

# Algebraic curves with many automorphisms

Massimo Giulietti

UNIVERSITÀ DEGLI STUDI DI PERUGIA

## Abstract

We consider algebraic curves of genus  $g > 1$  over fields of characteristic  $p > 0$ . For these curves, an important invariant is the  $p$ -rank. It turns out that the most anomalous examples of curves with a large automorphism group with respect to their genus  $g$  invariably have zero  $p$ -rank. Several results on the interaction between the automorphism group, the genus and the  $p$ -rank of a curve can be found in the literature. We will discuss the main achievements that have been obtained in the last decade.