

Erratum

Infinite Volume Limit for the Stationary Distribution of Abelian Sandpile Models

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Regrettably, our proof of the main theorem in [1] contains some errors. The results of the paper do hold without change, and the original line of argument can be followed, after appropriate modifications. The corrections can be found in the electronic supplementary material to this article. The problems are indicated below.

- (a) The way $H_{F,x}$ was defined, the inclusion $\{(F^*, x^*) = (F, x)\} \supset \{T \cap H_{F,x} = F\}$ in (7) may fail. On the event $\{T \cap H_{F,x} = F\}$, there may be descendants of x in T that do not belong to F (but belong to F^*). Therefore, we cannot conclude $F^* = F$. This problem can be fixed by letting (F^*, e^*) play the role of (F^*, x^*) , where e^* is the unique edge joining F^* to the rest of the tree.
- (b) The sets $\{\omega \in \Omega' : \omega \cap H_{F,x} = F\}$ are not disjoint (as claimed above (7)), only their intersections with \mathcal{X} . This is remedied by a more careful application of weak convergence.
- (c) The description of the event $B_\Lambda(\bar{F}, \bar{x})$ via Wilson's algorithm is not correct. The random walks started at vertices in $\cup_{i=1}^r V(F_i)$ are not sufficient to describe this event. A suitable modification of B_Λ works.

Reference

1. Athreya, S.R., Járai, A.A.: Infinite volume limit for the stationary distribution of Abelian sandpile models. Commun. Math. Phys. **249**, 197–213 (2004)

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