Abelian dynamical Galois groups

Andrea Ferraguti

Scuola Normale Superiore di Pisa

Dynamical Galois groups are invariants associated to dynamical systems generated by the iteration of a self-rational map of an algebraic variety. These are still very mysterious objects, and it is conjectured that abelian groups only appear in very special cases. We will show how the problem is deeply related to a dynamical property of these rational maps (namely being post-critically finite) and we will discuss several proofs of particular cases of the conjecture. This is based on joint works with A. Ostafe, C. Pagano and U. Zannier.