Bohr chaoticity of topological dynamical systems

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We introduce the notion of Bohr chaoticity [2], which is a topological invariant, and is opposite to the property required by Sarnak's conjecture. Such a system is by definition never orthogonal to any non-trivial weight and it must be of positive entropy. But having positive entropy is not sufficient to ensure the Bohr chaoticity [1]. Using Riesz products we prove the Bohr chaoticity for the following systems when they have positive entropy: endomorphisms on tori, subshifts of finite type, β-shifts, principal algebraic $\mathbb{Z}^d$-actions on the torus [2, 3]. These are joint works with Shilei FAN, Wexiao SHEN, Klaus SCHMIDT, Evgeny VERBITSKIY.

References

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[3] A. H. Fan, K. Schmidt and E. Verbitskiy, *Bohr chaoticity of principal algebraic actions*, prepint (2019)