

**Avalanches in model sandpiles:
probing predictability**

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The ideas of Self Organized Criticality (SOC) triggered great interest in the early 1990's, pushing some "serious" research teams to look at avalanches in laboratory sandpiles. We show our own results in the study of the dynamics of quasi-two-dimensional piles of beads, which, differently from other systems, allow to track the behaviour of each one of the grains. We first establish the experimental conditions to find a "SOC-behaviour" in the piles, and then scale up the experiment to find power-law distributed avalanches, without the need of (sometimes obscure) critical size scaling arguments. Finally, we study the relation between the evolution of the structural disorder in the piles and the avalanche dynamics, resulting in some signs of predictability...or perhaps "forecastability" of large avalanches.