

THE GEOPRISMS PROGRAM

is a community-driven effort to carry out interdisciplinary investigations of continental margins around the world. Scientists from different disciplines work together, combining field operations with numerical, experimental, and analytical studies to develop an integrated understanding of the fundamental controls on continental margin evolution. These include deformation of the crust and mantle, generation, transport and storage of magma, chemical and material fluxes, fluid flow, and surface processes.

GeoPRISMS investigations have practical applications for sustainability in the face of climate change and sea level variation, resource management and availability, and hazard mitigation.

PROGRAM HIGHLIGHTS

Conferences & Workshops

GeoPRISMS sponsors scientific workshops each year to plan and advance research.

Event Response

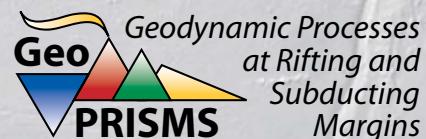
A rapid response strategy for earthquakes, volcanic eruptions, and other natural events allows scientists to collect data on active systems.

Data Management

All data collected under the GeoPRISMS Program are made available via an open, integrated data management system. <http://www.marine-geo.org/portals/geoprisms/>

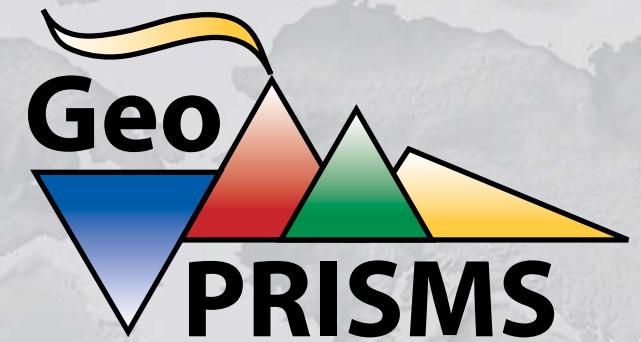
Education & Public Outreach

GeoPRISMS offers several programs to engage the public and students, including the Distinguished Lectureship Program and the Annual Student Prize for best presentation at AGU. MARGINS mini-lessons are available for undergraduate classes. <http://serc.carleton.edu/margins/index.html>



The GeoPRISMS Program is driven by input from, and interaction with, the Earth science community. GeoPRISMS is funded by the National Science Foundation.

The Pennsylvania State University
The GeoPRISMS Office
Department of Geosciences
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DISTINGUISHED LECTURESHIP PROGRAM

2017 - 2018

An opportunity for US colleges, universities, museums, and other institutions to host lectures by outstanding geoscientists.

<http://geoprisms.org/education/distinguished-lectureship-program/>

Distinguished scientists involved with GeoPRISMS science and planning are available to visit US colleges, universities, museums, schools, and other institutions. The distinguished speakers will present technical and public lectures on subjects related to the two GeoPRISMS science initiatives:

SUBDUCTION CYCLES AND DEFORMATION • RIFT INITIATION AND EVOLUTION



CYNTHIA EBINGER

Dr. Cynthia Ebinger holds the Marshall-Heape Chair in Geology at Tulane University. She received her BS in marine geology from Duke University, and a MS and PhD from the MIT-Woods Hole Oceanographic Joint Program in Oceanography. She completed her postdoctoral training at NASA Goddard Space Flight Center

and through a NATO fellowship at the University of Leeds. Her research focuses on plate boundary deformation processes, with focus on volcano and earthquake processes in marine and continental settings. Specifically, her data acquisition and modeling probe the response of Earth's plates to stresses induced by the movement of faults and the flow of magma and volatiles. As a geophysicist, she utilizes a range of signal processing and analytical and numerical modeling, studies of rock properties and Earth deformation processes, linking geological and geophysical data sets. The goal of her research teams is to understand the basic physics of fundamental Earth processes.

Public Lecture: *Recipe for continental rifting: Flavors of East Africa*

Technical Lecture: *Earthquakes within continental plates: How, Where, and Why it Matters*



BRANDON SCHMANDT

Dr. Brandon Schmandt is an Assistant Professor in the Earth and Planetary Science Department at the University of New Mexico. His research primarily uses observational seismology to investigate tectonic and magmatic processes. Recently he is involved in a collaborative project to investigate melt generation, melt transport, and

crustal evolution in the Cascades arc at Mount St. Helens (www.imush.org). The project includes multi-scale seismic arrays, magnetotelluric imaging, and petrologic analyses. The subset of the seismic studies lead by UNM uses two weeks of continuous recording with a 900-geophone array concentrated within about 12 km of Mount St. Helens. Presentations will largely focus on this hybrid active and passive source portion of the project and place those results in the broader context of recent advanced views of magmatic processes at Mount St. Helens.

Public Lecture: *Exploring the roots of volcanoes with seismology*

Technical Lecture: *Investigation of Mount St. Helens earthquakes and magma plumbing with a hybrid natural and controlled source seismic survey*



HEATHER SAVAGE

Dr. Heather Savage is an Associate Research Professor at Lamont-Doherty Earth Observatory. Using both laboratory experiments and field studies, her research focuses on understanding the strength and stability of faults in order to improve our ability to assess when and where large earthquakes occur. Heather is particularly

interested in identifying seismic signatures of ancient earthquakes in the rock record that provide windows into the processes that occur during earthquakes. She has worked in a variety of geologic settings, studying faults in California, Nevada, Oklahoma, Vermont, Alaska, Wyoming, Japan, and Italy.

Public Lecture: *The science and pseudoscience of earthquake prediction*

Technical Lecture: *Understanding deformation in fault zones over multiple seismic cycles*



ESTEBAN GAZEL

Dr. Esteban Gazel is an Associate Professor at the Department of Earth and Atmospheric Sciences at Cornell University. He uses geochemical and petrological tools to understand intraplate magmatism, subduction zone processes, and deep Earth geochemical cycles. Ongoing projects include the evolution of mantle plumes (from

Large Igneous Provinces to modern hotspots), the role of island arcs in the generation of continental crust, and volatile budgets in the mantle. His research approach integrates a combination of field, lab, statistical, and theoretical methods with interdisciplinary collaboration with other fields in Earth Science.

Public Lecture: *The rocks that joined the Americas: Is there a connection with climate and evolution of life?*

Technical Lecture: *Making young continents in arcs*

Interested in hosting a GeoPRISMS distinguished speaker?

Apply before July 10, 2017!

Any US institution interested in inviting a DLP speaker may apply via the GeoPRISMS website:

<http://geoprisms.org/education/distinguished-lectureship-program/>

Applications are due by July 10, 2017 for speakers visiting in Academic Year 2017 - 2018 (Fall 2017 - Spring 2018). Please note that spots are limited as speakers are only available to visit approximately four institutions apiece. Institutions catering to the general public or not currently involved with GeoPRISMS research are strongly encouraged to apply, including those granting undergraduate or masters degrees, as well as those with PhD programs. Institutions may request a technical and/or public lecture. Public lectures outside of established geoscience departments (including libraries and museums) are encouraged to apply, with help from the GeoPRISMS Office to coordinate. The GeoPRISMS Office will cover airfare for speakers' travel and will coordinate travel and off-site logistics. Host institutions are responsible for the speaker's local expenses (i.e. hotel and meals) for the duration of the visit.

