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ACIMs for metastable systems

Metastable systems arise when a dynamical system possessing two or more invariant sets of positive Lebesgue measure is perturbed in a way that the initially invariant sets merge.

Working in a one-dimensional setting of piecewise smooth expanding maps, we describe the limit(s), as the size of the perturbation goes to zero, of absolutely continuous invariant measures (ACIMs) for metastable systems as an explicit convex combination of the ergodic ACIMs for the initial system.

This talk is based on joint work with B. Hunt and P. Wright.