

# RATE OF CONVERGENCE IN THE CHAOS GAME

KRZYSZTOF LEŚNIAK

(JOINT WORK WITH NINA SNIGIREVA AND FILIP STROBIN)

It is known that an attractor of a contractive iterated function system is the omega-limit of the orbit that is driven by a disjunctive sequence (i.e., a sequence of symbols, which contains all possible finite words). In particular, this convergence holds with probability 1, when the orbit is driven by a sequence generated by a chain with complete connections with positively minorized transition probabilities, the most simple case being a Bernoulli scheme. Very recently, B{a}r{a}ny, Jurga and Kolossv{a}ry have established the rate of convergence of the probabilistic chaos game in terms of the box dimension, cf. [1]. We will present what happens to the rate of convergence when a disjunctive chaos game is considered instead of the probabilistic one, cf. [2].

## REFERENCES

- [1] B. B{a}r{a}ny, N. Jurga, I. Kolossv{a}ry, *On the convergence rate of the chaos game*, International Mathematics Research Notices, rnab370 (2022).
- [2] K. Le{e}śniak, N. Snigireva, F. Strobin, *Rate of convergence in the disjunctive chaos game algorithm*, Chaos 32, 013110 (2022).

K. LEŚNIAK: FACULTY OF MATHEMATICS AND COMPUTER SCIENCE, NICOLAUS COPERNICUS UNIVERSITY IN TORUŃ, POLAND