Non-smooth critical point theory on closed convex sets

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A critical point theory for non-differentiable functionals defined on a closed convex subset of a Banach space is worked out. Special attention is paid to the notion of critical point and possible compactness conditions of Palais-Smale's type. Two Mountain-Pass like theorems are also established. Concepts and results are compared with those already existing in the literature [1], [2], [3].

References

[1] *K.-C. Chang*: On the mountain pass lemma. In: Equadiff 6 (Brno, 1985). Lecture Notes in Math. *1192* (1986), 203–208.

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[3] *M. Struwe*: Variational Methods. Applications to Nonlinear Partial Differential Equations and Hamiltonian Systems. Springer-Verlag, Berlin, 1996.