

arXiv.org > math > arXiv:1204.0110

Mathematics > Number Theory

Badly approximable vectors on a vertical Cantor set

Erez Nesharim

(Submitted on 31 Mar 2012 (v1), last revised 24 May 2012 (this version, v2))

For \$i, j > 0, i + j = 1\$, the set of badly approximable vectors with weight \$(i, j) \$ is defined by \$Bad(i, j) = $(x, y) \ln R^2 : exists c > 0 forall q \ln N, (;); \max{q||qx||^{1/i}, q||qy||^{1/j}} > c}$, where $||x||$ is the distance of x to the nearest integer. In 2010 Badziahin-Pollington-Velani solved Schmidt's conjecture which was stated in 1982, proving that $Bad(i, j) cap Bad(j, i)$ is nonempty. Using Badziahin-Pollington-Velani's technique with reference to fractal sets, we were able to improve their results: Assume that we are given a sequence (i_t, j_t) with $i_t, j_t > 0, i_t + j_t = 1$. Then, the intersection of $Bad(i_t, j_t)$ over all t is nonempty.$

Subjects: Number Theory (math.NT); Dynamical Systems (math.DS) Cite as: arXiv:1204.0110 [math.NT] (or arXiv:1204.0110v2 [math.NT] for this version)

Submission history

From: Erez Nesharim [view email] [v1] Sat, 31 Mar 2012 15:52:37 GMT (12kb) [v2] Thu, 24 May 2012 03:52:33 GMT (12kb)

Which authors of this paper are endorsers?

Link back to: arXiv, form interface, contact.

Search or Article-id	(<u>Help</u> <u>Advanced search</u>)
	All papers 🖵 Go!
	Download:
n a	 PDF PostScript Other formats
rersion, v2))	Current browse context: math.NT < prev next > new recent 1204
ht \$(i, j) ;\; x\$ to the	Change to browse by: math math.DS
j, i)\$ is ce to	References & Citations NASA ADS
e given a ction of	Bookmark(what is this?)
n DS)	