Colloquium Mathematical Physics

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Quasicompact Operators and Uniquely Ergodic Dynamical Systems

Primitive substitutions on finite alphabets are well studied objects in symbolic dynamics and are known to generate uniquely ergodic dynamical systems via the classical Perron--Frobenius theory. There is a similar notion of primitivity for substitutions on compact alphabets, but this no longer guarantees unique ergodicity. In this talk, we define the associated substitution operator, discuss its spectral properties, and give several criteria which guarantees unique ergodicity. We conclude by illustrating how it is satisfied for several classes of examples. This is based on joint work with Dan Rust and Jamie Walton.

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Zoom Conference Call—Please contact Gernot Akemann (akemann@physik.uni-bielefeld.de) for details regarding access