

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

Thursday, September 18, 2014, 1:00 pm, 243 Altgeld Hall

Elise Goujard (Rennes)

Counting closed geodesics on flat surfaces

Abstract: Counting periodic trajectories in polygonal billiards is related in some cases to counting closed geodesics on corresponding flat surfaces. The asymptotic of the number of closed geodesics on a flat surface is given by a constant called Siegel-Veech constant. For a flat surface defined by a quadratic differential we explain how this constant is related to the volumes of moduli spaces of quadratic differentials, extending the work of Masur-Zorich and Athreya-Eskin-Zorich. We illustrate this correspondence with an example of small complexity, for which we compute the volume explicitly.

[Video](#)