Opportunity Title: Military Installation Resilience through Resource Recovery and Waste-to-Energy Systems
Opportunity Reference Code: ARL-R-USMA-CEGS-400053

Organization DEVCOM Army Research Laboratory

Reference Code ARL-R-USMA-CEGS-400053

How to Apply Applications must be submitted in Zintellect.

A complete application includes:

1. **Curriculum Vitae or Resume**
   - List relevant coursework and lab experience as well as all papers, presentations, or publications you may have authored or co-authored. Include any reprints or abstracts if they are available.
2. **Three References Forms**
   - An email with a link to the reference form will be available in Zintellect to the applicant upon completion of the on-line application. Please send this email to persons you have selected to complete a reference.
   - References should be from persons familiar with your educational and professional qualifications (include your thesis or dissertation advisor, if applicable)
3. **Transcripts**
   - Transcript verifying receipt of degree or current enrollment in an undergraduate or graduate program at an accredited university or technical institute. Student/unofficial copy is acceptable
4. **Research Proposal**
   - Research topic should relate to a specific opportunity at ARL
   - The objective of the research topic should be clear and have a defined outcome
   - Explain the direction you plan to pursue
   - Include expected period for completing the study
   - Include a brief background such as preparation and motivation for the research
   - References of published efforts may be used to improve the proposal

Description **About the Research**

This research involves conducting applied research in the fields of Environmental Engineering, Environmental Science, and/or Civil Engineering. The fellowship position is based at the United States Military Academy's Center for Environmental and Geographic Sciences in West Point, New York. The following areas have the most opportunities (this is not an exhaustive list and is provided to convey scope):

- Biotechnology
- Environmental Biotechnology
- Environmental Microbiology
- Environmental Modeling, AI/ML
- Environmental Chemistry
- Microbial Ecology

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- Water Treatment
- Wastewater Treatment
- Anaerobic Digestion
- Membranes / Membrane Bioreactors
- Organic Waste-to-Energy
- Biomethane Production
- Resource Recovery
- Mass and Energy Balances
- Bioreactor Design and Optimization
- Technoeconomic Assessment
- Lifecycle Analysis
- Energy Security
- Environmental Sustainability
- Energy Resilience

Keywords: biotechnology, waste-to-energy, anaerobic digestion, wastewater treatment, resource recovery, environmental modeling

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About USMA and CEGS

The United States Military Academy's mission is to educate, train, and inspire the Corps of Cadets so that each graduate is a commissioned leader of character, committed to the values of Duty, Honor, Country. USMA is the oldest engineering school in the nation and is situated 55 miles north of New York City in the picturesque Hudson Valley. USMA's rigorous programs, quality faculty, and student-to-faculty ratio of 12:1 attract a student body of 4,400 of the nation's best.

The Center for Environmental and Geographic Sciences (CEGS) facilitates, supports, and champions a research program in environmental engineering and science and the geographic sciences to enhance the education of cadets and develop faculty professionally, while addressing the most important and complex challenges facing our Army and the Nation. CEGS interfaces with the broader Department of Defense (DoD) agencies.

ORAU Fellows at USMA-CEGS conduct fundamental and applied research and engineering on projects that are aligned with the Army's and DoD's priorities while contributing to the broader scientific community.

Questions about this opportunity? Please email ARLFellowship@orau.org

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Point of Contact ARL-RAP

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Academic Level(s):** Bachelor's Degree (Journeyman Fellow), Master's Degree (Journeyman Fellow), Master's Degree 7+ years (Senior Fellow), Doctoral Degree (Postdoctoral Fellow), or Doctoral Degree 5+ years (Senior Fellow).
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12)
  - **Earth and Geosciences** (21)
  - **Engineering** (29)
  - **Environmental and Marine Sciences** (14)
  - **Life Health and Medical Sciences** (51)
  - **Mathematics and Statistics** (11)
  - **Science & Engineering-related** (2)