

SOME IMPROVEMENTS OF THE POPOVICIU, BELLMAN AND DIAZ—METCALF INEQUALITIES VIA SUPERQUADRATIC FUNCTIONS

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Abstract. We give refinements of the generalized Bellman and Diaz–Metcalf inequalities for isotonic linear functionals by using the concept of superquadratic functions. Further, we give refinements of the generalized Bellman and Diaz–Metcalf inequalities for time scales integrals as applications of the above obtained inequalities for isotonic linear functionals. Moreover we give refinements of the Aczél and Popoviciu inequalities for time scales integrals.

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