

Local dynamics of skew-products tangent to the identity

Wednesday, July 12, 2023 2:00 PM (50 minutes)

The results we will present in this talk deal with local dynamics of skew-products P with a (non-degenerate) tangent to the identity fixed point at the origin. We will give an explicit sufficient condition on its coefficients for P to have wandering Fatou components. In particular, we will see that the dynamics of quadratic maps of the form $(z, w) \mapsto (z - z^2, w + w^2 + bz^2)$ is surprisingly rich: under an explicit arithmetic condition on b , these maps have an infinity of grand orbits of wandering Fatou components, all of which admit non-constant limit maps. The main technical result is a parabolic implosion-type theorem, in which the renormalization limits that appear are different from previously known cases.

Travail en collaboration avec Luka Boc Thaler

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