Alexander Soshnikov (University of California, Davis):

Determinantal Random Point Fields

Abstract: The purpose of the talk is to give an introduction to determinantal random point fields. Determinantal random point fields appear naturally in random matrix theory, probability theory, quantum mechanics, combinatorics, representation theory and some other areas of mathematics and physics. The first part of the talk will be devoted to some general results (i.e. existence and uniqueness theorem) and examples. In the second part we will concentrate on the CLT type results for the linear statistics and ergodic properties of the translation-invariant determinantal point fields.