

**Opportunity Title:** 5G Researcher: Naval Postgraduate School - Postdoctoral Fellowship

**Opportunity Reference Code:** NPS-2024-0004

**Organization** U.S. Department of Defense (DOD)

**Reference Code** NPS-2024-0004

**How to Apply** Click on *Apply* at the bottom of the opportunity to start your application.

**Description** The Center for Cyber Warfare (CCW) is an interdisciplinary problem-solving research center in the Department of Electrical and Computer Engineering at the Naval Postgraduate School (NPS) in Monterey, California. The CCW faculty work in collaboration with other universities and innovative commercial companies to deliver basic and applied research solutions to the Navy, U.S. government, DoD, and intelligence communities.

This position will involve activity in the Center for Cyber Warfare and/or the Applied Cryptography Engineering Lab. Both research groups are investigating and developing Navy- and DOD-relevant applications of 5G networks and protocols. More information is available at <http://nps.edu/web/ccw> and <https://nps.edu/web/ace>.

#### What will I be doing?

5G private networks and their applications are one of the major research lines of the CCW due to their virtualization, high data rates, and emerging open standards. These open standards permit network composability and configurability to specific DON and DOD use cases, including on-demand and scalable 5G private networks to support expeditionary operations.

Recently, the Office of the Undersecretary of Defense (Research and Education) announced a five-year workforce development effort at NPS centered on private 5G network research and education. You will support the development of a configurable, open source 5G research testbed for NPS students and faculty as well as the creation and refinement of 5G educational offerings to NPS students. You will collaborate with existing NPS faculty and staff in the CCW, ECE, CS, and IS departments that will analyze and select potential network configurations, services, protocols, and hardware; instantiate the selections; collect performance data; develop novel protocols or refine existing solutions for DOD use cases; and integrate the findings from these activities into educational offerings. Subsequent phases of this research program will involve the development and instantiation of improved capabilities in areas such as edge processing, network slicing, RF signal adaptation, backhaul resilience, and network security.

#### Why should I apply?

You will be assigned to a particular faculty mentor and research team based on your interests, experience, and goals. While collaborating with team members on research projects, you will gain experience in the full range of data collection, reduction and analysis, and communicating results through presentations and written materials. The Naval Postgraduate School maintains state-of-the-art networking and computer facilities as well as physical engineering laboratory spaces. You will have opportunities to participate in these spaces as a member of the team.

As a participant in the Research Participant Program at the Naval Postgraduate School, you will have the opportunity to explore a federal career and gain a competitive edge as you apply your education, talent, and skills in a variety of settings. You will have the opportunity to travel to present research findings to academic conferences, collaborate with industry partners, and participate in education at remote sites.

#### Where will I be located?



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Monterey, California

**What is the anticipated start date?**

NPS is ready to make appointments immediately. Exact start dates will be determined at the time of selection and in coordination with the selected candidate. Applications are reviewed on an ongoing basis and fellowships will be filled as qualified candidates are identified.

**What is the appointment length?**

This appointment is a full-time, 12-month research appointment, with the possibility to be renewed for additional research periods. Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant.

**What are the benefits?**

You will receive a stipend to be determined by NPS. Stipends are typically based on a participant's academic standing, discipline, experience, and research facility location. Other benefits may include the following:

- Health Insurance Supplement (*Participants are eligible to purchase health insurance through ORISE*)
- Relocation Allowance
- Training and Travel Allowance

**About NPS**

The Naval Postgraduate School provides relevant and advanced educational and research experience to commissioned officers of the Naval Service to increase their combat effectiveness and enhance the security of the United States. In support of this mission as well as to sustain academic excellence, NPS and the U.S. Department of the Navy (DoN) foster and encourage an academic program of relevant and meritorious naval research. NPS research supports the needs of the Navy and the U.S. Department of Defense while also building the intellectual capital of Naval Postgraduate School. For more information about NPS, visit: <https://my.nps.edu/>.

**About ORISE**

This program, administered by Oak Ridge Associated Universities (ORAU) through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and DoD. Participants do not enter into an employee/employer relationship with ORISE, ORAU, DoD or any other office or agency. Instead, you will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE. For more information, visit the [ORISE Research Participation Program at the U.S. Department of Defense](#).

**Qualifications**

The qualified candidate is a U.S. Citizen who has received a Doctoral degree within 1 year of the appointment start date or will have completed a Doctoral degree by 10/01/2024.

The ideal applicant has a technical PhD and research experience in the areas directly applicable to 5G(and beyond) research areas such as wireless communications (to include software defined radio, satellite, and 5G/6G cellular networks), cryptography, network engineering, mobile applications and security, etc.

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The ideal applicant is also open to developing their own areas of study and research that enrich ongoing 5G research topics in the CCW and ACE labs.

As 5G private networks are an emerging application requiring the convergence of a variety of disciplines, candidates with hardware or software backgrounds will be considered. The ideal candidate will be approaching graduation (or have recently graduated) with a technical degree in fields such as electrical engineering, computer science, computer engineering, or physics, though any applicable degree will be considered. The CCW and ACE are particularly interested in applicants with research knowledge in facilitating areas such as wireless communications (to include software defined radio, satellite, and 5G/6G cellular networks), cryptography, network engineering, mobile applications and security, etc.

**Application Requirements**



A complete application consists of:

- Zintellect Profile
- Educational and Employment History
- Essay Questions (goals, experiences, and skills relevant to the opportunity)
- Resume (PDF)
- Transcripts/Academic Records - Please upload a copy of a transcript for your current or most recent degree program that meets the disciplinary qualifications of the opportunity. [Click here for detailed information about acceptable transcripts.](#)

If you have questions, send an email to [navy@orise.orau.gov](mailto:navy@orise.orau.gov). Please list the reference code of this opportunity [NPS-2024-0004] in the subject line of the email. Please understand that ORISE does not review applications or select applicants; selections are made by the sponsoring agency identified on this opportunity. All application materials should be submitted via the "Apply" button at the bottom of this opportunity listing. Please do not send application materials to the email address above.

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- Eligibility Requirements**

  - **Citizenship:** U.S. Citizen Only
  - **Degree:** Doctoral Degree received within the last 12 months or anticipated to be received by 10/1/2024 12:00:00 AM.
  - **Discipline(s):**
    - **Computer, Information, and Data Sciences** ([8](#) )
    - **Engineering** ([4](#) )