

Title: Satellite renormalization of complex quadratic polynomials

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Abstract: The renormalization has been one of the main focus of the theory of one-dimensional complex dynamics. It is connected to the conjectures on the density of hyperbolicity and the local connectivity of the Mandelbrot set.

For quadratic polynomials, there are two different types of renormalizations—primitive and satellite. The primitive renormalization has been successfully studied to some extent by Kahn and Lyubich and now there are powerful "a priori" bounds. The satellite type has a very different nature and our knowledge is limited. In this talk, we discuss the difference between the two types of renormalizations and explain recent results on the satellite renormalization.

This is a joint work with Prof. Mitsuhiro Shishikura.