

Diophantine approximation and Hausdorff dimension

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Abstract. A classical result of Khintchine asserts that almost every real number is approximable at the order 2 and not more by rational numbers. This was refined by Jarnik and Besicovitch, who, independently, determined the Hausdorff dimension of sets of real numbers which are very closed to infinitely many rational numbers. We will discuss on various extensions of this result, including a recent refinement on a theorem of Baker & Schmidt on the Hausdorff dimension of sets of real numbers close to infinitely many algebraic numbers of bounded degree.

