

1146-52-181

**Alexey Garber\*** (alexeygarber@gmail.com). *On periodic triangulations of  $\mathbb{Z}^n$ .*

In this talk we will discuss properties of triangulations of  $n$ -dimensional Euclidean space with the vertex set  $\mathbb{Z}^n$  that are preserved by all translations by the vectors of  $\mathbb{Z}^n$ . This family of triangulations can be seen as a generalization of Delone triangulations of  $\mathbb{Z}^n$  with respect to generic quadratic forms.

We will describe a local approach that allows to obtain all such periodic triangulations for  $n \leq 4$  and explain why this approach does not work for higher dimensions. We will also provide some computational results for five-dimensional triangulations.

This talk is based on a joint work with Mathieu Dutour Sikirić. (Received January 21, 2019)