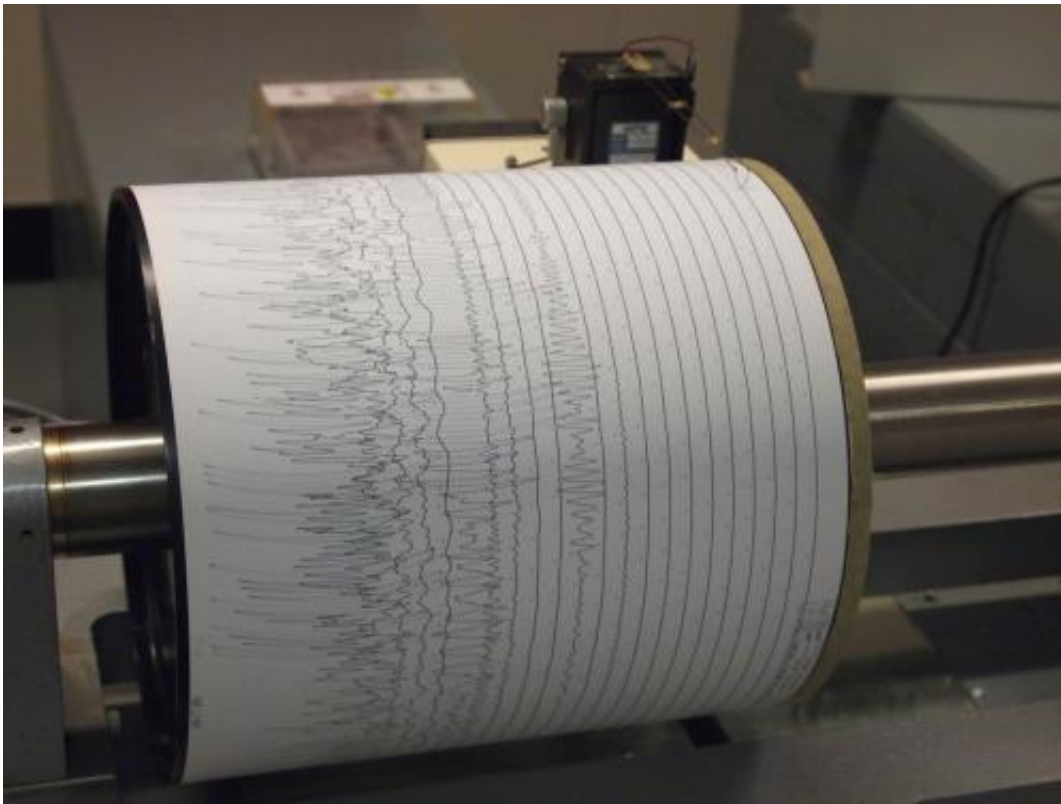


Researchers seek new ways to improve earthquake risk communications

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Seismogram being recorded by a seismograph at the Weston Observatory in Massachusetts, USA. Credit: Wikipedia

The public wants to know more about earthquake risk and how best to manage it, surveys show, but scientists and engineers must adapt their communication skills to meet these public needs, researchers will report at the 2017 Seismological Society of America's (SSA) Annual Meeting.

Keith Porter, a research professor in civil, environmental, and architectural engineering at the University of Colorado, Boulder, has studied the public's knowledge about [earthquake risk](#) and [building](#) code preferences through community action groups and online web surveys. His research indicates that the public can understand [earthquake](#) risk assessments and the cost-benefit tradeoffs involved designing and retrofitting buildings to withstand [seismic events](#).

But he suggests that there are three keys to success in communicating earthquake risk that seismologists and engineers should follow: use plain language when possible, discuss likely outcomes instead of probabilities or uncertainties, and limit misinformation about earthquake risk.

For instance, this could mean using the term "flood" instead of "storm surge," and talking about the impact of the "Big One" in California rather than offering a recitation about the percentage of ground shaking expected over an interval of 50 years, he says. It may also mean addressing any misinformation about the costs and benefits of earthquake protections for buildings.

Porter's research has uncovered "some tension," he says, between the standards of current building codes and what people say are acceptable seismic performance targets for those buildings. For instance, in the case of a San Francisco voluntary action committee, Porter had expected that the group would be in favor of voluntary retrofitting of older buildings to meet a minimum level of safety. Instead, he says, the group was in favor of "mandatory retrofitting to the highest [seismic performance](#) level, with the costs shared between building owners and tenants."

And where structural engineers work mostly with building codes designed to focus on the human lives saved during an earthquake, rather than preserving the buildings themselves, a majority of respondents to a web survey said they preferred stricter codes for new buildings that

would make them habitable and functional after an earthquake, Harper notes.

Other presentations in the SSA session on communicating risk include preliminary results from a project in Pakistan to include religious leaders in earthquake hazard mitigation programs; a report on school seismic safety programs in Washington State; predictions for human and property loss in the event of a large Himalayan earthquake; and a tsunami preparation program in Puerto Rico.

More information: "The Public Can Understand Risk and Cares About Building Code Requirements for New Buildings" will be presented at the SSA Annual Meeting on Wednesday, April 19. All presentation abstracts for the 2017 SSA Annual Meeting can be accessed at meetings.seismosoc.org/abstracts

Provided by Seismological Society of America

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