

1051-47-105

Zheng Gan* (zheng.gan@rice.edu), Department of Mathematics, MS-136 , Rice University, Houston, TX 77005, and **David Damanik**. *Limit-Periodic Schrödinger Operators in the Regime of Positive Lyapunov Exponents*. Preliminary report.

We investigate the spectral properties of the discrete one-dimensional Schrödinger operators whose potentials are generated by continuous sampling along the orbits of a minimal translation of a Cantor group. We show that for given Cantor group and minimal translation, there is a dense set of continuous sampling functions such that the spectrum of the associated operators has zero Hausdorff dimension and all spectral measures are purely singular continuous. The associated Lyapunov exponent is a continuous strictly positive function of the energy. It is possible to include a coupling constant in the model and these results then hold for every non-zero value of the coupling constant. (Received August 19, 2009)