DIMENSION INTERPOLATION AND THE GEOMETRY OF FRACTALS

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Abstract. Dimension theory is an important sub-field of fractal geometry where one attempts to classify and describe fractal objects by assigning to them a 'dimension', that is, a quantity which reflects some geometric or analytic features of the object. It turns out there are many interesting and equally natural ways to define the 'dimension' of a fractal and one of the joys of the subject is in understanding how these different notions relate to each other. Dimension interpolation is a relatively new programme where one tries to define 'dimension functions' which live in-between classical notions of dimension with the broad aim of gleaning more nuanced information about the object and a more holistic view of the field in general. I will survey some recent developments in this area.