ID: Type: **Oral**

- a State-of-the-Art Cabled Undersea Observatory

In 2013 and 2014, the University of Washington deployed RSN (Regional Scale Nodes), a state-of-the-art cabled ocean observatory. RSN was designed and constructed by the Applied Physics Lab-UW for a 25 year service life. Powered from shore by an 860 km backbone of high-bandwidth, telecom grade electro-optical cable, RSN supports 14 seafloor instrument platforms operating at depths of 80 to 2900 m. The instrument platforms are located on sediment in the offshore littoral zone and at the base of the continental shelf, and on pillow basalt in the caldera of an active undersea volcano 480 km offshore. Also deployed are three large and complex subsurface moorings that host APL-designed winched profilers, as well as APL-upgraded McLane Moored Profilers on separate moorings. The moorings are anchored at depths of 600 to 2900 m. In all, 100 commercial and custom academic instruments are connected to this observatory, including nine hydrophones and 13 seismometers. The observatory is highly modular and flexible, utilizing many hybrid and electrical wet-mate connectors for efficient installation and servicing by ROV.

Primary author: CRAM, Geoffrey (Applied Physics Laboratory - University of Washington)

Presenter: CRAM, Geoffrey (Applied Physics Laboratory - University of Washington)

Track Classification: 4 - Upcoming acoustic/seismic trends in Ocean Observatories