

Northwestern



SCIENCE
CAFE

When the Earth Gives Way, for Better or Worse

presented by Jim Hambleton

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Wednesday
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6:30 - 8:00pm

The Firehouse Grill
750 Chicago Avenue
Evanston

The meaning of the term “failure” is apparent when a bridge or building collapses. But what about the earth upon which we build these structures? How do soils “fail”? And is this always a bad thing? In this discussion, we will delve below the Earth’s surface to explore these questions and more, examining the ground below our feet as a foundation for our infrastructure, a medium in which to grow our food, and a commodity from which we extract valuable resources.

“Failure” is both a potential catastrophe, as in the case of a tunnel collapse or landslide, and an absolute necessity, as in tunneling and mining, where the earth must be broken up before it can be moved. Considering the latter, the quantity of earth that we move for agriculture, construction, and mining is remarkable: when distributed across the world’s population, each individual effectively moves several hundred times his or her body weight each year. And yet this is nothing compared to ants, who move hundreds of times their weight in soil every day. In this talk, we will describe new research initiatives aimed at learning from nature’s civil engineers to improve efficiencies in earthmoving.

Science Cafe: Eat. Drink. Talk research in a relaxed atmosphere.

We are committed to promoting engagement with scientific topics and making it accessible to all.