<<常微分方程理论中的几何方法 >

图书基本信息

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作者：V.I.ARNOLD

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内容概要

Newton's fundamental discovery, the one which he considered necessary to keep secret and published only in the form of an anagram, consists of the following: Data aequatione quotcunque fluentes quantitae involvente fluxiones invenire et vice' versa. In contemporary mathematical language, this means: "It is useful to solve differential equations". At present, the theory of differential equations represents a vast con- glomerate of a great many ideas and methods of different nature, very useful for many applications and constantly stimulating theoretical in- vestigations in all areas of mathematics. Many of the routes connecting abstract mathematical theories to appli- cations in the natural sciences lead through differential equations. Many topics of the theory of differential equations grew so much that they became disciplines in themselves; problems from the theory of differential equations had great significance in the origins of such disciplines as linear algebra, the theory of Lie groups, functional analysis, quantum mechanics, etc. Consequently, differential equations lie at the basis of scientific mathematical philosophy (Weltanschauung).

书籍目录