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Rank-one homeomorphisms of \mathbb{T}^2 .

We give an explicit rank-one construction for some homeomorphisms of \mathbb{T}^2 of the form $T(x, y) = (x + h(y), y + \alpha)$ for certain irrational $\alpha \in [0, 1)$. We discuss spectral properties of such transformations and compare with existing examples. (Received September 16, 2014)