

<<偏微分方程组中的李结构法>>

图书基本信息

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内容概要

This book provides a lucid and comprehensive introduction to the differential geometric study of partial differential equations. It is the first book to present substantial results on local solvability of general and, in particular, nonlinear PDE systems without using power series techniques. The book describes a general approach to systems of partial differential equations based on ideas developed by Lie, Cartan and Vessiot. The most basic question is that of local solvability, but the methods used also yield classifications of various families of PDE systems. The central idea is the exploitation of singular vector field systems and their first integrals. These considerations naturally lead to local Lie groups, Lie pseudogroups and the equivalence problem, all of which are covered in detail. This book will be a valuable resource for graduate students and researchers in partial differential equations, Lie groups and related fields.

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书籍目录

Preface 1 Introduction and summary 2 PDE systems ,pfaffian systems and vector field systems 2.1 ODE systems,vector fields and 1-parameter groups 2.2 first order PDE systems in one dependent variable,pfaffian equations and contact transformantions 2.3 Jet bundles and contact pfaffian systems 2.4 The theorem of Frobenius 2.5 Mayer's blowing-up method for proving 3 Cartan's local existence theorem 3.1 Involutions and characters 3.2 From involutions to complete systems 3.3 How general is the general solutions ? 3.4 Cauchy characteristics 3.5 Maximal involutions and integrable vector-field systems4 Involutivity and the prolongation theorem 4.1 Independence condition and involutivity 4.2 Prolongations 4.3 Explanation of the prolongation theorem5 Drach's Classification,seceond order PDEs in one dependent variable,and Monge characteristics 5.1 The classification of Drach 5.2 Second order PDEs in on unknown and their singular vector fields 5.3 Monge characteristic subsystems 6 Integration of vector field systems satisfying 6.1 Maximal involutions 6.2 Complete subsystems 6.3 The generalized contact bracket 6.4 Reduction to a canonical form and systems of contact coordinates 6.5 How to find all maximal completes subsystems of 6.6 Contact transformations and Lie pseudogroups 6.7 Explicitly integrable systems7 Higher order contact transformations 8 Local Lie groups 9 Structual classification of 3-dimensional Lie algebras over the comples numbers 10 Lie euqations and Lie vector field systems 11 Second order PDEs in one dependent and two independent variables12 Hyperbolic PDEs with Monge systems admitting two or three first integrals13 Classification of hyperbolic Goursat equations 14 Cartan's theory of Lie pseudogroups 15 The equivalence problem16 Parabolic PDEs and associated PDEs systems 17 The equivallence problem for general 3-dimensional pfaffian systems in five variables18 Involutive second order PDE systems in one dependent and three independent variables ,solved by he method of Monge BiliographyIndex

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