On the universality of fixed-energy sandpiles

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Fixed-energy sandpiles with stochastic update rules are known to exhibit a non-equilibrium phase transition from an active phase into infinitely many absorbing states. Examples include the conserved Manna model, the conserved lattice gas, and the conserved threshold transfer process. It is believed that the transitions in these models belong to an autonomous universality class of nonequilibrium phase transitions, the so-called Manna class. Contrarily, we argue that their critical behavior converges to directed percolation after very long time, questioning the existence of an independent Manna class.