



Construction of Lyapunov's Functions for a Class of Nonlinear Systems

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Abstract: The conditions of absolute stability for a certain class of nonlinear systems are investigated. It is proved that the systems considered are absolutely stable iff for these systems there exist Lyapunov's functions of the special form. The results obtained are used for the stability analysis of complex systems in critical cases.

Keywords: *Nonlinear systems; Lyapunov's functions; absolute stability; large scale systems.*

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