

1161-51-273

Xian Dai and **Giuseppe Martone***, martone@umich.edu. *Renormalized Hilbert length and convex projective surfaces.*

Convex projective surfaces, a generalization of hyperbolic surfaces, are naturally equipped with a geometric length function: the Hilbert length. We study the dynamics of the Hilbert length renormalized by the topological entropy, i.e. the exponential growth rate of closed curves. We estimate the number of closed curves which have roughly the same renormalized Hilbert length for two different convex projective surfaces. Furthermore, we describe the asymptotics of the renormalized Hilbert length along certain rays in the space of convex projective surfaces defined in complex analytic terms. This is joint work with Xian Dai. (Received August 18, 2020)