WILLIAM MANCE, The Ohio State University

Normal numbers with respect to the Cantor series expansions

We will discuss extending the concept of normality to the Q-Cantor series expansions by defining two notions that are equivalent for *b*-ary expansions: Q-normality and Q-distribution normality. Much of the theory of Q-normal numbers and Q-distribution normal numbers is similar to the classical theory of normal numbers. For example, almost every real number is Q-distribution normal and many sets of non-Q-normal or non-Q-distribution normal numbers are residual sets with full Hausdorff dimension. Surprisingly, Q-normality and Q-distribution normality are no longer equivalent. We will provide recent constructions that demonstrate this fact.