

COMPARISON PRINCIPLE FOR IMPULSIVE FUNCTIONAL DIFFERENTIAL SYSTEMS WITH INFINITE DELAYS OR FINITE DELAYS

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Abstract

In this paper, a new comparison principle for impulsive functional differential systems with infinite delays or finite delays is investigated. Also, some sufficient conditions for exponential stability are presented by using Lyapunov functions and Razumikhin technique. The results improve and generalize the ones in the literature. Finally, an example is given to illustrate the feasibility and advantages of the obtained results.

Keywords and phrases: impulsive functional differential systems, comparison principle, Razumikhin technique, Lyapunov functions, exponential stability, finite delays, infinite delays.

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