

# ON THE COEFFICIENTS OF THE CHARACTERISTIC POLYNOMIAL OF A RANDOM UNITARY MATRIX

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ABSTRACT. Changes of basis between different classes of symmetric functions involve transition matrices with coefficients having a combinatorial interpretation, such as the number of integer stochastic matrices or magic squares. In this talk, we will review some classical results on transition matrices (see [1] chapter 1, section 6) and use them to describe the distribution of the coefficients of the characteristic polynomial of a random (Haar-distributed) unitary matrix after [2].

## REFERENCES

1. I.G. Macdonald, *Symmetric functions and Hall polynomials*, Oxford Mathematical Monographs, Second edition, The Clarendon Press Oxford University Press (1995).
2. P. Diaconis, A. Gamburd, *Random matrices, magic squares and matching polynomials*, Electronic Journal of Combinatorics, vol. 11, issue 2 (2006).

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