



Would you sleep in a tent after a moderate earthquake in your neighbourhood?

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Earthquakes cluster strongly in space and time. Consequently, the most hazardous time that seismologists can identify with confidence is right after a moderate earthquake has happened. There is a 3-5% probability that this event will be followed by an 'aftershock' as large or larger than the initiating event. The seismic hazard during this time-period exceeds the background hazard significantly and by several orders of magnitude. Strong foreshocks to subsequent devastating mainshocks have saved many human lives throughout history. Would you sleep in a tent to avoid your house falling down on you given those probabilities? Would you tell others to do so? Who should make such decisions and on what basis?

Scientists within the SAFER & NERIES projects are working on developing robust statistical and physics-based tools to quantify the time-dependent hazard stemming from earthquake clustering. In this presentation, we summarise the state of the art in aftershock and foreshock hazard assessment as we see it, focussing specifically on the question: What are the societal implications from the models we have to-date, given their current probability gain and uncertainties. We also investigate ways to best communicate time-dependent hazard results and implications to decision makers, media and the public.