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Oscillation of Second Order Nonlinear Delay Damped Difference Equations

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摘要
关键词   oscillation   second-order difference equations   Riccati techniques

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Abstract Some new oscillation criteria for nonlinear delay difference equation with damping $$ \Delta ^{2}x_{n}+p_{n} \Delta x_{n}+F(n,x_{n-\tau },\Delta x_{n-\sigma })=0,\ \ \ \ n=0,1,2,\ldots ,\eqno{(*)} $$ are given. Our results partially solve the open problem posed in [{\it Math. Bohemica}, 125 (2000), 421--430]. Also, we will establish some new oscillation criteria for special cases of $(\ast),$ which improve some of the well-known results in the literature.

Key words   oscillation   second-order difference equations   Riccati techniques

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