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Sangita Jha^{*} (jhasa@nitrkl.ac.in), Assistant Prfofessor,Dept. of Mathematic, National Institute of Technology Rourkela, Rourkela, 769008, India, and Saurabh Verma. A note on fractal dimension for a class of fractal interpolation functions.

The fractal interpolation functions with appropriate iterated function systems (IFSs) provide a method to perturb and approximate a continuous function on a compact interval I. This method produces a class of functions $f^{\alpha} \in C(I)$, where α is a scale parameter. As essential parameters of the IFS, the scaling factors have important consequences in the properties of the function f^{α} . Also, the interpolant or a certain derivative of it may have a non-integer box-counting dimension depending on the scaling factors magnitude. In this talk, we discuss an estimation of box dimension of α -fractal functions under suitable hypotheses on IFSs. (Received August 20, 2021)