universität innsbruck

Department of Mathematics

Inn'formal Probability Seminar

Michael Baake (University of Bielefeld)

"On the long-range order induced by the Hat and Spectre monotiles"

Abstract:

Hat and Spectre are recently discovered aperiodic monotiles for the Euclidean plane. Each of them gives rise to a class of tiling dynamical systems under the translation action of $\mathbb{R}^2$. Combining methods from algebraic topology, dynamical systems theory and harmonic analysis, we show that they have pure-point spectrum and display quasiperiodic long-range order. In fact, both tilings are reprojections of self-similar tilings with a 4D embedding space, and as such rather different from the limit-periodic structure of the Taylor–Socolar monotile.

(This is joint work with Franz Gähler and Lorenzo Sadun).

Tuesday | 12.05.2026 | 15.30
HS 11 | Architecture building