



**Seeking a graduate student researcher to study
geotechnical site investigation through seismic wave propagation**

Applications are encouraged for a graduate research assistantship in geotechnical engineering or applied geophysics at UNLV's Applied Geophysics Center beginning fall of 2012. Degree program may be in civil engineering (geotechnical), geophysics, or interdisciplinary engineering - geophysics. Candidates holding a B.S. in civil engineering, geophysics or a related field who are enthusiastic to study applied geophysics in a multidisciplinary environment encompassing specializations in geotechnical engineering, seismology and geology should apply. Ph.D.-level candidates are preferred over M.S. International applicants are welcome.

The successful candidate will join an existing team encompassing faculty, industry professionals, staff and other students to develop approaches and tools for characterizing anomalous ground using seismic wave propagation. Applications of greatest interest include detection and delineation of buried targets such as cavities and cemented lenses, and overall multi-dimensional mechanical characterization of geotechnical sites. Research activities will encompass collection of multichannel, multicomponent seismic data at previously characterized sites, processing data in time and frequency domains to ascertain distinguishing characteristics and, ultimately, creation of user algorithms for characterizing impedance or wave transmission velocities of the subsurface in three dimensions. Emphasis is placed upon Rayleigh-type seismic surface waves because of their robust transmission characteristics at the ground surface.

Research will be conducted through UNLV's Applied Geophysics Center (<http://agc.unlv.edu>). The Center is well equipped with data collection equipment and data processing capabilities to facilitate the research.

First-year funding is provided through the University of Nevada Las Vegas Strategic Plan Graduate Research Assistantship program. Health insurance and tuition waivers are included. Various opportunities exist for continuation of financial support through completion of the Ph.D.

The successful candidate must apply and earn graduate admission to the UNLV Civil Engineering program or the UNLV Geoscience program, and also apply for a graduate assistantship. The deadline is **March 1, 2012**. To discuss opportunities, contact the Project Principal Investigator, Professor Barbara Luke, barbara.luke@unlv.edu; (702) 895-1568; <http://faculty.unlv.edu/bluke>.