

CS 790R Seminar

Modeling & Simulation

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HOMEWORK ASSIGNMENT 1: SANDPILE CELLULAR AUTOMATON

Program in NetLogo the Sandpile Cellular Automaton model as described in reference [1] in the simplest and most efficient way you can. You can either use patches only or a combination of patches and turtles. The interface must contain the same two plots as Fig. 2.17 of [1] (avalanche size vs. time, and number of avalanches vs. avalanche size in log-log coordinates), updated in real time. You do not need to write a documentation in the “Information” tab, but add at least your name in the “Credits and References” section at the bottom.

All other details are left to your creativity. No questions will be answered. Please work individually.

Deliverable: Name your complete NetLogo file **sandpile_<lastname>.nlogo** and e-mail it to the instructor before next class, **Tuesday, March 1, 2005 at 4pm**.

BIBLIOGRAPHY

1. Solé, R. & Goodwin, B. (2000) *Signs of Life: How Complexity Pervades Biology*, pp53-57. Perseus Books.
2. Bak, P. (1996) *How Nature Works: The Science of Self-Organized Criticality*. Springer, NY.