

Title:

Asymptotic directions of infinite paths in the hyperbolic Radial Spanning Tree

Abstract:

In 2001, Howard & Newman introduced the central notion of straightness in order to describe the infinite paths and their asymptotic directions in geometric random trees. Hence, for a straight geometric random tree, Howard & Newman are able to assert that any deterministic asymptotic direction u in S^{d-1} (the unit sphere in a d -dimensional space) is targeted by only one infinite path of the corresponding tree. There also exists a random set of directions which are targeted by at least two infinite paths (seen as 'exceptional directions'); this random set is only countable in dimension $d=2$. In this talk, we focus on 'very exceptional directions' in dimension $d=2$, i.e. targeted by at least three infinite paths. We prove that such 'very exceptional directions' do not exist in the case of the hyperbolic Radial Spanning Tree.

This is a joint work with Lucas Flammant and Chi Tran.