Opportunity Title: Climate Resilience Military Installation: Post-Doc
Opportunity Reference Code: NPS-2021-0002

Organization	U.S. Department of Defense (DOD)
Reference Code	NPS-2021-0002
How to Apply	Click on *Apply* at the bottom of the opportunity to start your application.
Description	The U.S. Navy Naval Postgraduate School is offering doctoral fellowships at the Naval Postgraduate School.

What will I be doing?

As an ORISE participant, you will join a community of scientists and researchers to model and analyze interdependent infrastructure systems that support military missions on installations and impact communities surrounding installations.

The Naval Postgraduate School (NPS) Center for Infrastructure Defense (CID) and Energy Academic Group (EAG) are leading efforts to assess and improve the resilience of US military installations and surrounding communities to climate change related disasters. Currently, the CID and EAG are leading several projects in this area that need research support, including: the Critical Infrastructure Resilience Collaboration and Assessment (CIRCA) program on military installation resilience, the development of a climate resilience training platform for installations and communities called Dystopia, the development of the NPS Climate and Security Network leading climate resilience efforts on campus and within the DoD, and the delivery of infrastructure resilience short-courses to US military and Allied officers.

Why should I apply?

Under the guidance of a mentor, you will gain hands-on experience to complement your education and support your academic and professional goals. Along the way, you will engage in activities and research in several areas. These include, but are not limited to,
- modeling interdependent military and community infrastructure systems (e.g., water, transportation, and energy)
- working with climate data and projections for assessing future natural disasters that disrupt military operations
- developing analyses and decision-tools that support military installation and community resilience
- publishing research reports and peer-reviewed articles
- developing infrastructure and climate resilience educational materials
- delivering educational short-courses to US military and Allies related to infrastructure and climate resilience
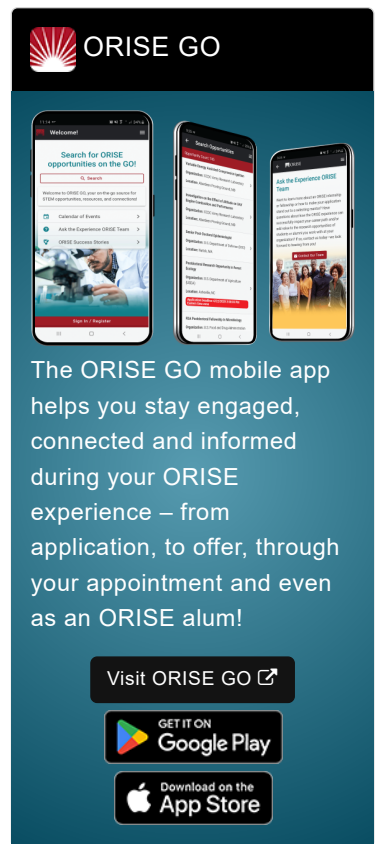
Where will I be located?

Monterey, California. This position is eligible to tele-research.

What is the anticipated start date?

The Naval Postgraduate School 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 internships or fellowships will be filled as qualified candidates are identified.

What is the appointment length?

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This appointment is a twelve 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 Naval Postgraduate School. 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 Naval Postgraduate School

The Naval Postgraduate School was established in 1909. Both the institution and the location of the NPS campus have evolved to meet changing times.

On June 9, 1909, less than four months after the completion of the record-setting world cruise of the Great White Fleet, Secretary of the Navy George von L. Meyer signed General Order No. 27, establishing a school of marine engineering at Annapolis.

This small program, consisting of 10 officer students and two Navy instructors, would later become today's Naval Postgraduate School.

 For more information about the NPS, please visit https://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 will have a Doctoral degree or will have completed by 12 months.

This position is at the Post-Doctoral level. Minimum qualifications include:
- Education: A PhD or equivalent level degree in civil engineering, operations research, and/or related program
- Computation and programming:
- - Experience in the Python programming language
- - Experience with geospatial data and geographic information systems (GIS) software.
- Writing and Publication: Strong written and verbal communication skills.
- Teaching: Experience delivering seminars and/or courses on topics related to infrastructure, climate change, resilience, and natural disasters.

Highly qualified candidates will have competency with:

- Python packages for geospatial data science and operations research (e.g., GeoPandas, Numpy, Pyomo, Numba, Rasterio, Scikit-learn, Fiona, Shapley, etc.).

- Software, including Git and GitLab version control; Industry standard infrastructure models (e.g., EPANET, SWMM, OpenDSS, XENDEE, etc.); QGIS

- Publishing peer-reviewed manuscripts on infrastructure systems, climate change, resilience, and natural disasters.

- Developing course materials (e.g., syllabus, lesson plans, lectures, etc.)

- Presenting research to international audiences

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 - For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. [Click here for detailed information about acceptable transcripts](#).

- 2 Letters of Recommendation

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-2021-0002 in the subject line of the email.

Connect with ORISE...on the GO! Download the new ORISE GO mobile app in the [Apple App Store](#) or [Google Play Store](#) to help you stay engaged, connected, and informed during your ORISE experience and beyond!

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** ([12](#) 👁)
  - **Communications and Graphics Design** ([2](#) 👁)
  - **Computer, Information, and Data Sciences** ([16](#) 👁)
  - **Earth and Geosciences** ([21](#) 👁)
  - **Engineering** ([27](#) 👁)
  - **Environmental and Marine Sciences** ([14](#) 👁)
  - **Life Health and Medical Sciences** ([45](#) 👁)
  - **Mathematics and Statistics** ([10](#) 👁)
  - **Other Non-Science & Engineering** ([2](#) 👁)
  - **Physics** ([16](#) 👁)

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- - **Science & Engineering-related** ([1](#) 👁)
    - **Social and Behavioral Sciences** ([27](#) 👁)
  - **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).