Ergodic Theory of Homogeneous Flows and Limit Laws in Diophantine Approximations

SPEAKER: Bassam Fayad, CNRS & Paris VI & NYU Shanghai
TIME: 3:00 - 4:00 pm, Monday, November 16, 2020
VENUE: Via Zoom (Members of NYU Shanghai Community can join from Room 611 at Pudong campus)

ABSTRACT
This talk is about a series of past and ongoing works with Dolgopyat on establishing general limit laws for cusp excursions of $\mathbb{Z}^k$ actions on homogeneous manifolds (CLT, Poisson law...) and deriving from them some statistical facts on Diophantine approximations.

Biography

Bassam Fayad is a Research Director at the Centre National de Recherche Scientifique (CNRS) in France, Institut de Mathématiques de Jussieu-Paris Rive Gauche. Fayad is a world expert in the theory of dynamical systems. He was an invited speaker to the ICM in 2018. He was given the best PhD dissertation award of Ecole Polytechnique in the year 2000, and the Prix des Annales de l'IHP in 2010 and a Knut and Alice Wallenberg Foundation grant in 2017. In 2020, he was nominated Knight of the Lebanon National Order of the Cedar.

He is a visiting Professor of Mathematics at NYU Shanghai, and was an invited Professor to Tsinghua University in Beijing for two months every year since 2008.