

ERGODIC THEORY FOR EXPANDING THURSTON MAPS

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ABSTRACT. Thurston maps are a class of branched covering maps on the 2-sphere that arose in W. Thurston's characterization of postcritically finite rational maps. By imposing a natural expansion condition, M. Bonk and D. Meyer investigated a subclass of Thurston maps known as expanding Thurston maps, which turned out to enjoy nice topological, metric, and dynamical properties. Contrary to what the name may suggest, these maps have very weak expansion properties. More precisely, they are never h -expansive, and such a map is asymptotically h -expansive if and only if it has no periodic critical point.

This talk will be a brief summary of known results and new developments on the ergodic theory for expanding Thurston maps. We will first introduce these maps with some motivation from their connection to other topics of mathematics. We will then focus on the thermodynamical formalism for such maps. We will discuss the existence, uniqueness, and various other properties of equilibrium states for such maps and Hölder continuous potentials.

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