

ENTROPY OF INFINITE MEASURE-PRESERVING TRANSFORMATIONS

RACHEL BAYLESS
UNC CHAPEL HILL

ABSTRACT. The entropy of a system measures the amount of information gained with each application of an experiment or transformation, and higher entropy corresponds to more disorder and less predictable systems. The Kolmogorov-Sinai entropy for finite measure-preserving systems relies heavily on the ability to associate probabilities to possible events or outcomes. Thus, classical measure theoretic entropy is only well-defined for finite measure-preserving transformations, and there is no universal analogue for infinite systems. Three possible extensions have been given independently by Krengel, Parry, and Roy. In this talk we provide a method of computing the Krengel entropy for entire class of rational functions which preserve Lebesgue measure on the real line.