论文

广义经典完整非保守力学系统Lie对称性及其守恒量

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摘要：

研究了广义完整非保守力学系统的Lie对称性及其守恒量. 建立了系统的运动微分方程，给出其确定方程、结构方程和守恒量，得到了系统的Lie对称性定理和逆定理，最后举例说明结果的应用.

关键词： 广义力学系统 Lie对称性 守恒量

Lie symmetries and conserved quantities of holonomic non-conservative dynamical systems in generalizad classical machanics

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Abstract:

Lie symmetries and conserved quantities of holonomic non-conservative dynamical systems in generalized classical mechanics were studied. First, the determining equations of Lie symmetries are established by using Lie's invariance method of infinitesimal transformations of differential equations. Second, the structure equations and the conserved quantities were obtained. Third, the inverse Lie symmetries system problems were discussed. Finally, an example to illustrate the application of the results was given.

Keywords: generalized mechanics system Lie symmetries conserved quantities

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