Geophysics: Garrett Apuzen-Ito

I use a variety of geophysical techniques to study the architecture and mechanics of the crust and tectonic plates. Students who work with me have strengths in math and physics and are interested computer data analysis and visualization.

REU Project

Seafloor spreading at mid-ocean ridges (arrows in box 1) takes on a huge diversity of shapes and forms owing to the complex interactions of faulting and magmatism. For example, in the eastern Pacific, robust magmatism creates long straight ridges separated by transform faults (2), whereas in northern Atlantic, weak magmatism leads short segments of spreading with huge fault blocks (3).

I invite an REU student to work with me and my post-doc to examine digital topography at mid-ocean ridges. We will address how differences in magma supply alter the style of faulting, the form of spreading segments, and the ways in which segments are offset.