

Geometry, Groups and Dynamics/GEAR Seminar
(held at the Illinois hub of GEAR)

Tuesday, September 2, 2014, 1:00 pm, 243 Altgeld Hall

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Counting non-simple closed curves on surfaces

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.

[Video](#)