

1041-52-232

Grigorios Paouris* (grigoris_paouris@yahoo.co.uk), 2709 Wndwood Dr, College Station, TX 77845. *Small ball probability estimates for log-concave measures.*

Let A a $n \times n$ matrix and μ an isotropic log-concave probability measure that is ψ_2 with some constant b . Then for every $\epsilon \in (0, 1)$, one has that

$$P(\|Ax - y\|_2 \leq \epsilon c_1 \|A\|_{HS}) \leq \epsilon^{\frac{c}{b^2}} \left(\frac{\|A\|_{HS}}{\|A\|_{op}} \right)^2 \quad (1)$$

where $c, c_1 > 0$ are universal constants.

This answers a question posed to the author by N. Tomczak-Jaegermann. (Received August 11, 2008)