



Analysis Seminar

Title: Postcritically finite endomorphisms of projective spaces

Speaker: Thomas Gauthier (Université Paris Saclay)

Date: Tue 15th October 2024 at 3:00PM

Location: E0.32 (beside Pi restaurant)

Abstract: An endomorphism of the projective space \mathbb{P}^k of dimension k is postcritically finite if its critical points are periodic under iteration of the map f , i.e. if there are integers $n > m > 0$ such that $f^n(C(f))$ is included in $f^m(C(f))$. We will discuss the distribution of periodic points lying in the critical set of a general regular polynomial endomorphism of the affine plane.

In this talk I will start with presenting a motivation: the distribution of periodic points of a given endomorphism. Then I will discuss what happens in families of rational maps of the Riemann sphere. If we have time, I will finish with a sketch of the strategy of the proof of the non-Zariski density of such parameters in the space of endomorphisms of \mathbb{P}^k , $k \geq 2$.

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