



The Heising-Simons Natural Disaster Risk Reduction UC Berkeley – GeoHazards International Internship:

Conduct civil engineering & earth science research relevant to emerging countries

Two internship positions will be available to UC Berkeley civil engineering and earth science undergraduates for the summer of 2015. One earth science and one civil engineering intern will conduct research in support of current earthquake and landslide hazards mitigation and awareness projects underway in northeast India through collaboration between UC Berkeley and GeoHazards International (GHI, www.geohaz.org).

GHI works in the world's most vulnerable communities to reduce loss of life and suffering caused by earthquakes and tsunamis through preparedness and mitigation. GHI works in the city of Aizawl, the capital of the northeast Indian state, Mizoram.. Aizawl's recent rapid population growth has led to poor quality and unplanned construction that puts residents at risk from the major earthquakes that threaten the region. The city's location on a mountain ridge presents additional risk, because the steep slopes are prone to landslides and seismic energy is amplified on topographic ridges. GHI currently is working with a multidisciplinary team of US, Indian and local engineers, earth scientists and planners to reduce the city's overwhelming level of earthquake and landslide risk.

Interns will conduct their research projects under the mentorship of a GHI staff member, and a UC Berkeley faculty member and a graduate student. While the specific research projects for the interns are still being developed, some possible research topics could include:

- Landslide mapping studies of the local area to identify specific areas of high landslide susceptibility zones and potential remediation measures;
- Investigations of specific landslides affecting people and infrastructure;
- Seismic hazard characterization and estimation of the maximum shaking possible from the nearby faults;
- Evaluation of lifeline systems like the water storage and delivery infrastructure, followed by network analysis to determine fragilities of various components and identification of the key system vulnerabilities;
- Conducting geotechnical or structural studies that develop possible solutions to protect vulnerable community buildings and infrastructure such as multi-family housing, water storage tanks, schools, and bridges; and
- Studies of the potential effects of specific land use policies and regulations intended to reduce the local population's risk.

Apply online at <http://peer.berkeley.edu/education/internships.html> beginning January 23, 2015. Applications are due by February 23, 8am. Students from diverse groups traditionally underrepresented in science and engineering programs are especially encouraged to apply.

Aizawl: A city in need of resilience-building



Unregulated construction in earthquake and landslide country

