

SNAP, CRACKLE, & POP

Designing buildings that can survive natural disasters

Notable notes in forest research at Oregon State University College of Forestry



crackle, and pop—good noises from your cereal bowl, but not so good if your house is making them as you're squinched in the tub, hoping the storm will blow away before your roof does. Houses and other wooden buildings have lots of joints made with fasteners, like nails and screws. Hurricanes, tornadoes, and earthquakes stress them out; those groans and pops are your house's cries of distress. Buildings can't hide—so how do they survive those natural forces?

Dave Rosowsky, of the Wood Science and Engineering department, is a civil engineer. He is interested in designing buildings so that they, as well as the people in them, can survive natural disasters. Like people, buildings need to be flexible, yet strong, under stress if they're going to hold together. Rosowsky hooks up computers to models of walls and joints to test just how much force different kinds of wood and fasteners can take. "What's really great about this work," says Rosowsky, "is that it can be applied right away and can appear in building codes within 12 months." Builders have to follow the rules in those codes, so safer houses soon follow—meaning that the economic and personal costs of the next disaster are much less.

Rosowsky became involved in forestry because it offered the chance to work with wood experts. As an engineer, he had to "go outside the engineering box" to study natural hazards. He works with sociologists, economists, urban planners, emergency managers, and manufacturers to deal with issues arising from the hazards. "There are many opportunities in this area," he says, "for people who want to connect the tree with the timber with the structure—biologists interested in natural resources who also are intrigued by computers and technology, for example."

To find out more about the work of Dr. Rosowsky and other wood engineers at OSU, visit <http://woodscience.oregonstate.edu>.

