

Transversals in quasirandom latin squares

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A transversal in a $n \times n$ latin square is a set of n entries not repeating any row, column, or symbol. A famous conjecture of Brualdi, Ryser, and Stein predicts that every latin square has at least one transversal provided n is odd. We will discuss an approach motivated by the circle method from the analytic number theory which enables us to count transversals in latin squares which are quasirandom in an appropriate sense.