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DISTRIBUTIONAL CHAOS FOR ITERATED FUNCTIONS

We disprove the conjecture from [1] that the weakest form of distributional chaos (denoted by DC3) is iteration invariant and show that a slightly strengthened definition, denoted by DC2$\frac{1}{2}$, is preserved under iteration, i.e. f^n is DC2$\frac{1}{2}$ if and only if f is too. Unlike DC3, DC2$\frac{1}{2}$ is also conjugacy invariant and implies Li-Yorke chaos.

References

[1] L. Risong, *A note on the three versions of distributional chaos*, Communications in Nonlin. Sc. and Num. Sim., **16** (2011), 1993–1997.

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