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Section:

9. Ordinary Differential Equations and Dynamical Systems

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Marachkov type stability results for functional differential equations

This paper is concerned with systems of functional differential equations with either finite or infinite delay. We give conditions on the system and on a Liapunov function to ensure that the zero solution is asymptotically stable. The main result of this paper is that the assumption on boundedness in Marachkov type stability results may be replaced (in both the finite and the infinite delay case) with the condition that $|f(t,\varphi)| \leq F(t)$ such that $\int^{\infty} 1/F(t)dt = \infty$.