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University of Nevada, Reno
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New Mexico State University
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University of North Carolina, Chapel Hill
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Northwestern University
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San Jose State University
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Texas Tech University
University of Tulsa
University of Utah
Virginia Polytechnic Institute
University of Washington
Washington University, St. Louis
West Virginia University
University of Wisconsin, Madison
University of Wisconsin, Milwaukee
University of Wisconsin, Oshkosh
Western Washington University
Woods Hole Oceanographic Institution
Wright State University
University of Wyoming
Yale University

IRIS President Update – Fall 2016



Dear Colleagues,

These have been a very busy 6 months as we worked on preparing our proposal for the management and operation of what NSF is calling the “National Geophysical Observatory for Geoscience” or N GEO for short. According to the solicitation, N GEO will comprise “a distributed, multi-user, national facility” for the maintenance and operation of modern geodetic, seismic and related geophysical instrumentation to support research and education in the Earth sciences. N GEO effectively combines the facilities that have operated under SAGE and GAGE into a single national facility, although it allows for multiple awardees to manage different parts of the facility.

The IRIS proposal, which has been closely coordinated with UNAVCO, relied heavily on input from more than 80 community members who serve on 11 different IRIS governance committees. These committees prepared white papers in response to the N GEO solicitation describing foundational and frontier facility needs, identified how these facilities should evolve over the next 10 years to meet changing scientific requirements and opportunities, and developed recommendations on programmatic and budget priorities. Twenty-eight community members directly participated in the writing of the proposal and 15 other community members served on two *ad hoc* committees that provided constructive internal reviews of the proposal at key stages during the proposal preparation process. Finally, the proposal was approved for submission to NSF by the IRIS Board of Directors. In every sense, this is a community-driven proposal reflecting the needs and priorities of the 125 academic institutions that are IRIS consortium members. As I write this letter, we are completing the final copy editing of the proposal and assembling various supplementary documentation required by NSF. We expect to formally submit the proposal the week after AGU.

More than 230 researchers, post-docs, graduate students and other members of the seismology community gathered in Vancouver, Washington, June 8-10, for the 2016 IRIS Workshop. The focus of this workshop was on new developments in seismology, including applications of seismology in non-traditional areas (glaciology, hydrology, near-surface Earth processes, and ocean and atmospheric studies) as well as the integration of seismology with related disciplines in the solid Earth sciences. Prior to the start of the IRIS Workshop, meeting participants could choose to attend a mini-workshop on active source seismology, a half-day data services short course, or take a field trip to Mount St. Helens led by Seth Moran (Cascades Volcano Observatory) and Steve Malone (University of Washington).

During the week of June 20th, a crew of students, faculty, industry personnel, and IRIS staff deployed several hundred sensors above an active seismic

lineament in north-central Oklahoma for the Wavefields Community Demonstration Experiment. The goals of this experiment were to capture the full wavefield generated by local seismicity beneath the array, investigate induced seismicity processes, and provide the community with experience in the use of new nodal-style instrumentation. Approximately 30 students from 18 different institutions, including two international students, were among those selected to assist with the deployment. In addition, students and staff from local universities (University of Oklahoma and Oklahoma State) and staff from the Oklahoma Geological Survey participated in the fieldwork. The crews deployed several hundred latest-generation three-component nodes along three seismic lines and in a seven-layer gradiometric array outside the town of Enid. IRIS and PASSCAL staff installed 18 broadband stations in a Golay array, including six subarrays each with three three-component seismometers, surrounding the nodes. Nine infrasound stations were also deployed. The nodal sensors were retrieved in mid-July and the remaining broadband and infrasound sensors were removed in November. All data collected during this experiment have been archived at the IRIS Data Management Center and are available to any interested investigator.

IRIS completed a very successful summer field season in Alaska this Fall. Sixty-nine Transportable Array (TA) stations were installed bringing to 117 the total number of new TA stations installed in Alaska since 2014. An additional 73 new TA stations are planned for installation in the 2017 field season which, together with existing stations that have been upgraded, will complete the 266 station network in Alaska which will operate for two years. IRIS is collaborating with NOAA and NASA to install met sensors at many of the Alaska TA stations. This summer the TA deployment was featured by the Alaska Earthquake Center during the annual public summer tours hosted by University of Alaska Geophysical Institute. About 200 visitors from Alaska, the Lower 48, and various countries, spanning all age groups, participated in the tours.

A joint IRIS-UNAVCO EarthCube Building Block proposal called GeoSciCloud was recently funded by NSF. This proposal will allow us to move portions of the IRIS and UNAVCO data collections and web services into a cloud environment to test the performance, maintainability, cost and suitability of operating data centers in the cloud. No SAGE funding is involved, but results may benefit future IRIS and UNAVCO Data Services activities.

A week-long orientation for the 2016 IRIS interns was held from May 29 to June 4, 2016, at the PASSCAL Instrument Center on the New Mexico Tech campus. This year, 14 IRIS interns and one intern from UNAVCO's RESESS program received training in the basics of seismology, technical training on how to install both broadband and active source seismometers, and an introduction to seismic data processing.

I want to remind representatives from Consortium Voting Members of the election to the Board of Directors (ballots were sent out about 3 weeks ago). This year, elections are being held for Board Chair and two Director positions, each with a term of three years. I hope to see you at the Annual IRIS Membership Meeting at AGU on the evening of Monday, December 12th. This year we will be meeting at Hotel Zelos (12 4th Street; 5th floor). The reception begins at 6:00 pm; the Membership Meeting at 7:00 pm.

See you there!

Bob Detrick, IRIS President