Moment Analysis of a Rice-Pile Model

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Abstract: Large scale simulations of a rice-pile model are performed. We use moment analysis techniques to evaluate critical exponents and data collapse method to verify the obtained results. The moment analysis yields well-defined avalanche exponents, which show that the rice-pile model can be coherently described within a finite size scaling framework. The general picture resulting from our analysis allows us to characterize the large scale behavior of the present model with great accuracy.

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