

Undergraduate Research Assistant Opportunity within the UW CEE RAPID Facility

UW Civil and Environmental Engineering's (CEE) own UW RAPID Facility is recruiting for two undergraduate research assistants (URA) for fall, winter, and spring 2023-24. The appointments will be approximately 10 hours per week. One appointment will start on December 1, 2023, and the other will start in January 2024; both will continue through June 9, 2024. This position is contingent upon funding.

Job responsibilities include supporting RAPID facility staff and working with a current continuing URA on data-collection deployments, basic field data management and processing, equipment maintenance, and the design and fabrication of instrumentation modifications. The successful applicant will i) be highly motivated for self-directed learning, ii) demonstrate an aptitude for problem solving and exceptional organizational techniques, iii) be professional and adhere to the RAPID Facilities code of conduct, iv) be capable of working with and receiving feedback from a team, v) have basic computing skills, vi) show the ability to support field operations that require carrying modestly heavy equipment (up to 35 lbs) over modestly rough terrain for distances up to a mile as well as traveling and operating equipment during long days, and vii) interest in advancing natural hazard research field data collection via the activities discussed in detail below. This appointment will be paid at \$19.25 per hour.

If you are interested in this opportunity, **by Start of Business on Monday, November 13, 2023, email the RAPID team (rapidreu@uw.edu) a PDF of your resume, unofficial undergraduate transcript, and a short (less than 200 words) statement about why you are a good fit for this opportunity; please indicate your preferred start date in your application statement.** Application review will begin on November 13, 2023, and continue until both positions are filled. Applications will be accepted until January 1, 2024, for the position starting in 2024.

Additional information about the RAPID facility and job activities are discussed below.

The NSF-sponsored UW RAPID facility provides researchers with the equipment, software, and support services needed to collect, process, and analyze perishable data from natural hazards events such as earthquakes, hurricanes, tsunamis, landslides and wildfires. Facility equipment includes ground-based laser (lidar) scanners, GNSS and surveying equipment, streetview style imaging systems, uncrewed aerial systems (UAS) with digital cameras and/or lidar units, accelerometers, and seismometers for ground investigation as well as software to support data processing (E.g., Pix4D, Leica Cyclone suite, Maptek Pointstudio). Additional information about the RAPID facility is available at <https://rapid.designsafe-ci.org/>.

URAs will work primarily with RAPID staff members Dr. Michael Grilliot, Andrew Lyda, Jaqueline Zdebski and Karen Dedinsky. Activities will include the following:

1. Only for the first weeks of the position beginning December 1, activities will include i) use of Google Scholar and other academic search engines to find journal articles and other scholarly works that have been published by facility users, ii) manually examining publications to determine if they present or use data collected with RAPID resources, and iii) documenting results.
2. Assisting RAPID staff prepare for and return from field deployments, including developing packing lists, establishing deployment schedule, packing/unpacking equipment.
3. Assisting RAPID staff and researchers with field deployments, including travel to/from deployment site, equipment setup and testing, data collection, and data evaluation and management in the field. URAs will be trained to use specific equipment and will have the opportunity to support staff with data collection.
4. Supporting pre- and post-deployment data management, and post-processing of collected data.
5. Learning proper care and maintenance procedures for RAPID equipment and inventory.
6. Maintaining a clean and safe workspace in the RAPID occupied spaces within More Hall.
7. Additional activities may include, i) optimizing and recording multispectral camera operation with the facility's Trinity F90+ drone, ii) integrating a new portable recorder with existing seismometers and streamlining their use as a mobile reconnaissance tool, iv) designing and fabricating, using 3-d printing and CNC mills, a mount for the z-boat's new underwater camera, and v) studying for and taking the FAA Part-107 drone pilots license exam.