Viro's Patchworking Method

Ahmed Uzun

Middle East Technical Universty

Abstract

Real algebraic curves seem to be quite distant from combinatorial geometry. In this talk, we will intend to demonstrate how to build algebraic curves in a combinatorial fashion: to patchwork them from pieces which essentially are lines. This method was a major breakthrough in Hilbert's 16th problem, and since then it has been the most efficient constructive method in this field.

We will start with the special case of the patchworking. In this case the patches will be so simple that they do not demand a special care. Next, we will try to examine the use of this method only on amoebas

References

[1] I. Itenberg, G. Mikhalkin, E. Shustin, Tropical Algebraic Geometry, Oberwolfach Seminars

[2] Oleg Viro's personal webpage