

## RAPID Services

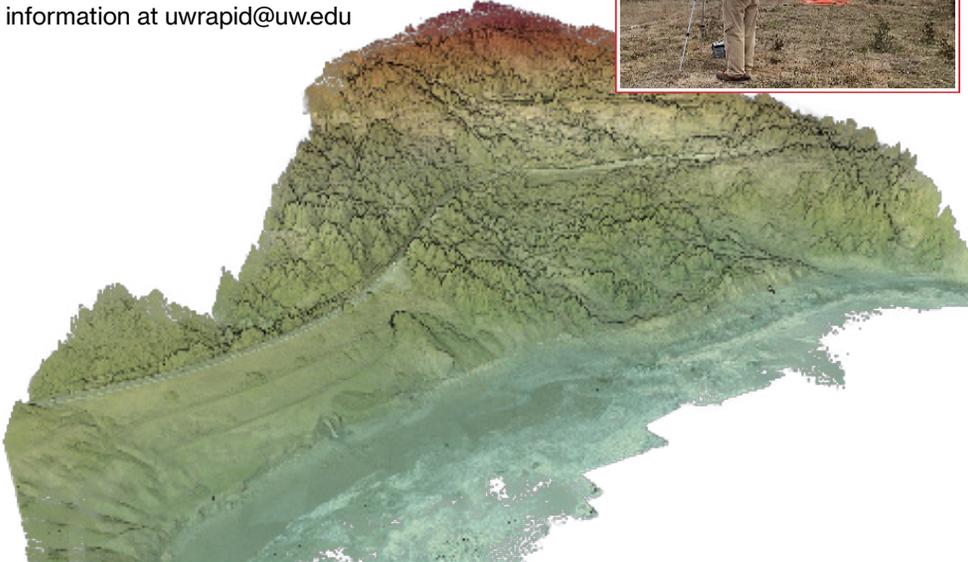
The RAPID can assist with field data collection, and data processing, visualization and archiving. Our services include:

- ◆ Assistance with data collection using RAPID instrumentation at your field location or experimental facility.
- ◆ Lidar and structure from motion (SfM) photogrammetric processing.
- ◆ Data visualization using our computer automated virtual environment (CAVE)
- ◆ Archiving data using DesignSafe, which integrates with RApp.

The RAPID provides training and engages with the community through:

- ◆ Community outreach one-day workshops.
- ◆ One-week intensive training at our facility.
- ◆ Participating in the Research Experience of Undergraduates (REU) program.

Funding for use of the RAPID resources can be obtained through various avenues including the National Science Foundation. Contact us for more information at [uwrappid@uw.edu](mailto:uwrappid@uw.edu)



# NATIONAL SCIENCE FOUNDATION

# RAPID NHERI

## Natural Hazards and Disaster Reconnaissance

The Natural Hazards Reconnaissance Facility (known as the "RAPID") provides investigators with the equipment, software, and support services needed to collect, process, and analyze perishable data from natural hazard events. The facility supports natural hazard and disaster researchers through training and educational activities, field deployment services, and facilitating engagement between scientists, engineers, stakeholders, and the public.



## Ground Investigation/ Site Characterization

Accomplish subsurface characterization of soil and rock through a suite of portable investigation tools including an auger sampler, hand held dynamic cone penetrometer system, and a Schmidt hammer. Use seismic instruments to determine site characteristics using MASW and horizontal/vertical noise techniques.



## Geospatial/Imaging

Use geospatial and imaging data for hazard mapping, damage assessment, deformation monitoring, and 3D digital modeling. The RAPID offers close- and long- range terrestrial lidar scanners, a fleet of unmanned aerial vehicles (UAVs) for imagery capture and collection of airborne lidar, and various high-resolution camera, including 360-degree and thermal imaging systems. Geolocate imaging data using RAPID survey equipment, such as total stations and GNSS/GPS units.

## Coastal Monitoring and Investigation

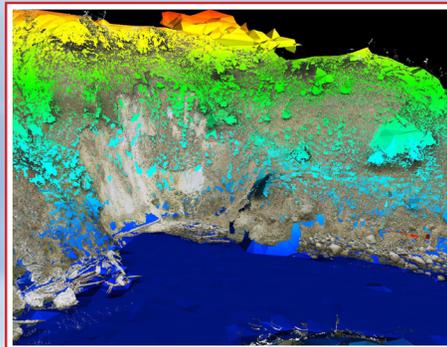
Capture Bathymetric data using a single-beam sonar mounted on a remotely operated boat. Measure water levels and waves with Pressure sensors deployed onshore or offshore.

## Structural Engineering

In addition to the imaging equipment for use in structural damage evaluation, RAPID has robust Nanometrics accelerometer packages consisting of triaxial accelerometers, gps, data loggers and cabling for monitoring building and infrastructure vibrations during earthquakes and windstorms.

## Support Tools

The RAPID offers various other tools to support other instrumentation and for performing natural hazard reconnaissance, including RapPacks (grab-and-go backpacks with essential hand tools, and safety gear), communication devices, computing equipment, and backup devices.



## RApp

Identify, capture, aggregate, organize, and store engineering, natural science, and social science reconnaissance data with the RAPID custom mobile application App (RApp).

## Social Science

Field surveys and data collection can be streamlined and standardized using the RApp. The RApp facilitates linking visual, audio and other types of data temporally and spatially. RApp also supports development and field use of complex questionnaires to collect data of interest to social scientists.

