Tang, Wee-Kee

On Fréchet differentiability of convex functions on Banach spaces. (English) Zbl 0831.46045

Commentat. Math. Univ. Carol. 36, No. 2, 249-253 (1995).

Summary: Equivalent conditions for the separability of the range of the subdifferential of a given convex Lipschitz function f defined on a separable Banach space are studied. The conditions are in terms of a majorization of f by a C^1-smooth function, separability of the boundary for f or an approximation of f by Fréchet smooth convex functions.

MSC:

46G05	Derivatives of functions in infinite-dimensional spaces	Cited in **1** Review
49J50	Fréchet and Gateaux differentiability in optimization	Cited in **7** Documents
46B03	Isomorphic theory (including renorming) of Banach spaces	

Keywords:

separability of the range of the subdifferential; convex Lipschitz function; C^1-smooth function; Fréchet smooth convex functions

Full Text: EuDML