
Zbl 116.04703
Erdős, Pál
On trigonometric sums with gaps (In English)
Publ. Math. Inst. Hung. Acad. Sci., Ser. A 7, 37-42 (1962).

The main result in this paper is the following theorem:
Theorem 1. Let $n_1 < n_2 < \cdots$ be an infinite sequence of integers satisfying $n_{k+1} > n_k(1 + c_k/k^{1/2})$, where $c_k \to \infty$. Then

$$\lim_{N=\infty} \left| E_t \left\{ \sum_{k=1}^{N} (\cos 2\pi n_k(t - \vartheta_k)) < \omega N^{1/2} \right\} \right| = \frac{1}{2\pi} \int_{-\infty}^{\infty} e^{-u^2/2} du$$

($|E_t\{.\}|$ denotes the Lebesgue measure of the set in question).

Y.M.Chen

Classification:
42A05 Trigonometric polynomials
11L03 Trigonometric and exponential sums, general