Opportunity Title: Self-Healing Paint Technology Faculty Research Fellow
Opportunity Reference Code: AFCEC-2024-0002

Organization U.S. Department of Defense (DOD)

Reference Code AFCEC-2024-0002

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

Description The Air Force Civil Engineer Center (AFCEC) is offering a faculty fellowship at Northwestern University.

What will I be doing?

As an Oak Ridge Institute for Science and Education (ORISE) participant, you will join a community of scientists and researchers in an effort to collaborate with AFCEC on research and technology focused on a new coating strategy for self-healing paint. This technology uses "graphene-based composites," which include Graphene Oxide (GO), reduced Graphene Oxide (r-GO), and their combinations with other nano/micromaterials such as r-GO and titania nanoparticle composites. It enables length scaled dependent viscosity oil that is stable, insulates metal from corrosive environment, and has underwater applicability.

Why should I apply?

The participant will collaborate with student participants and assist them with their project design, experimental approach, collection and analysis of data, and critical interpretation of results to provide meaningful conclusions relevant to the understanding of self healing paint. Participant will also assist AFCEC with potential self-healing paint field testing at some Air Force base(s) as research progresses toward better product transferability and manufacturing capability.

Where will I be located? Evanston, Illinois

What is the anticipated start date?

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 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 AFCEC. 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 AFCEC

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The Air Force Civil Engineer Center (AFCEC) focuses on technologies applied to the civil engineer mission encompassing, among others, corrosion control, pavements, materials, soils, matting systems, infrastructure protection, cathodic protection, protective coatings, and energy. To find out more, visit https://www.afcec.af.mil/.

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 be current faculty in materials science and engineering, with an emphasis on chemical, mechanical, and/or material science engineering, modeling, and research.

Highly competitive applicants will have education and/or experience in one or more of the following:

- Scholarly expertise in material science, polymers, protective coatings, chemistry, materials, metals or other courses of similar content
- Must be current faculty at Northwestern University and have access to the university resources and facilities

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.
- One Recommendation. We encourage you to contact your recommender(s) as soon as you start your application to ensure they are able to complete the recommendation form and to let them know to expect a message from Zintellect. Recommenders will be asked to rate your scientific capabilities, personal characteristics, and describe how they know you. You can always log back in to your Zintellect account and check the status of your application.

If you have questions, send an email to AIRFORCE@orise.orau.gov. Please list the reference code of this opportunity [AFCEC-2024-0001] 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.

Connect with ORISE...on the GO! Download the new ORISE GO mobile app in the Apple App

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Store or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Engineering** (27 👁)
  - **Physics** (16 👁)
  - **Science & Engineering-related** (2 👁)