

Associate Professor Do Ngoc My
Editor-in-Chief, *Quynhon University Journal of Science*
170 An Duong Vuong, Quynhon, Binhdinh

September 10, 2021

Title: “Inexact regularized Newton method for unconstrained optimization with rapid rate of convergence”

Authors: Nguyen Van Vu and Tran Ngoc Nguyen

Dear Professor Do Ngoc My,

We would like to submit the above paper for possible publication in Quynhon University Journal of Science.

The topic on designing algorithms for solving optimization problems has been an important research topic in economics, engineering and applied mathematics. In this paper, we propose a new inexact regularized Newton algorithm for unconstrained optimization.

Our novel idea is to combine the inexact Newton-type method with a regularization technique. This makes our new algorithm able to solve degenerate problems and take less time to solve optimization problems. Along with the theoretical results, some numerical experiments are also conducted to demonstrate the effectiveness of our new algorithm. We believe that the presented result is a new contribution in numerical optimization area as well as it falls within the scope of the journal.

We are looking forward to hearing from you with many thanks.

Yours sincerely,

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