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Lyapunov type inequalities and inhomogenous boundary value problems for linear Hamiltonian systems under impulse effect

Zeynep KAYAR and Ağacık ZAFER

Middle East Technical University, Ankara, Turkey

zkayar@metu.edu.tr

Abstract

In this talk two existence and uniqueness criteria for the solutions of inhomogenous BVPs are proved by using the Lyapunov type inequalities. Moreover the unique solution of inhomogenous BVP has been expressed in terms of Green's function (pair) and properties of Green's function (pair) have been stated. Our criteria are the first results which give the relation between existence and uniqueness theory of boundary value problems and Lyapunov type inequalities. This relation has not been noticed even for the ordinary differential equations case.