

البحث الرابع

Title: Novel Integral Inequalities on Nabla Time Scales with C-Monotonic Functions

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Abstract. Through the paper, we present several inequalities involving C-monotonic functions with $C \geq 1$, on nabla calculus via time scales. It is known that dynamic inequalities generate many different inequalities in different calculus. The main results will be proved by applying the chain rule formula on nabla calculus. As a special case for our results, when $\mathbb{T} = \mathbb{R}$, we obtain the continuous analogues of inequalities that had previously been proved in the literature. When $\mathbb{T} = \mathbb{N}$, the results, to the best of the authors' knowledge, are essentially new. Symmetrical properties of C-monotonic functions are critical in determining the best way to solve inequalities.