

Nonwandering sets and the entropy of local homeomorphisms

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In this talk, we review the concept of metric entropy for local homeomorphisms between open subsets of a locally compact Hausdorff space. These systems, also known as Deaconu-Renault systems, are building blocks of many C^* -algebras, including graph C^* -algebras. A classical result in dynamical systems over compact spaces states that the metric entropy concentrates in the nonwandering portion of the space. We extend the notion of nonwandering points to local homeomorphisms and show that, under mild conditions, this result remains valid in this broader setting. We will illustrate our results with examples, including applications to subshifts over countable alphabets.

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