Viveka ERLANDSSON, University of Bristol, UK

Title: Counting and distribution of multi-curves

Abstract: It is a classical result due to Huber that the growth of the number of closed geodesics on a closed hyperbolic surface, is asymptotic to e^L/L. In her thesis, Mirzakhani studied the subset of simple (multi) geodesics and proved the asymptotic then is instead polynomial, and later generalized this to counting inside a mapping class group orbit of a fixed (simple or not) closed multi geodesic. Once one can count one can ask what a random multi geodesic of fixed type looks like. For example, how do the length of the individual components distribute? Mirzakhani answered this for random pants decompositions of a hyperbolic surface and this result has been generalized independently by Mingkun Liu and Francisco Arana-Herrera to other simple multi-curves. In this talk I will give a brief overview of these results and then explain how it can be extended to general multicurves and a large class of metrics besides hyperbolic. This is joint work with Juan Souto.