

MINI-SEMINAR FOR SECOND-YEAR PH.D. STUDENTS

Department of Statistics

**An Introduction to Voronoi Tessellation**

by

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**ABSTRACT**

As a topic in random geometry, Voronoi Tessellation has many applications in physics, astronomy etc. The expectations and variances of perimeter and area of a typical cell are of interest. Recently, people have established the existence of CLT for total edge length in Voronoi Tessellation, but unfortunately they could not get the variance in the limiting distribution. I will try to compute it, but haven't finished all the calculations. Finally, I will discuss possible transformations of Voronoi Tessellation, e.g when the underling process is a marked poisson process rather than a poisson process.