

**Early-Career Scientists/Faculty: Introduction to GeoPRISMS/MARGINS Data Resources,
Mini-Lessons, and Effective Broader Impacts**

**Sunday December 10, 2017
AGU Fall Meeting 2017
New Orleans, LA**

Conveners: Andrew Goodwillie (Lamont-IEDA), Julia Morgan (Rice University)

Early-career members of the GeoPRISMS community including graduate students, post-docs and recently-appointed faculty often seek help in three areas: In generating ideas for successful broader impacts, in finding reliable sources of material for their class exercises, and in locating effective data tools relevant for their research and teaching. This workshop aimed to provide guidance and pointers on these topics, and aimed to show how the GeoPRISMS-hosted [MARGINS mini-lessons](#) could be used as a vehicle to explore each aspect.

Following an introduction by GeoPRISMS Office chair Demian Saffer, this half-day workshop proceeded with demonstrations from the NSF-funded IRIS, UNAVCO and IEDA data facilities of data tools and resources that are relevant for GeoPRISMS.

John Taber, IRIS director of education and public outreach, presented IRIS data tools including [Seismic Monitor](#) which displays near real-time earthquake information, the Earthquake Teachable Moments [slide packets](#), IRIS Ground Motion Visualization [GMV animations](#), the IRIS [3-D Earthquake Browser](#), a seismic wave propagation [visualization tool](#), and the [jAmaSeis](#) realtime seismic data display.

UNAVCO's Shelley Olds described the [Short Courses](#) for advancing technical expertise which cover topics including GPS and InSAR data processing, and Terrestrial Laser Scanning. The [GETSI](#) peer-reviewed teaching modules were shown. Her presentation also provided a demonstration of the [GPS Velocity Viewer](#) web interface.

Andrew Goodwillie from the IEDA facility demonstrated the NSF Data Management Plan [Tool](#), Data Search using [EarthChem](#) and [MGDS](#), and the [GeoMapApp](#) data discovery and visualization tool.

Former GeoPRISMS Office chair and lead PI on the [MARGINS mini-lessons](#) project Juli Morgan introduced the rationale behind the mini-lesson modules. They were designed to integrate in undergraduate geoscience curricula the critical new MARGINS observations and insights of fundamental geological processes along continental margins. Covering all four MARGINS scientific initiatives (SubFac, SEIZE, RCL, S2S), the MARGINS mini-lessons present a comprehensive and balanced suite of learning modules that highlights key results of the MARGINS program, as well as some early results of the GeoPRISMS SCD and of RIE initiatives. The mini-lessons enable data-rich learning

opportunities for upper-level undergraduate students and provide a valuable resource to educators interested in continental margins research. Juli Morgan discussed the Rift Basin Morphology module as an example of bringing RCL science into the classroom. Eliza Richardson and Jeff Marshall summarized SEIZE initiative mini-lesson modules covering Slow-Slip Events. Bob Stern and Jeff Ryan described SubFac modules that tackle active tectonics and geochemical studies at the Marianas and Central America subduction systems.

The final part of the workshop was a round-table discussion of strategies to improve the impact and effectiveness of proposed Broader Impacts, with a focus on the generation of community accessible mini-lessons and data sets.

More than thirty participants from a range of fields registered for the event. The conveners thank GeoPRISMS for arranging this mini-workshop at the Fall AGU meeting.