Seminar of Probability and Stochastic Process

Friday, 3th December, from 10h15 to 11h30
[MAA 112](), EPFL, Ecublens

Dr. Beltran Johel

EPFL

Scaling limit for rooted quadrangulations with no pending edge

Abstract:

A planar map is a proper embedding of a finite connected graph in the two-dimensional sphere. Loops and multiple edges are a priori allowed. The faces of the map are the connected components of the complement of the union of edges. A planar map is rooted if it has a distinguished oriented edge called the root edge, whose origin is called the root vertex. Two rooted planar maps are said to be equivalent if the second one is the image of the first one under an orientation-preserving homeomorphism of the sphere, which also preserves the root edges. Two equivalent planar maps are identified. Given a rooted planar map, its radius is the maximal (graph) distance between the root vertex and another vertex. A quadrangulation is a planar map where each face has degree 4, that is 4 adjacent edges. In this talk, we discuss a scaling limit for the radius of a rooted quadrangulation chosen uniformly over the set of rooted quadrangulations with n faces, as n goes to infinity. The corresponding continuous limit will be described in terms of the Brownian snake.

Date of last change: Mon, 29 Nov 2010 11:52:37, by Le CHEN