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\text{\frac{1}{2}}, is preserved under iteration, i.e. \( f^n \) is DC2\text{\frac{1}{2}} if and only if \( f \) is too. Unlike DC3, DC2\text{\frac{1}{2}} is also conjugacy invariant and implies Li-Yorke chaos.

References