1125-52-459 **Alexey Garber*** (alexey.garber@utrgv.edu). *Helly numbers for crystals and cut-and-project sets.*

Helly number $h(S)$ of a set $S \subseteq \mathbb{R}^d$ is the smallast positive integer n such that, if any n sets from a finite family of convex sets intersect at point of S, then all sets from the same family intersect at point of S.

Helly numbers were studied for different point sets, in particular it was proven by Helly that $h(\mathbb{R}^d) = d + 1$, and it was proven by Doignon that $h(\mathbb{Z}^d) = 2^d$.

In this talk we will prove existence of Helly numbers for each periodic discrete point set (crystal) and for certain quasiperiodic point sets (cut-and-project sets). (Received September 02, 2016)