SEMINARIO DI GEOMETRIA

# Giovedì 13 Giugno 2024, ore 14:15

## Aula M1

### Dipartimento di Matematica e Fisica

### Università degli studi Roma Tre

### Largo San Leonardo Murialdo 1

Speaker: Matteo Ruggiero (IMJ-PRG)

Title: On the Dynamical Manin-Mumford problem for plane polynomial endomorphisms

Abstract: The Dynamical Manin-Mumford problem is a dynamical question inspired by classical results from arithmetic geometry. Given an algebraic dynamical system (X,f), where X is a projective variety and f is a polarized endomorphism on X, we want to determine if a subvariety Y containing "unusually many" periodic points must be itself preperiodic. In a recent work in collaboration with Romain Dujardin and Charles Favre, we prove this property to hold when f is a regular endomorphism of ℙ^2 coming from a polynomial endomorphism of ℂ^2 of degree d≥2, under the additional condition that the action of f at the line at infinity doesn't have periodic super-attracting points. We will introduce the problem and some of the ingredients of the proof, coming from arithmetic geometry, holomorphic and non-archimedean dynamics.