

CIWRO Research Associate – Uncrewed Aircraft System Engineer

The Cooperative Institute for Severe and High-Impact Weather Research and Operations (CIWRO, formerly CIMMS) at The University of Oklahoma seeks to fill a Research Associate position for its uncrewed aircraft system (UAS) research program. The Research Associate will contribute to the development, maintenance, and deployment of the UAS fleet at CIWRO for primarily atmospheric science-related applications. This position is based at CIWRO in Norman, Oklahoma, within the National Weather Center.

Background:

CIWRO, NSSL, the School of Meteorology at the University of Oklahoma, and the broader research community at the National Weather Center (NWC) have long collaborated on pioneering research on mesoscale and boundary layer meteorology and severe storms and their impacts. The Boundary Layer Integrated Sensing and Simulation (BLISS) group at NWC is an example of this collaboration, and acts as an umbrella under which those with research interests in boundary layer meteorology can come together and collaborate. The CIWRO UAS research program is intricately involved in BLISS-related research activities at NWC. The incumbent in this position will contribute to the development, maintenance, and deployment of the CIWRO UASs in support of research activities primarily related to BLISS. This position does not require specialized knowledge of mesoscale and boundary layer meteorology or severe storms dynamics.

Responsibilities:

- Collaboratively work in a team of researchers to document, test, and troubleshoot UASs in support of CIWRO missions.
- Obtain and maintain operator status on CIWRO UAS platforms and ensure the safe operation and maintenance of those UAS.
- Acquire and apply knowledge of the existing and emerging applicable UAS software and hardware methodologies to improve system-level reliability and aircraft control and performance in all phases of flight.
- Design components and sub-assemblies for existing and future UAS.
- Develop and maintain training practices for licensed pilots of CIWRO UASs.
- Develop and maintain techniques for real-time data collection of meteorological variables from UAS flights.

Required qualifications:

- A Master's degree in electrical or computer engineering, or a closely related field.
- Demonstrated experience with UASs, with at least three (3) years of experience building and maintaining UASs.
- Knowledge of flight control theory, estimation, and simulation necessary for developing algorithms and models.
- Demonstrated experience installing and evaluating meteorological sensors on UASs.
- Strong oral and written communication skills.
- The ability to work both independently and cooperatively in an interdisciplinary team.

Preference will be given to candidates who have experience in one or more of the following: using CAD software (Solidworks is in use locally), managing field deployments of UASs,

postprocessing and quality controlling meteorological data collected by UASs, testing new designs for UAS structural design and electronic components, and experience with quad-copter UASs.

Applicants should identify expertise within any of the following areas: Programming in C, C++, Matlab (Simulink); Github; Ardupilot or other open-source flight software stack; 3D printing; software-in-the-loop simulations.

Normal working hours will be routinely observed with some occasional irregular hours during active field deployments. The incumbent is expected to earn their Part 107 operators license; they will receive training and gain expertise with the latest UAS and observation platforms available.

The starting salary will be based on qualifications and experience, with benefits provided through the University of Oklahoma (<https://hr.ou.edu/>). The start date for the position is negotiable. The appointee will serve a customary probationary period during the first year.

To apply, please forward your resume, cover letter, and contact information for three references to:

CIWRO-Careers
University of Oklahoma CIWRO
120 David L. Boren Blvd., Suite 2100 Norman, OK 73072-7304
ciwro-careers@ou.edu
ATTN: CIWRO UAS Engineer

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The University of Oklahoma has a mandatory COVID-19 vaccine requirement, with exceptions only for approved medical or religious accommodations. As a condition of employment, newly hired employees must provide proof of vaccination or initiate the accommodations process before their first day of employment.