

RUTGERS UNIVERSITY
DEPARTMENT OF STATISTICS AND BIOSTATISTICS
HILL CENTER #501, BUSCH CAMPUS, PISCATAWAY

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Seminar

Speaker: Dmitry Zaporozhets, Mathematics Institute of St. Petersburg, Russia

Title: On Roots of Random Polynomials

Date: Monday, April 26, 2010

Place: 552 Hill Center

Time: 3:20 p.m.

Abstract

Let $\xi_0, \xi_1, \dots, \xi_n, \dots$ be a sequence of random variables. We assume that these variables are independent, identically distributed, and nondegenerate. Consider a random polynomial of one variable

$$G_n(t) = \xi_0 + \xi_1 t + \dots + \xi_{n-1} t^{n-1} + \xi_n t^n.$$

We consider two natural questions: how many roots of G_n are real in average and what is the asymptotical distribution of complex roots of G_n ?

Joint work with Friedrich Götze, Ildar Ibragimov, and Alexander Nazarov.