Stepanyuk, Tetiana A.
Estimates for logarithmic and Riesz energies of spherical $t$-designs. (English) [Zbl 07240109]
Tuffin, Bruno (ed.) et al., Monte Carlo and quasi-Monte Carlo methods. MCQMC 2018. Proceedings of the 13th international conference on Monte Carlo and quasi-Monte Carlo methods in scientific computing, Rennes, France, July 1–6, 2018. Cham: Springer. Springer Proc. Math. Stat. 324, 467-484 (2020)

Summary: In this paper we find asymptotic equalities for the discrete logarithmic energy of sequences of well separated spherical $t$-designs on the unit sphere $S^d \subset \mathbb{R}^{d+1}$, $d \geq 2$. Also we establish exact order estimates for discrete Riesz $s$-energy, $s \geq d$, of sequences of well separated spherical $t$-designs.

For the entire collection see [Zbl 1440.65006].

MSC:
65C05 Monte Carlo methods

Keywords:
sphere; well separated spherical $t$-design; logarithmic energy; Riesz energy

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