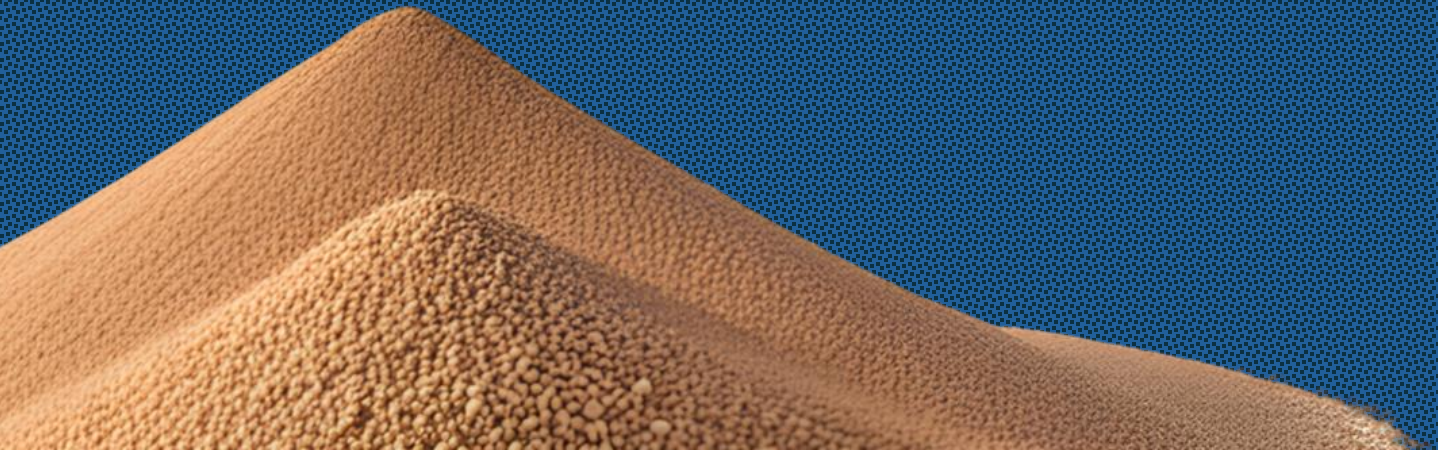# A SIMPLE IMPLEMENTATION OF THE ABELIAN SANDPILE MODEL
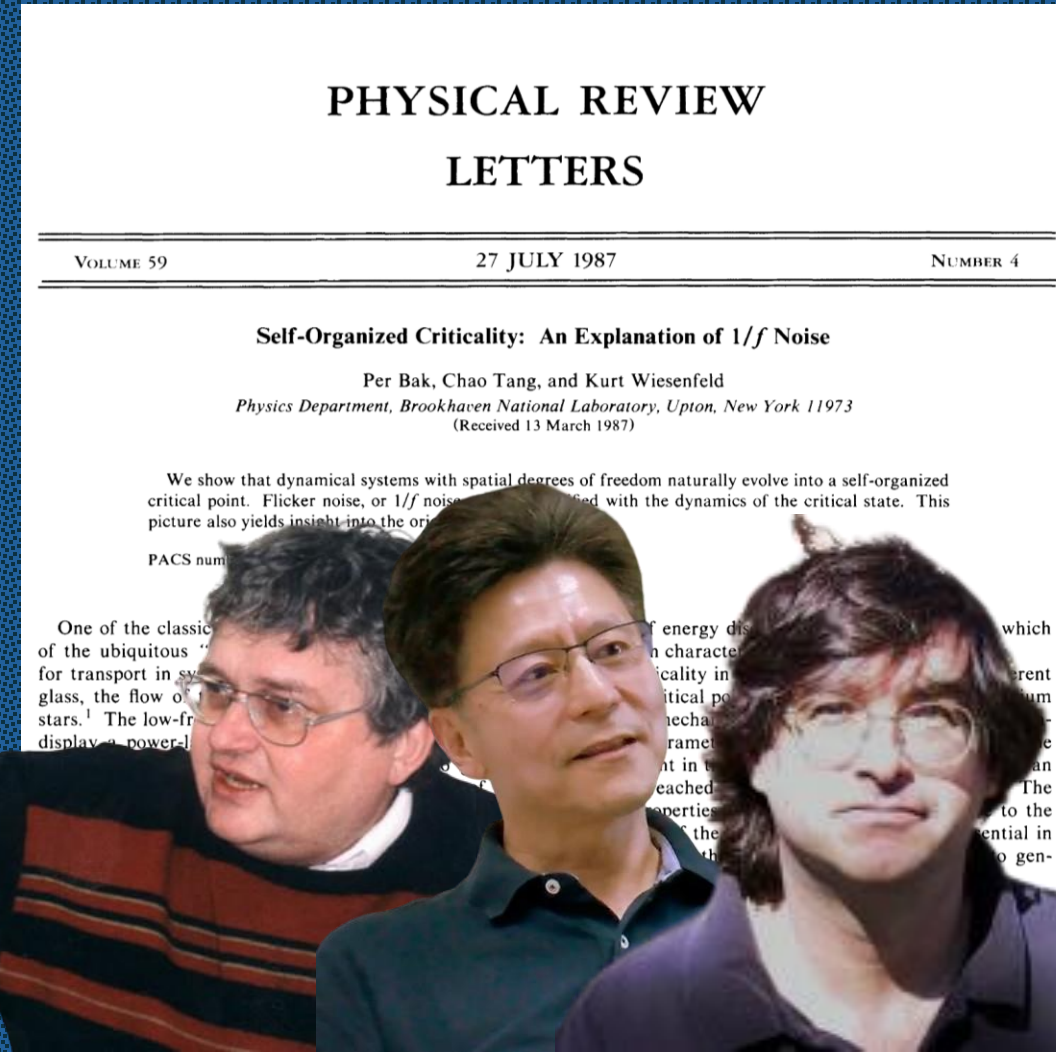
Alberto Zaghini – Collegio Superiore

April 2024
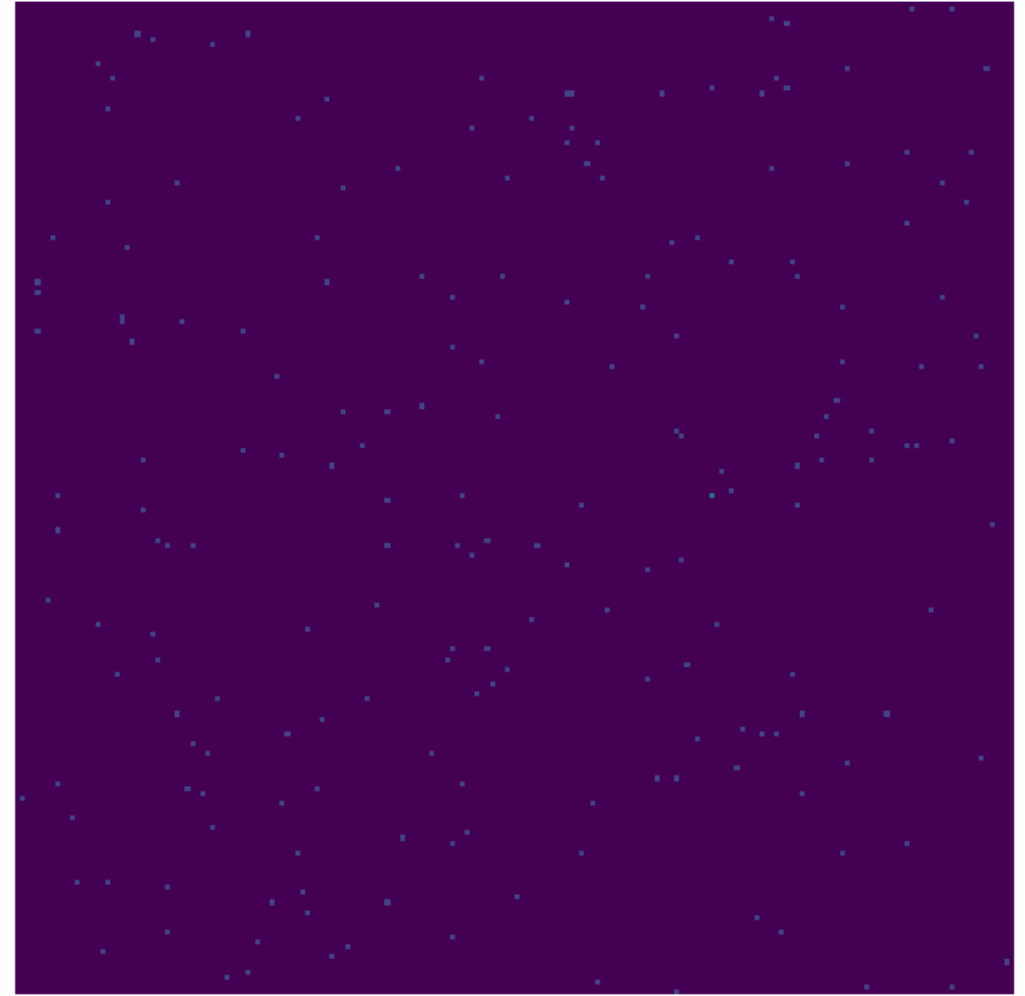
BACKGROUND

- *Self-Organized Criticality (SOC): spontaneous evolution towards critical state*

- *No «fine tuning»*

- *Fractal structure, scale-free: power-law behaviour*

- *Cellular automaton*

  - *Abelian properties*
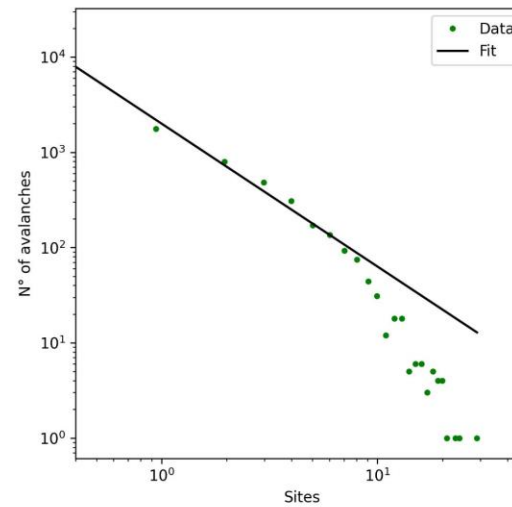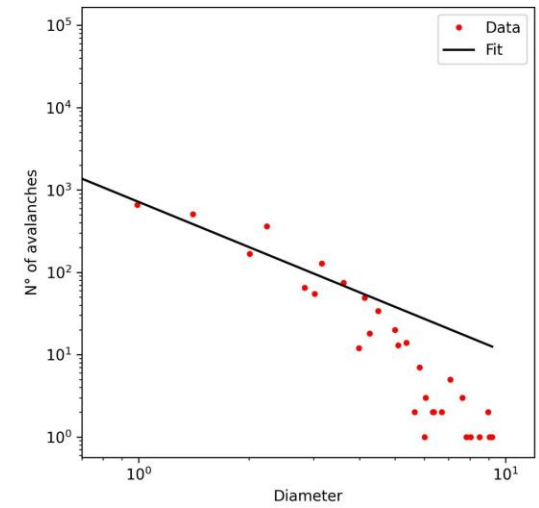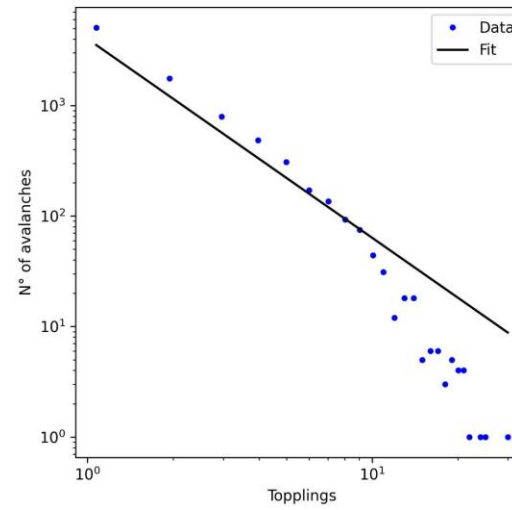
SIMULATION

- *Numpy*
- *MatPlotLib*

ANALYSIS

- *LMFit*

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- E.V. Ivashkevich, V.B. Priezzhev. *Introduction to the sandpile model,* Physica A (1998)
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