
Géométrie et dynamique dans les espaces de modules

(Carlos Matheus et Anton Zorich)

Un **mercredi** par mois de **14h à 15h** à l'**Institut Henri Poincaré**.

Séminaire au mois de Avril:

- **13/04/2022 - Mingkun Liu (IMJ-PRG)**

Titre: *Length partition of random multi-geodesics on large genus hyperbolic surfaces*

Résumé: Work of Delecroix–Goujard–Zograf–Zorich showed that, a random multi-geodesic on a hyperbolic surface is non-separating with high probability as the genus g tends to infinity, and its number of connected components is about $\log(g)/2$. This talk aims to describe the geometry of a random multi-geodesic in large genus hyperbolic surfaces. More precisely, we will focus on the length partition, and we will see that it converges in law to the Poisson–Dirichlet distribution of parameter $1/2$ as the genus goes to infinity. In particular, the average lengths of the three largest components of a random multi-geodesic on a large genus hyperbolic surface are approximately, 75.8%, 17.1%, and 4.9%, respectively, of the total length. This result further confirms the intuition that, for large g , a random multi-geodesic on a hyperbolic surface of genus g behaves like a random permutation of g elements chosen according to the Ewens measure of parameter $1/2$. This is joint work with Vincent Delecroix.

Salle 01