Computer-assisted proofs, proof assistants and visualization in dynamical systems



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Estimates on Lyapunov exponents via the pressure function

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Given an expanding map of the interval one can estimate the Lyapunov exponent (or equivalently the metric entropy) for the absolutely continuous invariant probability measure using the pressure function. This lends itself to rigorous estimates. For random products of suitable matrices the same approach gives estimates on their top Lyapunov exponent.

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