

Lenka Rucka, Mathematical Institute in Opava, Czech Republic. email:
lenka.rucka@math.slu.cz

CONTINUOUS ENTROPY

Continuous entropy - joined work with L. Block and J. Keesling

Given an arbitrary (not necessarily continuous) function of a topological space to itself we associate a non-negative extended real number which we call the continuity entropy of the function. In the case where the space is compact and the function is continuous, the continuity entropy of the map is equal to the usual topological entropy of the map. We show that some of the standard properties of topological entropy hold for continuity entropy, but some do not. We show that for piecewise continuous piecewise monotone maps of the interval the continuity entropy agrees with the entropy defined in a paper by Misiurewicz and Ziemian. Finally, we show that if f is a continuous map of the interval to itself, and g is any function of the interval to itself which agrees with f at all but countably many points, then the continuity entropies of f and g are equal.