Turkish Journal of Physics

Canonical Treatment of Regular Lagrangians with Holonomic Constraints as Singular Systems

Eqab M. RABEİ
Physics Department, Mu'tah University
Mu'tah-Karak-P.O.Box 7-JORDAN

Abstract: Regular Lagrangians with holomonic constraints are treated as singular systems using the canonical method. The Lagrange multipliers are introduced as generalized coordinates. The regular Lagrangians are extended to be singular and the Hamiltonian formulation is obtained. The equations of motion are written as total differential equations in terms of the time t and the Lagrange multipliers. It is also shown that Lagrange multipliers can be determined from the integrability conditions.

Keywords
Authors

phys@tubitak.gov.tr

Scientific Journals Home Page