

CONSTANT INVARIANCE IN DIOPHANTINE APPROXIMATION

The set of badly approximable vectors in Diophantine approximation plays a significant role. In a recent work with Victor Beresnevich, Anish Ghosh, and Ben Ward, we developed a general framework to show a ‘constant invariance’ property for a large class of limsup sets of neighbourhoods of subsets of a metric measure space. As a consequence, we get that the set of badly approximable points has measure zero in a metric space equipped with certain natural measures. In particular, given any C^2 manifold, we show almost every point is not badly approximable.