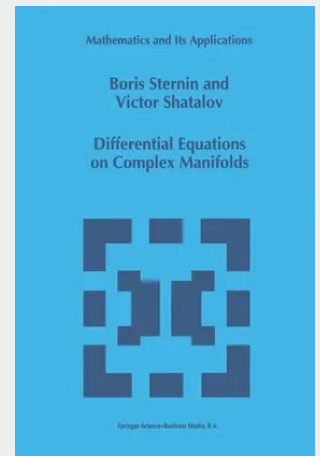


Differential Equations on Complex Manifolds

The present monograph is devoted to the complex theory of differential equations. Not yet a handbook, neither a simple collection of articles, the book is a first attempt to present a more or less detailed exposition of a young but promising branch of mathematics, that is, the complex theory of partial differential equations. Let us try to describe the framework of this theory. First, simple examples show that solutions of differential equations are, as a rule, ramifying analytic functions. and, hence, are not regular near points of their ramification. Second, bearing in mind these important properties of solutions, we shall try to describe the method solving our problem. Surely, one has first to consider differential equations with constant coefficients. The apparatus solving such problems is well-known in the real theory of differential equations: this is the Fourier transformation. Unfortunately, such a transformation had not yet been constructed for complex-analytic functions and the authors had to construct by themselves. This transformation is, of course, the key notion of the whole theory.

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106,99 €

99,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9789048143689

Medium: Buch

ISBN: 978-90-481-4368-9

Verlag: Springer

Erscheinungstermin: 06.12.2010

Sprache(n): Englisch

Auflage: 1. Auflage. Softcover version of original hardcover Auflage 1994

Serie: Mathematics and Its Applications

Produktform: Kartoniert

Gewicht: 785 g

Seiten: 508

Format (B x H): 155 x 235 mm

