Mathematics > Optimization and Control

Convergence of the Gauss-Newton method for convex composite optimization under a majorant condition

Orizon Perreira Ferreira, Max Leandro Nobre Gonçalves, Paulo Roberto Oliveira

(Submitted on 19 Jul 2011)

Under the hypothesis that an initial point is a quasi-regular point, we use a majorant condition to present a new semi-local convergence analysis of an extension of the Gauss-Newton method for solving convex composite optimization problems. In this analysis the conditions and proof of convergence are simplified by using a simple majorant condition to define regions where a Gauss-Newton sequence is "well behaved".

Subjects:	**Optimization and Control (math.OC)**
MSC classes:	65H10
Cite as:	**arXiv:1107.3796v1 [math.OC]**

Submission history

From: Max Leandro Nobre Goncalves [view email]
[v1] Tue, 19 Jul 2011 17:56:43 GMT (18kb)

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