1172-28-115   **Megha Pandey*** (`meghapandey1071996@gmail.com`), Department Of Mathematical Sciences, Indian Institute Of Technology (BHU), Varanas, Varanasi, 221005, India, and **Tanmoy Som** and **Saurabh Verma**. *Set-valued Fractal interpolation functions: approximation and dimension.*

Approximation Theory has gained an appreciable attention in almost every field of mathematics. Fractal theory embraced the approximation theory in 1986 by Barnsely in his seminal research paper, namely, "Fractal functions and interpolatio". Following this pioneering work of Barnsely, Navascués and her group studied approximation of real-valued functions using a parameterized class of fractal interpolation functions termed as α-fractal functions associated with continuous functions on a compact interval of $\mathbb{R}$. This talk will focus on a generalization of their work to the set-valued functions defined on unit interval $[0, 1]$. In particular, we record some approximation theoretic results in terms of set-valued fractal functions. In the last section, we will introduce a new definition for graph of a set-valued function, which is different from the standard definition of graph of a set-valued function and obtain some fractal dimension results for special classes of set-valued functions. (Received August 23, 2021)