Boğaziçi
MATH COLLOQUIUM

Universality principles for zeros of random polynomials

Turgay Bayraktar
Sabancı University

Abstract:

I will present several universality principles concerned with zero distribution of random polynomials or more generally random holomorphic sections of high powers $L^{\otimes n}$ of positive line bundle $L \to X$ defined over a projective manifold. In one direction, universality phenomenon indicates that under natural assumptions, asymptotic distribution of (appropriately normalized) zeros of random polynomials is independent of the choice of probability law defined on random polynomials. Another form of universality is asymptotic normality of smooth linear statistics of zero currents. Finally, if time permits, I will also describe some recent results on universality of scaling limits of correlations between simultaneous zeros of random polynomials.

Date : Wednesday, October 18, 2017
Time: 15:00
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