RATE OF APPROXIMATION OF MINIMIZING MEASURES (JOINT WORK WITH A. QUAS)

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For T a continuous map from a compact metric space to itself and f a continuous function, we study the minimum of the integral of f with respect to the members of the family of invariant measures for T and in particular the rate at which this minimum is approached when the minimum is restricted to the family of invariant measures supported on periodic orbits of period at most N. We answer a question of Yuan and Hunt by demonstrating that the error of approximation decays faster than N^{-k} for all k > 0, and show that this is sharp by giving examples for which the approximation error does not decay faster than this.