

Multiobjective Optimization of an Extremal Evolution Model

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We propose a two-dimensional model for a co-evolving ecosystem that generalizes the extremal coupled map lattice model. The model takes into account the concept of multiobjective optimization. We find that the system is self-organized into a critical state. The distribution of avalanche sizes follows a power law.

Key words: Self-organized Criticality; Evolution and Extinction; Bak-Sneppen Model; Multiobjective Optimization; Extremal Dynamics; Coupled Map Lattice.