

## A Schechter-type critical point result for locally Lipschitz functions

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Based on the variational principle of Ekeland, we prove a Schechter-type critical point existence theorem for locally Lipschitz functions defined on a ball of a Hilbert space.

Concerning the critical points of a  $C^1$ -functional on a ball, M. Schechter proved [?] an existence and localization result. In this case, he also presents [?] a systematic way of finding critical points and shows that how this method can be used for solving partial differential equations. Schechter's original statements for extrema in a ball of a Hilbert space can be found in [?, Theorems 5.3.3 and 5.5.5].

In articles [?, ?], R. Precup deals with the critical point theory [?] developed by M. Schechter. Based on the variational principle of Bishop–Phelps, he also gives in [?] a new proof to Schechter's theorem for these extrema.

Our objective is to extend the Schechter-type result of R. Precup [?] for locally Lipschitz functions. Confirming the applicability of this result, we present a differential inclusion problem.

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