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ERRATUM

Embeddings of dynamical systems into cellular automata – ERRATUM

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Regrettably some of the proofs, and most likely also the statements, in [**1**] are incorrect as stated: Proposition 2.2, Remark 3.1, Lemma 3.1, Proposition 3.2, and Theorem 4.2. Proposition 2.2 does not hold true. As a consequence, Proposition 3.2 and Theorem 4.2 are also incorrect. Finally, Remark 3.1 and Lemma 3.1 do not in general hold true. A counterexample for Remark 3.1 (and hence for Lemma 3.1) is an infinite adding machine, whose automorphism group consists of group rotations and thus acts equicontinuously. Another counterexample is any non-trivial cellular automaton over $\mathbb{Z}^3$, as any embedding of $\mathbb{Z}^3$ into $\mathbb{Z}^2$ cannot respect the concept of locality in $\mathbb{Z}^3$.

We are grateful to Hochman who pointed out the deficiencies in the original paper. Furthermore, in [**2**] he showed explicitly (Corollary 1.9) which real numbers can occur as the entropy of a cellular automaton in $\mathbb{Z}^d$ ($d \geq 3$).

References

[1] J. Müller and Ch. Spandl. Embeddings of dynamical systems into cellular automata. *Ergod. Th. & Dynam. Sys.* **29** (2009), 165–177.

[2] M. Hochman. On the dynamics and recursive properties of multidimensional symbolic systems. *Invent. Math.* **176** (2009), 131–167.

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