

Speaker

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Workshop

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Title

Asymptotics for the probability of labeled objects to be connected

Abstract

Let f_n be the counting sequence of a labeled combinatorial class and g_n be the number of connected objects of size n in the same class, so that their exponential generating series satisfy $F(z) = \log(G(z))$. We are interested in the asymptotic behavior of the probability $p_n = g_n/f_n$. It turns out that if f_n is growing sufficiently fast, then p_n converges to 1 and we can describe the coefficients h_i involved in the asymptotic expansion of p_n explicitly. In some cases, we can indicate other combinatorial objects that these coefficients count. Moreover, the asymptotic expansion of h_n/f_n can also be described.

This is ongoing work joint with Thierry Monteil.