



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

*Conduct civil engineering & earth science research relevant to emerging countries*

Two paid internship positions will be available to UC Berkeley civil engineering and earth science undergraduates for the summer of 2016. 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, and potentially other locations, through collaboration between UC Berkeley and GeoHazards International (GHI, [www.geohaz.org](http://www.geohaz.org)). The internship includes an international field component.

GHI works in the world's most vulnerable communities to end preventable deaths caused by natural hazard events. We work before disaster strikes, focusing on 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 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:

- Seismic hazard characterization and estimation of the maximum shaking possible from the nearby faults;
- Landslide mapping studies of the local area to identify specific areas of high landslide risk and potential remediation measures;
- Evaluation of transportation and electrical power systems, followed by network analysis to determine fragilities of various components and identification of the key system vulnerabilities;
- Conducting geotechnical or structural studies that support development of 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.

**Aizawl: At risk from earthquakes and landslides**



**Unregulated construction on steep, landslide-susceptible slopes**



Apply online at <http://peer.berkeley.edu/education/internships.html> beginning January 20, 2016. Applications are due by February 22, 8am. Students from diverse groups traditionally underrepresented in science and engineering programs are especially encouraged to apply.