I spent yesterday at a conference at RFF on managing "tail risks" — the low-probability but extreme events that are on the tail of the probability distribution. Some probability distributions have what are called fat tails, meaning that the extreme events are more likely than you would expect from a normal distribution.

One way of identifying such a distribution is to see what happens when records are broken. With a normal distribution, after a short initial period, records should be broken infrequently — and when they are broken, it should only be by a small amount. If the tallest man in the world is currently about eight feet tall, we would expect the record to be broken by someone who is 8′2″ or something like that, not by someone who is sixteen feet tall. In contrast, Hurricane Katrina broke previous records of storm damage by an enormous margin. This is what we would expect from a fat tailed distribution, and it's go insurance companies very worried.

Part of the day was spent hearing climate scientists talk about what they expect in terms of storms in the future; part on the mathematics of fat tailed distributions (there turn out to be several degrees of fatness), and part on policy implications. Fat tail risks can be difficult (and sometimes impossible) to diversify, making insurance problematic.

This may seem like an esoteric topic. But it has real and important implications for how we plan for possible catastrophic events.