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*Stability and Boundedness in Nonlinear Infinite Delay Volterra Discrete Systems Using Lyapunov Functionals.*

We utilize Lyapunov functionals and obtain sufficient conditions for the stability of the zero solution and boundedness of solutions for the discrete Volterra system with infinite delay of the form

$$x(t+1) = Px(t) + \sum_{s=-\infty}^{t-1} C(t,s)g(x(s)).$$

Due to the nature of the Lyapunov functional, we will be able to show that all solutions are  $l([t_0, \infty) \cap \mathbb{Z})$ .

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