Moments of discrete measures with dense jumps induced by $\beta$-expansions

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Abstract

Let $\beta > 1$. Through an appeal to $\beta$-expansions we define a strictly increasing and left-continuous function $\mu_\beta$ on $[0, 1]$. Then $\mu_\beta$ turns out to be a pure jump distribution. In other words, its consequential Lebesgue-Stieltjes measure is discrete, i.e., a summation of point masses. In this talk, we study the moment of this discrete measure, and its asymptotics.