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UCSB Researcher Makes Waves At Earthquake Research Summit

By Tiana Miller-Leonard | October 1, 2013

Dr. Sandy Seale of UCSB NEES receives an award for her efforts in Earthquake education, outreach and training.

Sandra Seale, a member of UCSB's Network for Earthquake and Engineering Simulation, or NEES , was recently honored at the NEES 2013 Quake Summit for her work in earthquake-related educational outreach.

Having received the earthquake education award at the NEES 2013 Quake Summit in September, Seale has worked as project specialist and education/outreach coordinator for NEES and has contributed a great deal of research to efforts aimed at increasing public awareness about earthquake safety.

Seale's most notable form of NEES outreach includes a project titled Make Your Own Earthquake, which teaches K-12 students the mechanics of an earthquake through an activity in which students jump up and down in order to simulate earthquake accelerations. The accelerations are then measured by an accelerometer and displayed on a laptop computer.

The project began when Seale's supervisor decided to take funding for earthquake engineering research that was specifically earmarked for outreach and education and devote this money toward giving children a dynamic, hands-on activity for learning earthquake safety.

"He had the idea of inviting children to simulate their own earthquakes," Seale said. "Then they could see them, and they could understand how trilaterations work and what earthquake vibrations are like."

A large part of the project's success comes from recent advances in accelerometer technology, as accelerometer field equipment can now be set up by three people in just 30 minutes, Seale said.

"Accelerometers have become smaller and smaller," Seale said. "We have the ability to go to any school and set this up in a minute, and do it so that we can meet a lot more kids and do a lot more outreach."

The research and outreach efforts are especially important since it is necessary for children growing up in earthquake-prone areas of California to learn about how these natural disasters work and what to do when they occur, according to Seale.

"We live in California. This is earthquake country," she said.

NEES Research Seismologist Jamison Steidl said making earthquake safety procedures instinctual at a young age could potentially be life-saving, adding that his own children are now more aware of basic earthquake safety tips.

"We had an earthquake here in May that shook up the campus pretty well," Steidl said. "I watched my children get under the table immediately … They knew what to do."

Steidl also said the Make Your Own Earthquake project is beginning to spread to an even larger scale due to the success of Seale's other work, which he said is "bringing that visibility to a national level."

The Make Your Own Earthquake project is only one piece of what the NEES is responsible for, and the organization does a large amount of research in addition to engineering.

According to Steidl, there are several sectors of research and outreach that is included in the larger pool of earthquake engineering research involving NEES.

"The outreach is just a small part of that larger project," Steidl said. "The Make Your Own Earthquake is a small component of our outreach, and then our outreach is just a small component of our overall earthquake experience."