

Title: Orientation preserving Lozi mappings

The family of Lozi mappings is a parametrized family of piecewise linear planar homeomorphisms given by $f_{(a,b)}(x, y) = (1 + y - a|x|, bx)$ for $a, b \in \mathbb{R}$. It has been introduced in 1978 by R. Lozi as a simplification of Hénon family, potentially sharing some of its properties and being more approachable. In 1980 Michał Misiurewicz proved that for a certain subset of parameter space for which $f_{(a,b)}$ is orientation reversing, that is for $b > 0$, there exists an attractor for $f_{(a,b)}$ on which $f_{(a,b)}$ is mixing. Since then Lozi family has been studied in terms of its entropy, possible coding, characterisation as inverse limits of certain spaces, either as an example of existing phenomena, or as a stepping stone towards more general families. Yet it has not been rigorously verified that attractors of Lozi family exist for $b < 0$, that is in the orientation preserving case. We will talk about this result and its consequences.