非**Четаев**型非完整系统的**Lie**对称性与守恒量

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摘要　　研究非Четаев型非完整系统的Ｌｉｅ对称性．首先利用微分方程在无限小变换下的不变性建立Ｌｉｅ对称所满足的确定方程和限制方程，给出结构方程并求出守恒量；其次研究上述问题的逆问题：根据已知积分求相应的Ｌｉｅ对称性；最后举例说明结果的应用．
关键词　　分析力学　非完整系统　Lie对称性　守恒量

分类号

LIE SYMMETRIES AND CONSERVED QUANTITIES OF NONHOLONOMIC SYSTEMS OF NON CHETAEV'S TYPE 1)

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Abstract

There are two kinds of modern methods in finding conservation laws. One is the Noether method which is based on the invariance of the Hamilton's action under the infinitesimal transformations, the other one is the Lie method which is based on the invariance of the differential equations under infinitesimal transformations. In mathematics, the symmetry methods in the theory of differential equations have made great progress in recent years. In mechanics, the research on Lie symmetries and conservation l...

Key words　analytical mechanics　nonholonomic symstem　Lie symetry　conserved quantity

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