

On Lyapunov Exponent and Avila's Acceleration of Quasi-Periodic Schrödinger Cocycles

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Resumo/Abstract:

I am going to talk about the Lyapunov exponent and the Avila's acceleration of the quasi-periodic cocycles $(\alpha, S_E^{\lambda v})$:

$$(\theta, w) \mapsto (\theta + \alpha, S_E^{\lambda v}(\theta) \cdot w),$$

where

$$S_E^{\lambda v}(\theta) = \begin{pmatrix} E - \lambda v(\theta) & -1 \\ 1 & 0 \end{pmatrix},$$

λ is sufficiently big and $v(\theta) = \sum_{k=-d}^d v_k e^{ik\theta}$ is trigonometric polynomial.

More precisely, I will give an optimal estimate on the Lyapunov exponent, the sharp exponent of Hölder continuity, a way of computing Avila's acceleration and also the relationship between the Lyapunov exponent and the acceleration. The talk is based on a joint work with L. Ge.