION

A full proposal will be requested from those Offerors whose proposed technologies have been identified through the aforementioned email as still being of "particular value" to the Government. Full proposals should be submitted under N0001424SBC08 by **September 27, 2024**. Full proposal submitted after that date should be submitted under N0001424SB001 and will be considered as time and availability of funding permit.

ONR anticipates that both grants and contracts will be issued for this effort.

Full proposals for contracts should be submitted in accordance with the Appendix 2 of N0001424SB001. Full proposals for grants should be submitted via Grants.gov in accordance with Appendix 1 of N0001424SB001.

The period of performance for projects may be from 1, 2, or 3 years.

ONR plans to fund 5 to 6 individual awards with a value of \$250,000 to \$500,000 per year, using research funds. However, lower and higher cost proposals will be considered.

Although ONR expects the above described program plan to be executed, ONR reserves the right to make changes.

Funding decisions should be made by **October 18, 2024**. Selected projects will have an estimated award date of **March 14, 2025**.

VI. SIGNIFICANT DATES AND TIMES

Event	Date	Time
White Paper Submission Date	7/17/2024	4 pm EST
Notification of White Paper Valuation*	7/24/2024	
Oral Presentations	8/8/2024	
Notification of Full Proposal Selection*	8/23/2024	

Full Proposal Submission*	9/27/2024	4 pm EST
Expected Award *	3/14/2025	

Note: * These are approximate dates.

VII. Small Business Subcontracting

As indicated in ONR Broad Agency Announcements large businesses and non-profit organizations must submit a subcontracting plan along with their research proposal. While large businesses and non-profits are responsible for making these subcontracting arrangements, ONR will help facilitate prime contractor/small business contracting connections by posting to the ONR external website contact information of small businesses that have indicated their subcontracting interests and technological niche for prime contractor consideration for this program. This is not an endorsement, but an effort by ONR to help bring these parties together to provide superior solutions.

If you are a small business, and your company is interested in subcontracting activities with large businesses and/or non-profits considering your technology for this program, please provide the following information by email, to the ONR Small Business Director at ellen.simonoff.civ@us.navy.mil with the subject line, "BC N0001424SBC08". Provide this information:

- 1) Company Name and Website
- 2) Individual (POC) name and POC email address
- 3) Business Size and socio-economic category
- 4) Brief Technology Description (no more than 3 sentences)
- 5) Technology Key Words (no more than 10 words)

Note: Do not include ANY proprietary information. This information will be posted on the ONR website under this BAA call and will available to the public.

VIII. POINTS OF CONTACT

In addition to the points of contact listed in N001424SB0001 the specific points of contact for this announcement are listed below:

Technical Points of Contact:

Name: Dr. Santanu Das

Title: Program Officer, ONR Code 31

Address: One Liberty Center, 875 North Randolph St., Suite 1115, Arlington, VA 22203-1995

Email: santanu.k.das.civ@us.navy.mil

Business Point of Contact/Contracting Officer:

Name: Stephen Hughes

Title: Contracting Officer

Email Address; Stephen.T.Hughes.civ@us.navy.mil

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VIII. SUBMISSION OF QUESTIONS

Any questions regarding this announcement must be provided to the Technical Points of Contact and/or the Business Point of Contact listed above. All questions shall be submitted in writing by electronic mail.

Answers to questions submitted in response to this BAA Call will be addressed in the form of an Amendment and will be posted to the following web pages:

- Grants.gov (<https://www.grants.gov/>)
- System for Award Management (Sam.gov - Contract Opportunities) (<https://sam.gov/content/home>)
- ONR website (<https://www.nre.navy.mil/work-with-us/funding-opportunities>)

Questions regarding **White Papers or Full Proposals** should be submitted NLT two weeks before the dates recommended for receipt of White Papers and/or Full Proposals. Questions after this date may not be answered.