

UC SANTA BARBARA

# THE *Current*

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## **UCSB Earth Research Institute Project Scientist Recognized for Bringing Hands-On Earthquake Education to Local Schools**

Sandra Seale, project specialist and education and outreach coordinator for the George E. Brown Jr. Network for Earthquake and Engineering Simulation (NEES) group at UC Santa Barbara, has been recognized for her "outstanding service in education, outreach, and training." The award, which she received at the recent NEES 2013 Quake Summit, was for her efforts to bring earthquake awareness and education to the public.

"I really appreciate it," said Seale, a civil engineer, who has been a project scientist with UCSB's Earth Research Institute for the past five years. "We have been working hard on this and it has been growing, so it's nice to get the recognition."

Seale's efforts have largely concentrated on a project dubbed "Make Your Own Earthquake" (MYOE), a hands-on learning tool built to teach K-12 students about the forces involved in an earthquake and the instrumentation used to measure these forces. By jumping, the participant generates the earthquake accelerations, which are measured by a nearby accelerometer. The information is then transferred to a laptop computer, which displays a trace of the "shake" that the student generated with their jumps.

The module has been a hit at Santa Barbara-area grade school science fairs, where children line up to jump as high, hard and fast as they can for 10 seconds and come away with a reading of their earthquake. In Seale's time, the equipment has evolved from the expensive and complicated field gear, where measurements were recorded that took days or even weeks to analyze and return to the students, to a USB accelerometer, with software developed by NEES@UCSB and the Quake Catcher Network, that not only allows the students to walk away with a printout, but also made the module more readily available to schools outside of the UCSB area.

"This project has always had a large component of education and outreach and training," said UCSB research seismologist Jamison Steidl, who is the principal investigator at NEES@UCSB. "Sandy's been involved in all aspects of that since she came on board and has taken it beyond the UCSB level to the network-wide level." Seale was also instrumental in finding and acquiring the funding needed to grow and spread the project, he added.

Due to current funding uncertainties at the federal level, Make Your Own Earthquake may no longer be a regular sight at local Santa Barbara elementary school science fairs. However, NEES@UCSB will be maintaining -- and even increasing -- its outreach by putting together an interactive exhibit at the Santa Barbara Natural History Museum which will feature, among other things, the MYOE module. The exhibit is anticipated to be completed within the next few months.

"The throughput in a museum exhibit is much higher than anyone can get by visiting schools," said Seale. Schools in the Santa Barbara County region visit the museum, she said, as well as schools from nearby counties.

The George E. Brown Jr. Network for Earthquake Engineering Simulation is a National Science Foundation-funded consortium of academic, governmental, industry and international organizations dedicated to the advancement of research and innovations that promote earthquake safety and prevent and minimize damage caused by seismic events.

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