COMPLEX FEIGENBAUM PHENOMENA OF HIGH TYPE

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One of the least understood class of quadratic maps are infinitely renormalizable polynomial-like maps of satellite type. In this talk we discuss the geometric structure of the post-critical sets of infinitely satellite renormalizable maps of high type using near-parabolic renormalization. Notably, we identify an optimal arithmetic condition leading to a weak form of a priori bounds property for the polynomial-like renormalizations. This notion is slightly weaker than a priori bounds, but still implies many deep results on the dynamics of the corresponding maps such as ergodic behaviour. The talk is based on a joint work with Cheraghi.