מכון ויצמן למדע

THE WEIZMANN INSTITUTE OF SCIENCE

FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Geometric Functional Analysis and Probability Seminar

Room 290C ,Ziskind Building
on Thursday, Mar 09, 2017
at 11:15

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WIS

Conditional determinantal processes are determinantal

Abstract:

A determinantal point process governed by a locally trace class Hermitian contraction kernel on a measure space E remains determinantal when conditioned on its configuration on an arbitrary measurable subset $B \subset E$. Moreover, the conditional kernel can be chosen canonically in a way that is "local" in a non-commutative sense, i.e. invariant under "restriction" to closed subspaces $L^2(B) \subset P \subset L^2(E)$.

Using the properties of the canonical conditional kernel we establish a conjecture of Lyons and Peres: if K is a projection then almost surely all functions in its image can be recovered by sampling at the points of the process.

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