Opportunity Title: Basic Aeromechanics for small Unmanned Air Systems (sUAS)
Opportunity Reference Code: ARL-R-WMRD-300117-WS

Organization DEVCOM Army Research Laboratory

Reference Code ARL-R-WMRD-300117-WS

Description

About the Research

This project involves basic aerodynamics research, specifically small Unmanned Air System (sUAS) relevant problems and scales. Research on this project typically involves the use of experimental fluid mechanics techniques (PIV, MTV, HWA, others) for investigating topic areas such as gusts, highly dynamic maneuvers of small vehicles, and fluid - vehicle interactions. Research also usually leverages the wind tunnel facility located at Aberdeen Proving Ground, MD. Research problems on this project may also include controls related research as they apply to sUAS and aerodynamics.

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About Weapon Sciences (WS)
Internal, transitional, and external ballistics; launch, flight, control, and navigation of guided weapons and aerial systems; development of novel weapon concepts.

About Army Research Directorate (ARD)
ARL's Army Research Directorate (ARD) focuses on exploiting concept development, discovery, technology development, and transition of the most promising disruptive science and technology to deliver to the Army fundamentally advantageous science-based capabilities through laboratory's research competencies. This intramural research directorate also manages the laboratory's essential research programs, which are flagship research efforts focused on delivering defined outcomes.

About ARL-RAP
The Army Research Laboratory Research Associateship Program (ARL-RAP) is designed to significantly increase the involvement of creative and highly trained scientists and engineers from academia and industry in scientific and technical areas of interest and relevance to the Army. Scientists and Engineers at the CCDC Army Research Laboratory (ARL) help shape and execute the Army's program for meeting the challenge of developing technologies that will support Army forces in meeting future operational needs by pursuing scientific research and technological developments in diverse fields such as: applied mathematics, atmospheric characterization, simulation and human modeling, digital/optical signal processing, nanotechnology, material science and technology, multifunctional technology, combustion processes, propulsion and flight physics, communication and networking, and computational and information sciences.

A complete application includes:

- **Curriculum Vitae or Resume**
- **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)
- **Transcripts**
  - Transcript verifying receipt of degree must be submitted with the application. Student/unofficial copy is acceptable

If selected by an advisor the participant will also be required to write a **research proposal** to submit to the ARL-RAP review panel for :

- 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

A link to upload the proposal will be provided to the applicant once the advisor has made their selection.

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

Point of Contact ARL

Eligibility Requirements

- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree.
- **Academic Level(s):** Faculty.
- **Discipline(s):**
  - **Engineering** (2 👁)
- **Age:** Must be 18 years of age