

<<数学物理中的全局分析>>

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内容概要

This book is the first in monographic literature giving a common treatment to three areas of applications of Global Analysis in Mathematical Physics previously considered quite distant from each other, namely, differential geometry applied to classical mechanics, stochastic differential geometry used in quantum and statistical mechanics, and infinite-dimensional differential geometry fundamental for hydrodynamics. The unification of these topics is made possible by considering the Newton equation or its natural generalizations and analogues as a fundamental equation of motion. New general geometric and stochastic methods of investigation are developed, and new results on existence, uniqueness, and qualitative behavior of solutions are obtained. The first edition of this book, entitled *Analysis on Riemannian Manifolds and Some Problems of mathematical Physics*, was published in Russian by Voronezh University Press in 1989. For its English edition, the book has been substantially revised and expanded.

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