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Autore	Savin Anton
Titolo	Introduction to Complex Theory of Differential Equations / / by Anton Savin, Boris Sternin
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Descrizione fisica	1 online resource (IX, 138 p. 43 illus.)
Collana	Frontiers in Mathematics, , 1660-8046
Disciplina	550
Soggetti	Global analysis (Mathematics) Manifolds (Mathematics) Differential equations, Partial Functions of complex variables Geophysics Global Analysis and Analysis on Manifolds Partial Differential Equations Several Complex Variables and Analytic Spaces Geophysics/Geodesy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Leray residues -- Ramied integrals -- Asymptotics of ramied integrals -- Ramied Fourier transform -- Properties of ramied Fourier transform -- The Cauchy problem for equations with constant coefficients -- Singularities of the solution of Cauchy problem -- The Cauchy problem for equations with variable coefficients. Leray's uniformization -- Balayage inwards problem -- Mother body problem -- Hints for exercises.
Sommario/riassunto	This book discusses the complex theory of differential equations or more precisely, the theory of differential equations on complex-analytic manifolds. Although the theory of differential equations on real manifolds is well known – it is described in thousands of papers and its usefulness requires no comments or explanations – to date specialists on differential equations have not focused on the complex theory of partial differential equations. However, as well as being remarkably

beautiful, this theory can be used to solve a number of problems in real theory, for instance, the Poincaré balayage problem and the mother body problem in geophysics. The monograph does not require readers to be familiar with advanced notions in complex analysis, differential equations, or topology. With its numerous examples and exercises, it appeals to advanced undergraduate and graduate students, and also to researchers wanting to familiarize themselves with the subject.