

COLLOQUIO DE GIORGI

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"From 2 $\sqrt{2}$ to polarizations on abelian varieties"

Abstract

The first big success of the general method of Gelfond (who would have been 100 years old next year) was in proving the transcendence of numbers as in the title, as conjectured by Hilbert in his Seventh Problem. This was vastly generalized by Baker in his theory of linear forms in logarithms. The elliptic analogues of the theory can be extended in order to estimate isogenies between elliptic curves. Similarly for the abelian analogues; but here the theory can be taken a step further to estimate polarizations on a single abelian variety. In our talk we give an account of these developments and we mention some open problems.

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