

Some long-term effects of the almost periodic flu

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Barry’s foundational work and his - right or wrong - conjectures have shaped the field of quasiperiodic operators for over 30 years. Settling of Barry’s conjectures however has marked the new beginning rather than an end. We will discuss several results on sharp arithmetic spectral transitions in some popular models and on a recently discovered universal hierarchical structure in the behavior of quasiperiodic eigenfunctions. The structure is governed by the continued fraction expansion of the frequency and explains some predictions in physics literature. The talk will mainly be based on papers joint with W. Liu, and also may include results with A. Avila, R. Han, H. Kruger, C. Marx, S. Tcheremchantzev, F. Yang, S. Zhang, and Q. Zhou.

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