

Combinatorics and Probability Seminar

Random polynomials near the unit circle

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Abstract: It is well known that a random polynomial with iid coefficients has most of its roots close to the unit circle. Recently, Michelen and Sahasrabudhe found the limiting distribution for the closest root to the unit circle, in the case of Gaussian coefficients. We give a different proof of their result, which shows that the limit distribution is in fact universal (i.e. remains true for general coefficient distribution). Our new proof is inspired by earlier works of Konyagin and Schlag on the minimum modulus of the polynomial on the unit circle itself. Joint works with Nick Cook, Hoi Nguyen and Ofer Zeitouni.

Monday, November 1 at 2:00 PM in Zoom