

Geometry, Topology and Dynamics Seminar

Counting non-simple closed curves on surfaces

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Abstract: We show how to get coarse bounds on the number of (non-simple) closed geodesics on a surface, given upper bounds on both length and self-intersection number. Recent work by Mirzakhani and by Rivin has produced asymptotics for the growth of the number of simple closed curves and curves with one self-intersection (respectively) with respect to length. However, no asymptotics, or even bounds, were previously known for other bounds on self-intersection number. Time permitting, we will discuss some applications of this result.

Monday, October 19 at 3:00 PM in SEO 636