

Some new results on dynamic inequalities and dynamic systems on time scales

Sunday, December 11, 2016 3:00 PM (50 minutes)

Summary

In this talk, we present some weighted inequalities for delta derivatives acting on products and compositions of functions on time scales and apply them

to obtain generalized dynamic Opial-type inequalities.

We also give some Picone-type identities and inequalities for a class of first-order nonlinear dynamic systems and derive various weighted inequalities of Wirtinger type and Hardy type on time scales. We apply these results to obtain some

related properties of these systems including Reid's roundabout theorem on disconjugacy, Sturm's separation and comparison theorems, as well as a variational method in the oscillation theory.

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