

UNDERGRADUATE SEISMOLOGY INTERNSHIP PROGRAM



Opportunities for physics majors to conduct applied research for 8 to 10 weeks in the summer.



2009-10 Recruiting Speaker - Louanne Christopher

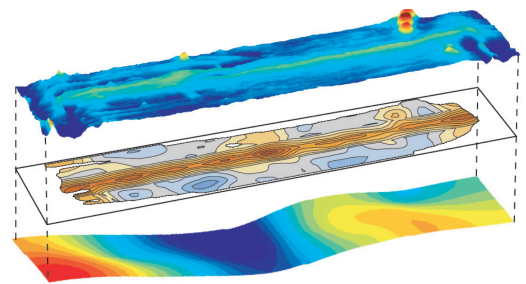
IRIS Internship Program Alumnus & Development Geophysicist, Chevron North America Exploration and Production

Opening Earth with geophysics and seismology



Have you ever looked at the picture of Earth's glowing, molten interior and wondered – "How do they know that is what it looks like?" Well, the answer is seismology. As an undergraduate physics student at Morgan State University, participating in research on coal samples and meteorites I had not given any thought to a career involving seismology. However, as graduation drew closer, I wondered what careers I could pursue with a physics degree. I was advised to consider geophysics and applied to and was accepted into the IRIS Undergraduate Internship program. That first foray into seismology "*opened up the world to me*" by giving me the opportunity to use seismic tomography to image mantle upwellings 8-10 km below the surface (5-7 miles) and propose mechanisms for magma delivery.

Now as a geophysicist for a major oil company, I create images of Earth's interior from the surface 5 to 6 km (tens of thousands of feet). We generate three-dimensional (3-D) images of buried salt domes, turbidite sand flows, underwater river channels and prehistoric carbonate reefs. These critical images allow us to thread drill pipe thousands of feet to recover the hydrocarbons that fuel our lives and the economy. Seismology provides the x-ray vision to help us 'see' the prize buried deep in the subsurface and even miles below the seafloor. Advances in seismic research, like time-lapse (4-D) seismic and continuous seismic monitoring, allow us to record real-time changes in fluid content in the subsurface. This is truly applied physics!



2010 Summer Internship Program Description

Conduct research with state of the art geophysical data and leading researchers at IRIS institutions. Research projects may involve the deployment of seismic instruments in the field (within the US or internationally), and/or analyses of seismic data in a lab setting with the ultimate goal of producing results to be presented at a national scientific meeting.



IRIS provides

- A weekly stipend (\$550/week for 9 - 11 weeks)
- A week-long orientation at New Mexico Tech (funding for travel & room/board)
- Funding for travel to the home institution of your research host
- Assistance securing housing at the host institution
- Funding for any additional expenses related to fieldwork
- Funding to present your results along with the associated meeting costs (travel, registration, abstract submission fee and per diem)

Experience or coursework in geophysics is not required.

Applications accepted November 1 to February 1, 2010