

Vincent Delecroix. The bottom of the Lagrange spectrum of translation surfaces.

Abstract. The Lagrange constant of an interval exchange transformation (IET) is a real number that measures the quality of approximation by rationals. The Lagrange spectrum is the set of Lagrange constants of all IET's with a fixed number d of intervals. Rotations of the circle are exactly the IET's with $d = 2$ intervals and this Lagrange spectrum is a straightforward generalization of the well known standard Lagrange spectrum.

In a joint work with Michael Boshernitzan we show that the infimum value of the spectrum is $(d - 1)\sqrt{5}$ and characterize the IET's that reach this bound. Moreover, as in the rotation case, this minimal value is isolated.
