On the theorem of algebraic successive minima.

Martin Sombra

Universidad de Barcelona, España (sombra@ub.edu)

The distribution of the height of points in a given algebraic variety is closely related to the height of the variety as a global object. The link is given by the theorem on successive minima due to S.-W. Zhang, which estimates the minimal height of Zariski dense sets of points.

Recently, some particular cases of this theorem have found application to the factorization of bivariate lacunary polynomials, through the work of Kaltofen and Koiran.

I will present this circle of ideas. I will also show the optimality of Zhang estimates, which is a consequence of my previous work with Philippon on explicit computation of height of toric varieties.