

Minerva Research Foundation Lectures



Prof. Grigori Olshanski

“DETERMINANTAL PROCESSES AND RELATED TOPICS”

Determinantal processes form a special class of random point processes that are on the next level of complexity after Poisson processes. Numerous examples of determinantal processes emerge in different domains of mathematics and mathematical physics: probability theory, random matrix theory, tiling models, algebraic combinatorics, representation theory; the subject is also related to classical analysis and special functions.

The theory of determinantal processes is a relatively new and rapidly developing subject. The goal of the course is to give a comprehensive introduction to this theory and to review some of its most recent achievements.

The course is accessible to graduate students. Prerequisites: Basic Real Analysis and Probability Theory (measure and integration, Markov chains, elements of Markov processes); Linear Algebra; some familiarity with basic notions related to Banach and Hilbert space operators would also be desirable.

Date/Time:

Fridays 3:15-5:00 PM

Location:

Room 520
Mathematics

First Meeting:

Friday January 20
2012