ON DETERMINANTS OF RANDOM SYMMETRIC MATRICES OVER $\mathbf{Z_m}$

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Abstract

We determine the probability that a random $n \times n$ symmetric matrix over $\{1, 2, \ldots, m\}$ has determinant divisible by m.

Comments

Only the Abstract is given here. The full paper appeared as [2]. For related work on random unsymmetric matrices, see [1].

References

[1] R. P. Brent and B. D. McKay, "Determinants and ranks of random matrices over $\mathbf{Z_m}$", *Discrete Mathematics* 66 (1987), 35–49. MR 88h:15042. Also appeared as "Determinants and ranks (mod m) of random integer matrices", Report CMA-R25-85, CMA, ANU, August 1985, 17 pp. rpb094.

[2] R. P. Brent and B. D. McKay, On determinants of random symmetric matrices over $\mathbf{Z_m}$, *Ars Combinatoria* 26A (1988), 57–64. MR 90g:05015. Also appeared as Report TR-CS-88-03, CSL, ANU, February 1988, 8 pp. (Retyped in LaTeX 1998.) rpb101.

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