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CORRIGENDUM

The Toeplitz noncommutative solenoid and its Kubo–Martin–Schwinger states – CORRIGENDUM

NATHAN BROWNLOWE, MITCHELL HAWKINS and AIDAN SIMS

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There is an error in [**2**]. On line 6 of §5 in [**2**], the set Ξ_N is defined as

$$\Xi_N := \{(\theta_n)_{n=1}^{\infty} : \theta_n \in \mathbb{S} \text{ and } N^2\theta_{n+1} = \theta_n \text{ for all } n\},$$

where $\mathbb{S} = \mathbb{R}/\mathbb{Z}$ denotes the circle group. The arguments in the paper are incorrect with this definition, and it must be replaced with

$$\Xi_N := \{(\theta_n)_{n=1}^{\infty} : \theta_n \in \mathbb{R} \text{ and } N^2\theta_{n+1} = \theta_n \text{ for all } n\}.$$

The reasons, as discussed in [**1**, Remark 2.2], are as follows. In the final displayed equation in the proof of Theorem 6.9, to conclude that $\theta_j/N^k = N^k\theta_{j+k}$, we must treat θ_j as an element of $\mathbb{R}$, not of $\mathbb{S}$ (there are many solutions to $N^k\gamma = \theta_j$ in $\mathbb{S}$). Then later, throughout §8, the statements include 'let $r_j := \beta/N^j\theta_j$', which makes sense only if $\theta_j \in \mathbb{R}$; and, in particular, in the displayed calculation below equation (8.3) in the proof of Lemma 8.1, which is a calculation about real numbers, it is crucial that $N^2\theta_{j+1} = \theta_j$ in $\mathbb{R}$, not just in $\mathbb{S}$.

Note that this reduces the generality of the results substantially: for a given $\theta_1 \in \mathbb{S}$ there are infinitely many sequences (θ_n) in $\mathbb{S}$ that satisfy $N^2\theta_{n+1} = \theta_n$ for all n; but, given $\theta_1 \in \mathbb{R}$, there is just one sequence (θ_n) in $\mathbb{R}$ that satisfies $N^2\theta_{n+1} = \theta_n$ for all n.

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