

Inverse Forms of Pachpatte-Type Dynamic Inequalities within Diamond-Alpha Calculus

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Abstract:

Through the application of concavity, we derive novel reversed diamond-alpha Pachpatte-type dynamic inequalities. These formulations not only encompass the nabla and delta analogues but also subsume both the discrete and continuous frameworks as particular instances. Moreover, in the absence of concavity, they naturally give rise to generalized versions of the diamond-alpha Bennett–Leindler-type dynamic inequalities [1].

References

- [1] Kayar Z., Kaymakçalan B. and Pelen N.N., (2022), Diamond alpha Bennett-Leindler type dynamic inequalities and their applications, *Math. Meth. Appl. Sci.*, vol. 45, pp. 2797–2819