

## Bielefeld Summer School 2022 : Main references used in the course of M. Maïda

- Some general references on determinantal point processes (DPP) : the more accessible is probably [7], but [13, 11, 8, 3] are also classical references adopting different point of views ;
- [2] is a nice reference on Gaussian Analytic Functions (GAF) ;
- A huge literature exists on universality/non-universality in RMT and DPP. In this course, I focused on orthogonal polynomial ensembles and I've only selected [6] for the global regime and [10] for the local regime in the bulk ;
- For the course on number-rigidity, I've mainly used [5] and our recent work [4] on the Sine beta process ;
- I did not have time to develop these aspects but if you are interested by inference for DPP, you may read [9, 12] and on the use of DPP for Monte-Carlo [1].

## Références

- [1] Rmi Bardenet and Adrien Hardy. Monte carlo with determinantal point processes. 2016.
- [2] Hough John Ben. *Zeros of Gaussian analytic functions and determinantal point processes*. University lecture series. American Mathematical Society, Providence (R.I.), C 2009.
- [3] Alexei Borodin. Determinantal point processes. *In Practice*, 258(1) :1–20, 2009.
- [4] David Dereudre, Adrien Hardy, Thomas Lebl, and Mylne Mada. Dlr equations and rigidity for the sinebeta process. *Communications on pure and applied mathematics*, 74(1) :172–222, 2021.
- [5] Subhroshekhar Ghosh and Yuval Peres. Rigidity and tolerance in point processes : Gaussian zeros and ginibre eigenvalues. *Duke Math. J.*, 2017. Advance publication.
- [6] Adrien Hardy. Polynomial ensembles and recurrence coefficients. *Constructive approximation*, 48(1) :137–162, 2017.
- [7] J. Ben Hough, Manjunath Krishnapur, Yuval Peres, and Bálint Virág. Determinantal Processes and Independence. *Probability Surveys*, 3 :206–229, 2006.
- [8] Kurt Johansson. Course 1 Random matrices and determinantal processes. *Les Houches Summer School Proceedings*, 83(C) :1–56, 2006.
- [9] Frédéric Lavancier, Jesper Møller, and Ege Rubak. Determinantal point process models and statistical inference. *Journal of the Royal Statistical Society. Series B : Statistical Methodology*, 77(4) :853–877, 2015.
- [10] Doron S. Lubinsky. A new approach to universality limits involving orthogonal polynomials. *Annals of Mathematics*, 170(2) :915–939, 2009.
- [11] Russell Lyons. Determinantal probability measures. *Science*, 98(1) :167–212, 2002.
- [12] A. (Arnaud) Poinas and F. (Frdric) Lavancier. Asymptotic approximation of the likelihood of stationary determinantal point processes.
- [13] Alexander B. Soshnikov. Determinantal random point fields. *Russian Mathematical Surveys*, 55(5) :923–975, 2000.