Characterizations of some properties of the closed convex sets through their Gauss range

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(Based on a joint work in progress with J.E. Martínez-Legaz)

Abstract

Two types of closed convex sets are characterized by some topological properties of the ranges of their associated Gauss maps. These topological properties are considered in the particular case of the epigraphs of the lower semicontinuous proper convex functions and they characterize two types of such functions.