On attractors of Iterated Function Systems (IFS)

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Workshop on Effect Algebras, Boolean Algebras & Related Topics

Udine (Italy) — January 25–27, 2016

Abstract

Let $X = [0,1]^n$ with $\mathcal{S} = \{S_1, , S_m\}$ a finite set of contraction maps from X to itself. A nonempty compact subset F of X is an attractor for the iterated function system $\mathcal{S}$ if $F = \cup_{i=1}^m S_i(F) = \mathcal{S}(F)$. We are interested in describing the compact sets which are possible attractors of IFS and their properties (that is, how many, Hausdorff dimension,...).