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A note on Dislocation hyperbolic augmented Lagrangian algorithm
for nonconvex optimization*

Authors:

Lennin Mallma Ramirez^{1*}, Nelson Maculan², Adilson Elias Xavier¹, Vinicius Layter
Xavier³

^{1*} Federal University of Rio de Janeiro, Systems Engineering and Computer Science Program (COPPE), Rio de Janeiro, Brazil.

² Federal University of Rio de Janeiro, Systems Engineering and Computer Science Program-Applied Mathematics (COPPE and IM), Rio de Janeiro, Brazil.

³ Rio de Janeiro State University, Institute of Mathematics and Statistics, Graduate Program in Computational Sciences, Rio de Janeiro, Brazil.

Abstract

About the published article “Mallma Ramirez L., Maculan N., Xavier A.E., Xavier V.L.: Dislocation hyperbolic augmented Lagrangian algorithm for nonconvex optimization. RAIRO-Oper. Res., Volume 57, Number 5, 2941–2950, (2023). DOI: <https://doi.org/10.1051/ro/2023153>; we clarify information that was assumed in our work but is not written explicitly.

Keywords: Dislocation hyperbolic augmented Lagrangian, nonlinear programming, nonconvex problem, convergence, complementarity condition.

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A note on: Dislocation hyperbolic augmented Lagrangian algorithm for nonconvex optimization*

Lennin Mallma Ramirez[†] Nelson Maculan[‡] Adilson Elias Xavier[§]
Vinicius Layter Xavier[¶]

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DOI: <https://doi.org/10.1051/ro/2023153>”, we clarify an information that was assumed in our work, but is not written explicitly.

In our work, in all the analyses it was considered that the sequence $\{\tau^k\}$ is bounded, and therefore there will exist a subsequence that will converge to a strictly positive point. But for that to happen, it is necessary to make the assumption the whole sequence is convergent, i.e.,

$$\lim_{k \rightarrow \infty} \tau^k = \tilde{\tau} > 0. \quad (1)$$

We assume that expression **(I)** is true throughout our work. In this way, we avoid the indeterminate case of $\frac{0}{0}$ in our analyses.

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[†]Systems Engineering and Computer Science Program (COPPE), Federal University of Rio de Janeiro, Rio de Janeiro, RJ, Brazil. email: lenninmr@cos.ufrj.br

[‡]Systems Engineering and Computer Science Program-Applied Mathematics (COPPE/IM), Federal University of Rio de Janeiro, Rio de Janeiro, RJ, Brazil. email: maculan@cos.ufrj.br

[§]Systems Engineering and Computer Science Program (COPPE), Federal University of Rio de Janeiro, Rio de Janeiro, RJ, Brazil. email: adilson@cos.ufrj.br

[¶]Department of Epidemiology, Institute of Social Medicine, Rio de Janeiro State University, Rio de Janeiro, RJ, Brazil. email: viniciuslx@ime.uerj.br