

**Denis Shatskov, Oscillation of irrational measure function in the multidimensional case.**

Let  $\Theta$  is a matrix of size  $m \times n$ . We denote the irrational measure function, as

$$\psi_{\Theta}(t) = \min_{\substack{x_i \in \mathbb{Z} \\ 1 \leq \max_{1 \leq i \leq n} |x_i| \leq t}} \max_{1 \leq j \leq m} \|\theta_j^1 x_1 + \dots + \theta_j^n x_n\|.$$

We proved that difference function  $\psi_{\Theta} - \psi_{\Theta'}$  for almost all pairs  $\Theta, \Theta'$  in cases  $m = 1, n = 2$  or  $m \geq 2$  and  $n = 1$  changes its sign infinity many times as  $t \rightarrow +\infty$ .