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Cantor sets, BV functions and BMO-type norms

We study functions of bounded variation (BV) through the classical Cantor-Lebesgue function (also known as the Devil's Staircase), which is both a fractal curve and an example of a one-dimensional BV function. Moreover, every BV function can be decomposed into three parts, one of which is Cantor-like. The goal is to explore concretely the relation between BV functions and BMO-type norms in the one-dimensional case by computing and comparing such norms in the case of the Cantor function. This is inspired by recent work of various authors attempting to compute the total variation from the BMO-type norms by using various notions of convergence such as Gamma-convergence.