Inexact descent methods for convex minimization problems in Banach spaces

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Abstract.

Given a Lipschitz and convex objective function of an unconstrained optimization problem, defined on a Banach space, we revisit the class of regular vector fields which was introduced in our previous work on descent methods. We study, in particular, the asymptotic behavior of the sequence of values of the objective function for a certain inexact process generated by a regular vector field when the sequence of computational errors converges to zero and show that this sequence of values converges to the infimum of the given objective function of the unconstrained optimization problem.

1. Introduction

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References


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