

Remarks on α -determinantal point fields

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Determinantal point processes are point processes with determinantal correlation functions. Permanent point processes are also known to be those with permanent correlation functions. In [1], we tried to interpolate these point processes by introducing 1-parameter α in their Laplace transforms. In the study, we encounter a positivity problem of the so-called α -determinant (slightly different version is also called α -permanent), which is a generalization of determinant and permanent. This problem is closely related to the existence problem of α -determinantal point process. We briefly review this problem and related known results. Also, we discuss a special α -determinantal point process associated with green kernel and give some remarks on relationship between occupation fields of a loop space.

References

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