

Certain Generalized Quantum Simpson's and Quantum Newton's type Inequalities for Convex Functions in Quantum Calculus

Muhammad Aamir Ali¹, Hüseyin BUDAK², PRAVEEN AGARWAL³, and Yuming Chu⁴

¹Nanjing Normal University School of Mathematical Sciences

²Düzce University

³Anand International College of Engineering

⁴Huzhou University

November 25, 2020

Abstract

In this paper first we present some new identities by using the notions of quantum integrals and derivatives which allows us to obtain new quantum Simpson's and quantum Newton's type inequalities for differentiable convex functions by using the q - $\{x\}$ -quantum integral and q - $\{y\}$ -quantum integral. In particular, this paper generalises and extends previous results obtained by the various authors in the field of quantum and classical integral inequalities.

Hosted file

MMAS11242020.pdf available at <https://authorea.com/users/330633/articles/495090-certain-generalized-quantum-simpson-s-and-quantum-newton-s-type-inequalities-for-convex-functions-in-quantum-calculus>