

I will sketch a proof that for every complex quadratic polynomial f with Cremer's fixed point z_0 (or periodic orbit) for every $\delta > 0$, there is at most one periodic orbit of minimal period n for all n large enough, entirely in the disc (ball) $B(z_0, \exp -\delta n)$ (at most $2p$ for a Cremer orbit of period p). Next, I will prove that the number of periodic orbits of period n in a bunch P_n , that is such that for all $x, y \in P_n$ it holds $|f^j(x) - f^j(y)| \leq \exp -\delta n$ for all $j = 0, \dots, n-1$, does not exceed $\exp \delta n$. I will conclude that the geometric pressure defined with the use of periodic points coincides with the one defined with the use of preimages of an arbitrary typical point. I. Binder, K. Makarov and S. Smirnov (Duke Math. J. 2003) proved this for all polynomials but assuming all periodic orbits to be hyperbolic, and asked about general situations. I will give a positive answer for all quadratic polynomials. A preprint version is available in arXiv:2503.03738.

Meeting ID: 852 4277 3200 Passcode: 103121