

Lie Symmetry and Conserved Quantity of Three-Order Lagrangian Equations for Non-conserved Mechanical System

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Abstract: Based on the infinitesimal and one parameter transformation, the problem of Lie symmetry of three-order Lagrangian equations has been studied. Under Lie transformation, the sufficient and necessary condition which keeps three-order Lagrangian equations to be unchanged and the invariant are obtained in this paper.

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Key words: three-order Lagrangian equation, Lie symmetry, conserved quantity

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