

Probability Seminar

Organizer: Tai Melcher & George Kordzakhia

Wednesday, 3:10–4:00pm, 330 Evans

Feb 22 **Evgeny Strahov**, Cal Tech

Giambelli compatible point processes

We distinguish a class of random point processes which we call Giambelli compatible point processes. Our definition was partly inspired by determinantal identities for averages of products and ratios of characteristic polynomials for random matrices. It is closely related to the classical Giambelli formula for Schur symmetric functions.

We show that orthogonal polynomial ensembles, z -measures on partitions, and spectral measures of characters of generalized regular representations of the infinite symmetric group generate Giambelli compatible point processes. In particular, we prove determinantal identities for averages of analogs of characteristic polynomials for partitions.

Our approach provides a direct derivation of determinantal formulas for correlation functions.