

The generalised Fermat equation

Abstract

In this lecture we want to give some finiteness results on the set of primitive solutions of the generalized Fermat equation: $x^p + y^q = z^r$ where the exponents p, q, r satisfy the inequality $1/p + 1/q + 1/r < 1$. The two main ingredients are Falting's theorem for curves of genus higher than one and a variant of the Chevalley-Weil theorem proved by Beckmann. The prerequisites for the lecture are some basic knowledge of group theory and branched covering maps.