عنوان مقاله:

Some relations between ε-directional derivative and ε-generalized weak subdifferential

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خلاصه مقاله:

In this paper, we study ε-generalized weak subdifferential for vector valued functions defined on a real ordered topological vector space X. We give various characterizations of ε-generalized weak subdifferential for this class of functions. It is well known that if the function $f : X \to R$ is subdifferentiable at $x_\circ \in X$, then f has a global minimizer at $x_\circ$ if and only if $\circ \in \partial f(x_\circ)$. We show that a similar result can be obtained for ε-generalized weak subdifferential. Finally, we investigate some relations between ε-directional derivative and ε-generalized weak subdifferential. In fact, in the classical subdifferential theory, it is well known that if the function $f : X \to R$ is subdifferentiable at $x_\circ \in X$ and it has directional derivative at $x_\circ$ in the direction $u \in X$, then the relation $f'(x_\circ, u) \geq \langle u, x* \rangle, \forall x* \in \partial f(x_\circ)$ is satisfied. We prove that a similar result can be obtained for ε- generalized weak subdifferential.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا: