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An alternative construction of normal numbers

par Edgardo UGALDE

Abstract. A new class of b–adic normal numbers is built recursively by using Eulerian paths in a sequence of de Bruijn digraphs. In this recursion, a path is constructed as an extension of the previous one, in such way that the b–adic block determined by the path contains the maximal number of different b–adic subblocks of consecutive lengths in the most compact arrangement. Any source of redundancy is avoided at every step. Our recursive construction is an alternative to the several well–known concatenative constructions *à la* Champernowne.

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