

FIM

Nachdiplomvorlesung

Jean Bertoin (Université Pierre et Marie Curie, Paris)

Exchangeable Coalescence

September 29 - December 22, 2010
Wednesdays 14.15 - 16.00h
HG G 19.2

ETH Zürich, Rämistrasse 101

Abstract

The purpose of this series of lectures is to introduce and develop some of the main aspects of a class of random processes evolving by coalescence, which arise in the study of the genealogy of certain large populations. More precisely, imagine a haploid population with non-overlapping generations. We can decompose the population at the present generation into siblings, or into families of grand-children, and so on. For each integer n , there is a natural partition of the population into families of individuals having the same ancestor n generations backwards. These partitions get coarser as n increases, and more precisely a merging of sub-families corresponds to coalescence of ancestral lineages. Loosely speaking, we will be interested in the study of such coalescent processes for certain random population models with large sizes and after an appropriate rescaling of time.

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