

# Localization properties for nonlinear equations involving monotone operators

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## Abstract

Using monotonicity methods, the Lagrange multiplier rule and some variational arguments, we consider a type of localization results pertaining to the existence of critical points to action functionals on a closed ball. A variant of the Schechter critical point theorem on a ball in Hilbert and Banach spaces is obtained. Applications to nonlinear Dirichlet problem and to partial difference equations are given in the final part of this paper.

## Hosted file

LocalizatF2.pdf available at <https://authorea.com/users/304988/articles/435562-localization-properties-for-nonlinear-equations-involving-monotone-operators>