Statistical properties for expanding circle maps with an indifferent fixed point

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Abstract.

In the setting of expanding maps of the circle with an indifferent fixed point, we study the joint behavior of the dynamics and pairs of moduli of continuity (ω, Ω), which ω is related to the regularity classes of potentials and Ω the regularity of observables. This interaction plays a central role in the development of equilibrium theory. In this talk, we remark on a specific property of the modulus Ω that guarantees favorable statistical properties for the associated equilibrium states, such as exponential decay of correlations and the Central Limit Theorem. Additionally, we present some preliminary elements that suggest the formulation of a Large Deviation Principle for equilibrium states linked to moduli of continuity. This is joint work with E. Garibaldi.