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Statistical properties of one-dimensional expanding maps with poor singularities

We consider one-dimensional non-Markov uniformly expanding maps, whose derivatives may have unbounded variations. Under certain conditions, we are able to show the existence of absolutely continuous invariant measure, exponential decay or correlations, central limit theorem and large deviation principle. Our method applies to the beta transformation, the Lorenz-like map, the Gauss map, and their C^1 perturbations.