

# Counting preimages (joint with Michal Misiurewicz)

Ana Rodrigues  
University of Exeter

## **Abstract**

In this talk I will discuss what happens if we follow backward trajectories, random in the sense that at each step every preimage can be chosen with equal probability for noninvertible maps. In particular, we will see what happens if we try to compute the entropy this way. It turns out that instead of the topological entropy we get the metric entropy of a special measure, which we call the fair measure. In general this entropy (the fair entropy) is smaller than the topological entropy. In such a way, for the systems that we consider, we get a new natural measure and a new invariant of topological conjugacy.