universität
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Department of
Mathematics

Inn'formal Probability Seminar

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" The law of the circumference of sparse random graphs"

Abstract:

There has historically been much interest in the distribution of the circumference, the length of the longest cycle, of a random graph G(n,p) in the sparse regime, where p = \Theta(1/n). Recently, Anastos and Frieze proved that the circumference has a scaling limit in the upper end of regime, along the way establishing an alternative `structural' approximation for the circumference. In this talk I will outline a proof of a central limit theorem for the circumference in this regime using a novel argument based on the Efron--Stein inequality, which relies on a combinatorial analysis of the effect of resampling edges on this approximation.

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