

Geophysics: Garrett Apuzen-Ito



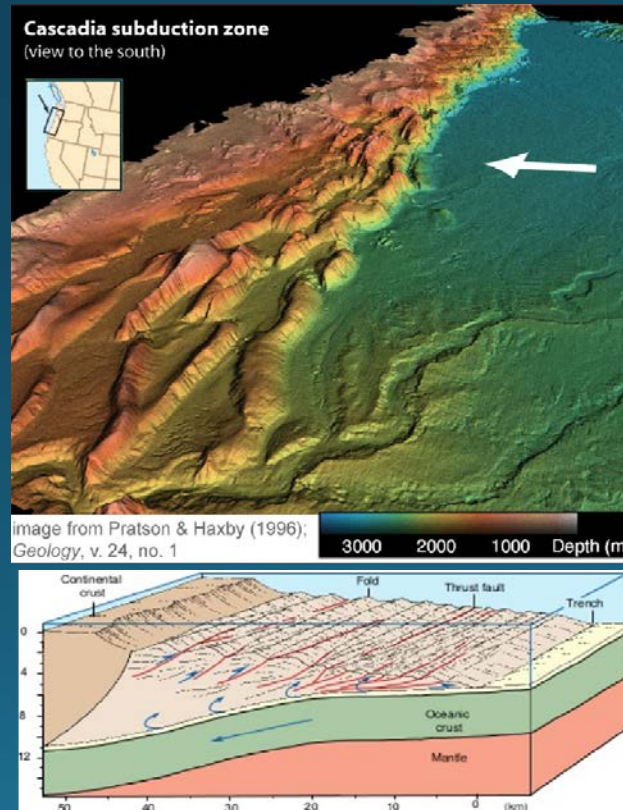
I use a variety of geophysical techniques to study the internal structure and mechanics of the crust and tectonic plates. I use geophysical field measurements to illuminate features in the crust such as frozen magma bodies, which are relevant to geothermal energy resources as well as density structure that impacts fresh water supply. I use computational geophysical simulations of solid and fluid mechanics to study lithosphere deformation and faulting. Students who work with me have strengths in math and physics and are interested data analysis in computer modeling.

Potential REU Projects

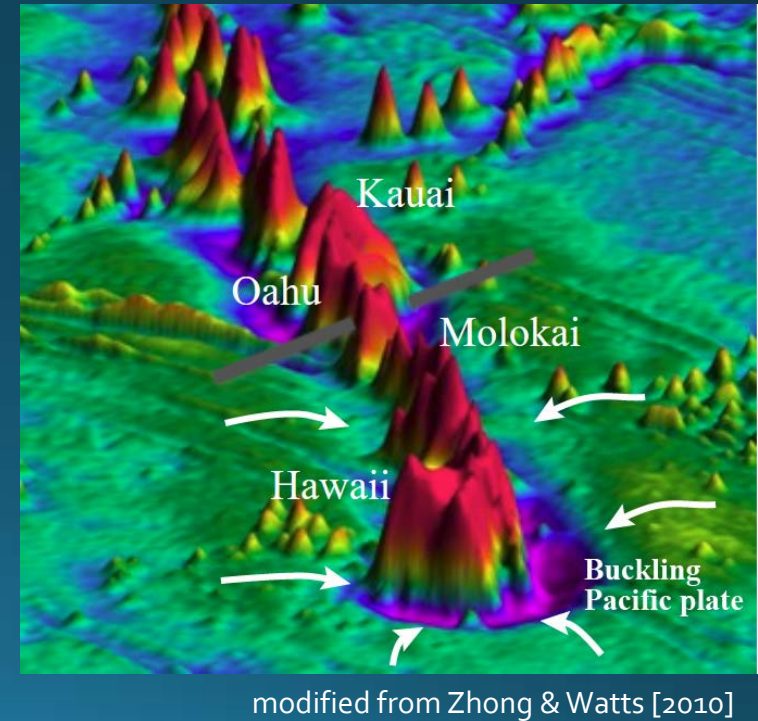
1) Geophysical field work and data analysis to image the shallow structure of the crust relevant to the impacts of ground water flow and storage



2) Computer models of the growth and faulting of mountain belts and submarine accretionary wedges where tectonic plates collide ([see movie on YouTube](#))



3) Computer simulations of the buckling and fracturing of the Pacific tectonic plate beneath the Hawaiian islands.



modified from Zhong & Watts [2010]