

SEMINARIO

SISTEMAS DINAMICOS

TITULO

Piecewise contraction maps and its applications

EXPOSITOR

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Abstract:

Our talk concerns dynamical systems which are defined by piecewise contraction maps (PC maps). There is a large literature which deals with the dynamical behavior of PC maps defined on convex subsets of Euclidean spaces in different contexts. Our aim is to show that, under certain conditions, a typical PC map, in the measure theoretical sense of the parameter space, is asymptotically periodic which means that the map has finitely many periodic orbits and every orbit converges to a periodic orbit. Our setup is the following: We fix an Iterated Function System $\{\phi_1, \dots, \phi_n\}$, where each map $\phi_i : X \rightarrow X$ is a contraction. Next we use a suitable parameter space and associate to each parameter a partition $X_1, \dots, X_n$ of X . In this way, each parameter defines a piecewise contraction map $f : X \rightarrow X$ given by $f(x) = \phi_i(x)$ for every $x \in X_i$.

Jueves 28 de Abril del 2016 a las 16:00 hrs. Sala de Seminarios John Von Neumann CMM, séptimo piso.

