

DYNAMICS OF RENORMALIZATION OPERATORS

ARTUR AVILA

It is a remarkable characteristic of some classes of low-dimensional dynamical systems that their long time behavior at a short spatial scale is described by an induced dynamical system in the same class. The *renormalization operator* that relates the original and the induced transformations can then be iterated, and may thus be studied as a dynamical system in its own right, taking place in a possibly high (or infinite) dimensional space.

In this talk we will discuss, in distinct representative settings, how the dynamics of the renormalization operator impacts that of the renormalized ones, particularly in the case of typical parameter values. While the specifics of the analysis varies a lot, a common theme is the *hyperbolicity* of the renormalization operator.