

Online Number Theory Seminar

12 April 2024. – 17:00-17:50

N. Moshchevitin: On (non)primitive Diophantine Approximation

In 1959 Chalk and Erdős proved the following result on coprime inhomogeneous approximation to a real number:

for any given $\alpha \in \mathbb{R} \setminus \mathbb{Q}$ and any real number η , there exists an absolute constant C such that

$$|q\alpha - \eta - r| \leq C \cdot \frac{1}{q} \left(\frac{\log q}{\log \log q} \right)^2$$

is satisfied by infinitely many coprime integers (q, r) , $q \geq 1$.

Recently problems related to approximation with coprime numbers became popular again. I will give a talk about classical and recent results related to Chalk-Erdős' theorem.