



## NYU-ECNU Institute of Mathematical Sciences at NYU Shanghai

### WEEKLY SEMINAR

**Title: AN INTRODUCTION TO RANDOM PLANAR MAPS**

**Speaker: Dr. Marie Albenque, Visiting Professor of Mathematics at NYU Shanghai**

**Time: 14:30-16:00, 11 September 2013**

**Venue: Room 153, Geography Building, 3663 Zhongshan Road North, Shanghai (华东师范大学中山北路校区, 地理楼 153 室)**

#### ABSTRACT OF THE TALK

Planar maps are graphs embedded in the two-dimensional sphere. They were introduced by Tutte in the 60's in an attempt to solve the 4-color problem. Since then planar maps have been studied extensively in combinatorics, and they also have significant geometrical applications.

As a discretization of planar surfaces, random planar maps have been used in theoretical physics, where they serve as models of random geometry in the framework of two-dimensional quantum gravity. There has been much recent interest in understanding the properties of large random planar maps from a probabilistic point of view. When properly rescaled, it has been shown that certain families of planar maps converge to the so-called "Brownian map", which is a 2-dimensional analogue of the Brownian motion.

#### BIOGRAPHY

Marie Albenque is a visiting Professor of Mathematics at NYU Shanghai. A CNRS researcher at École Polytechnique, Paris, she received her PhD in Computer Science from Université Paris Diderot in 2008. She specializes in interactions between combinatorics and probability and in particular in models of random trees, maps and graphs.