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Title: Hénon-like Renormalization

Abstract: I will present the renormalization theory of non-perturbative dissipative Hénon-like maps developed jointly with S. Crovisier, M. Lyubich and E. Pujals. A key novelty of our approach is the incorporation of Pesin theoretic ideas to the renormalization method, which enables us to control the small-scale geometry of dynamics in the higher-dimensional setting, and establish a priori bounds. This has a number of far reaching consequences, including renormalization convergence. In my talk, I will give an outline of these results. I will also discuss some more recent developments: namely, finite-time checkability of the required regularity condition, and $C^{1+\alpha}$ -rigidity for fixed average Jacobian.