## NEW RETARDED DYNAMIC INEQUALITIES ON TIME SCALES WITH APPLICATIONS

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**Abstract.** In this article, we prove new retarded dynamic inequalities on time scales that contain some integral and discrete inequalities reported in the literature. These inequalities can be used as handy tools for the study of qualitative properties of solutions of dynamic equations on time scales. Some examples are included to demonstrate the applications of our results.

Mathematics subject classification (2020): 26D10, 26D15, 26D20, 34A12, 34A40. Keywords and phrases: Dynamic inequality, Gronwall-type inequality, time scales.

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