

Fuzzy version of the Huthinson–Barnsley theory of fractals

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15-16 V 2019

As was proven by Cabrelli et.al [1], the classical Hutchinson–Barnsley theory of fractals can be extended to the setting of fuzzy sets. In this approach, the attractor is a fuzzy set which is the unique fixed point of a certain map between space of fuzzy sets, generated by the underlying IFS. During my talk I will discuss this theory and the possibility of extending it to the setting of generalized IFSs in the sense of Miculescu and Mihail. Presented results in the latter case were obtained in cooperation with E. Oliveira [2].

[1] C. Cabrelli, B. Forte, U. Molter, E. Vrscay, *Iterated fuzzy set systems: a new approach to the inverse problem for fractals and other sets*, J. Math. Anal. Appl. 171(1) (1992) 79–100.

[2] E. Oliveira, F. Strobin, *Fuzzy attractors appearing from GIFZS*. Fuzzy Sets Syst. 331 (2018), 131–156.