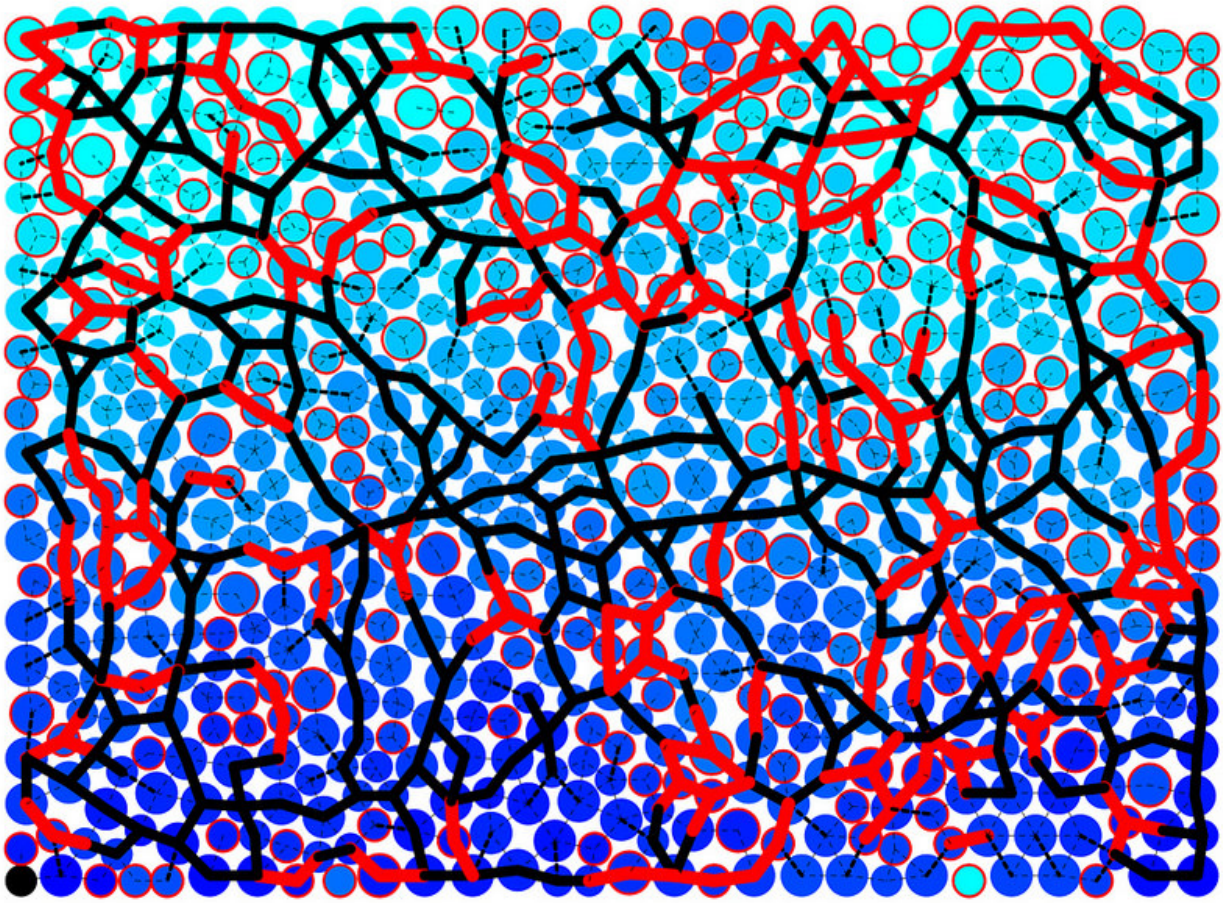
Picture of the Week: Jamming to the earthquake shake

September 27, 2015



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Jamming to the earthquake shake

Jamming is the physical process by which some materials, such as granular materials, glasses, foams, and other complex fluids, become rigid with increasing density. Simulations of jammed systems study particle configurations leading to jamming in both static systems and systems under shear—a motion similar to what happens during an earthquake. Scientists in Los Alamos National Laboratory's Theoretical Division are investigating the specific results of shear on granular systems by using resonant

sound waves to measure the effect. In this image, tightly packed disks subjected to an earthquake-like movement display separate fast and slow moving regions and form a net of load-bearing contacts, rather than a uniform distribution of pressure.