Curves with symmetry and virtual linear representations of the mapping class group

Marco Boggi

Departamento de Matemática,

UFMG,

Belo Horizonte.

Let C be a very general complex smooth projective algebraic curve endowed with a group of automorphisms G such that the quotient C/G has genus at least 3. Then, with Eduard Looijenga (cf. `arXiv:1811.09741`), we proved that the algebra of $\mathbb{Q}$-endomorphisms of the Jacobian $J(C)$ of C is naturally isomorphic to the group algebra $\mathbb{Q}G$. I will explain the applications of this result, via Hodge theory, to virtual linear representations of the mapping class group.