Speaker

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Seminar

Seminar IRIF (Enumerative and Analytic Combinatorics)

Location and date

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Title

Asymptotic probability of irreducible labeled objects in terms of virtual species

Abstract

There are various combinatorial structures that admit a notion of irreducibility in a broad sense, including connected graphs, irreducible tournaments, indecomposable permutations and different models of connected surfaces. We are interested in the probability that a random labeled object is irreducible, as its size tends to infinity. The aim of this talk is to show that, in certain cases, the asymptotics for this probability can be obtained in a common manner and the asymptotic coefficients have a combinatorial meaning naturally expressed in terms of virtual species. Moreover, we will explain how to get the asymptotic probability that a random labeled object has a given number of irreducible parts, and we will indicate the combinatorial meaning of the coefficients involved in the corresponding asymptotic expansions.

This is a joint work with Thierry Monteil.