报告题目：On Hausdorff dimension of the set of nonergodic directions

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报告摘要：

In this talk, we show a recent progress about Hausdorff dimension of the set of nonergodic directions. Let X be the resulting surface by gluing two copies of the flat torus along a segment with holonomy vector \((\lambda,\mu)\) and let \(q_k\) be the sequence of best simultaneous approximation denominators to \((\lambda,\mu)\), related to any norm of \(\mathbb{R}^2\). If \(q_{k+1}=O(q_k^N)\) for some \(N>0\), then the set of nonergodic directions in \(X\) has Hausdorff dimension \(1/2\); if \(\sum(\log\log q_{k+1})/q_k=\infty\), then the dimension is 0. This was a joint work with Yitwah Cheung.