Random geometric models

ECTS : 6

Volume horaire : 26

Description du contenu de l'enseignement :

This course provides a quick access to some popular models in the theory of random graphs, point processes and random sets. These models are widely used for the mathematical analysis of networks that arise in different applications: communication and social networks, transportation, biology... We will discuss among the others: the Erdos-Reny graph, the configuration model, unimodular random graphs, Poisson point processes, hard core point processes, continuum percolation, Boolean model and coverage process, and stationary Voronoi percolation. Our main goal will be to discuss the similarities and the fundamental relationships between the different models.

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