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G. Tinaztepe

Vocational School of Technical Sciences, Akdeniz University, Dumlupinar Boulevard, 07058
Campus Antalya, Turkey
gtinaztepe@akdeniz.edu.tr

I. Yesilce

Faculty of Science and Letters, Mersin University, Ciftlikkoy Campus, 33343 Mersin, Turkey
ilknuryesilce@gmail.com

G. Adilov

Faculty of Education, Akdeniz University, Dumlupinar Boulevard, 07058 Campus Antalya,
Turkey
gabiladilov@gmail.com

Separation of B^{-1} -Convex Sets by B^{-1} -Measurable Maps

A subset A of \mathbb{R}_{++}^n is B^{-1} -convex if for all $x_1, x_2 \in A$ and all $t \geq 1$ one has $tx_1 \wedge x_2 \in A$. These sets were first investigated in papers of G. Adilov and I. Yesilce [“ B^{-1} -convex sets and B^{-1} -measurable maps”, Numerical Functional Analysis and Optimization 33(2) (2012) 131–141; “On Generalization of the Concept of Convexity”, Hacettepe Journal of Mathematics and Statistics 41(5) (2012) 723–730], and of W. Bricc and Q. B. Liang [“On Some Semilattice Structures for Production Technologies”, European Journal of Operational Research 215 (2011) 740–749].

In this paper, we establish separation and a Hahn-Banach-like Theorem for B^{-1} -convex sets.

Keywords: B-convexity, half spaces, gauges, co-gauges, separation, B-measurable maps.

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