### UAF RVTEC Research Tours

The [Geophysical Institute Globe Room](https://www.sikuliaq.alaska.edu/rvtec2019/tours.html) will be available for networking and viewing GI research videos. Alaska maps and GI souvenirs including books, sweatshirts, pet items, and more are available in the Map Office.

- **A - Elvey Building (Globe Room)**
- **Thursday Oct 24**
- ~100 people

### Map Office

- **E - Akasofu Building (Room 204)**
- [https://www.gi.alaska.edu/services/map-office](https://www.gi.alaska.edu/services/map-office)

The Map Office is the only full-service map store in Alaska with more than 150,000 maps in stock and available by print-on-demand for hikers, hunters, guides, tourists, boaters, industry and military applications, and more. Topographic, geologic, and road maps are available.
Ocean Acidification Research Center (OARC)

- D - Irving II Building (3rd Floor)
- https://www.uaf.edu/cfos/research/major-research-programs/oarc/
- 15 person maximum per tour

Ocean acidification (OA) is the result of anthropogenic increases in atmospheric carbon dioxide that is later absorbed by the ocean. This change in ocean chemistry makes the global oceans more acidic. Concerns over increasing acidity in Alaska and how this phenomenon will impact Alaska’s Blue Economy spurred the creation of the Ocean Acidification Research Center (OARC) within the College of Fisheries and Ocean Sciences (CFOS) at the University of Alaska Fairbanks (UAF). Since 2008, the OARC has been making observations of OA from research vessels and autonomous sensors, by experimenting with culturally and economically valuable subsistence and commercial species, and estimating future changes to Alaska’s waters.

Operational Oceanography Lab

- C - O’Neill Building (Room 103)
- http://research.cfos.uaf.edu/artlab/projects.php
- 20 person maximum per tour

Centered in the Institute of Marine Science at the University of Alaska Fairbanks, here is where you can find schematics and descriptions of our instruments, summaries of our current and past projects, and tools that allow access to real-time data.

Alaska Center for Unmanned Aircraft Systems Integration (ACUASI)

- A - IARC Building (Room 306)
- https://acuasi.alaska.edu/
- 10-15 person maximum per tour

The Alaska Center for Unmanned Aircraft Systems Integration - RDT&E, or ACUASI, was established in December 2012 by the University of Alaska Board of Regents in recognition of the importance and growth of the unmanned aircraft program. It was established under the University of Alaska Fairbanks in the Geophysical Institute where it originated but was given the role of leading all unmanned aircraft programs for the entire system. It was also tasked to pursue opportunities with the FAA such as the FAA test sites. The program originated in 2001, and over the years has expanded in scope, the equipment it operated, and the variety and complexity of research projects it executed. In 2013 ACUASI submitted its proposal to the FAA to become one of the six test sites established by the 2012 FAA Modernization and Reform Act, and in December 2013 the FAA announced that the University had been selected. The Pan-Pacific UAS Test Range Complex reports to ACUASI, but also includes principal partners in Oregon and Hawaii as well as 56 non-state partners located all over the US and internationally. Ranges are located in the three states as well as in Iceland, our key international partner.

Alaska Satellite Facility (ASF)

- B - Elvey Building (Globe Room)
- https://www.asf.alaska.edu/
- 15 person maximum per tour

The Alaska Satellite Facility is a NASA Distributed Active Archive Center (DAAC) charged with processing, archiving, and distributing Earth observation data from air- and space-borne synthetic aperture radar (SAR) sensors. The ASF DAAC currently
archives over nine petabytes of SAR data that are distributed worldwide to users in the scientific, academic, and governmental communities. ASF is also part of the NASA Near Earth Network and operates four antennas that provide downlink, command, and tracking support for polar-orbiting satellites.

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**Alaska Earthquake Center (AEC)**

- **B - Elvey Building (Room 301)**
- [https://earthquake.alaska.edu/](https://earthquake.alaska.edu/)
- 15 person maximum per tour

The Alaska Earthquake Center is dedicated to reducing the impacts of earthquakes, tsunamis and volcanic eruptions in Alaska. We provide definitive earthquake information to the public, emergency managers, scientists and engineers. This information is derived from the network of seismic monitoring stations we operate across the state. Our data center is at the Geophysical Institute on the University of Alaska Fairbanks campus.

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**VisSpace - Near Realtime Vessel Demonstration**

- **B - West Ridge Research Building (Room 010)**
- [https://www.alaska.edu/epscor/visspace/](https://www.alaska.edu/epscor/visspace/)
- 30 person maximum per tour

VisSpace consists of a bank of high-definition monitors providing upwards of 60 million pixels of resolution, connected directly to UAF high-performance computing and storage. In addition to the seven 75-inch screens ringing its conference table, it also features audio, a videoconference system, high-speed wifi, dedicated memory and a 10-gig link to UAF, and is configurable to serve as either a conference room or as a theater. Users can display the dynamics of a problem, and the effects of policy options, in a clear and compelling manner – thus helping people to develop the best approaches and solutions. Several near realtime vessel data systems will be demonstrating capabilities in the VisSpace.

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**OpenRVDAS Demo**

- by David Pablo Cohn
- [https://openrvdas.org/](https://openrvdas.org/)

OpenRVDAS (Open Research Vessel Data Acquisition System) is a Linux and Python-based open source architecture intended to allow easy creation of customized data acquisition systems for research vessels and other scientific installations. Its modular design makes it easy for IT staff and scientists to assemble the functionality they need from existing components or - if necessary - create and integrate new components that serve their need.

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**OpenVDM Demo**

- by Web Pinner
- [https://github.com/webbpinner/OpenVDMv2](https://github.com/webbpinner/OpenVDMv2)

OpenVDMv2 is a ship-wide data management solution. It is comprised of suite of programs and an accompanying web-application that provides vessel operators with a unified interface for organizing files created by multiple data acquisition systems into a single cruises data package while a cruise is underway. Once the files are in the cruise data package they are immediately accessible by scientists. In addition, vessel operators can configure OpenVDM to regularly copy the cruise data package to backup storage devices, external hard drives and even to shore-based servers.

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**CORIOLIX Demo**

- by Chris Romsos
- [https://datapresence.coas.oregonstate.edu/demo/](https://datapresence.coas.oregonstate.edu/demo/)
The Cruise Observations Real-time Interface & Open Live Information eXchange (CORIOLIX) is a software system for telemetering (including bi-directional ship-shore data synchronization), capturing, storing, and accessing underway sensor data and information. Central to the CORIOLIX stack is a common shipboard and shoreside user interface that includes services for data visualization, mapping & charting, alerts & notifications, sensor inventory and configuration, and event logging. CORIOLIX was developed for the new Regional Class Research Vessels and is currently deployed on Oceanus and Endeavor.

**Sikuliaq Mapserver Demo**

- by Steven Roberts / Steven Hartz

The Sikuliaq Map Server is an integrated real-time web based layered GIS system available to researchers on board the R/V Sikuliaq. The map server also has the ability to stream low bandwidth real-time data to shore for situation visualizations.

**DevSpace - Virtual Reality Demonstration**

- B - West Ridge Research Building (Room 010)
- [https://www.alaska.edu/epscor/visspace/](https://www.alaska.edu/epscor/visspace/)
- 15 person maximum per tour

The Dev Space contains a number of development tools, including a smaller version of the Vis Space for developing content, two HTC Vive VR setups, a Samsung VR headset, two 360 cameras and a host of software for developing visualizations.