

عنوان مقاله:

A penalty method for solving nonsmooth constrained optimization problems

محل انتشار:

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خلاصه مقاله:

We introduce an algorithm to solve a locally Lipschitz constrained minimization problem. The method generates second order descent directions to minimize an ℓ_1 penalty function. We introduce a new criterion to decide upon acceptability of a Goldstein subdifferential approximation. We show that the new criterion leads to an improvement of the Goldstein subdifferential approximation, as introduced by Mahdavi-Amiri and Yousefpour. Also, making use of our proposed line search strategy, we show that the method always moves on differentiable points. Furthermore, the method has an adaptive behaviour in the sense that, when the iterates move on adequately smooth regions, the search directions switch exactly to the Shanno s conjugate gradient directions and no subdifferential approximation is .computed. The global convergence of the method is established

کلمات کلیدی:

Nonsmooth optimization, Goldstein subdifferential, Penalty method, Conjugate gradient

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