Record Nr. UNISALENTO991003531689707536 Delabaere, Éric Autore Titolo Divergent series, summability and resurgence III [e-book]: Resurgent methods and the first Painlevé equation / Eric Delabaere **ISBN** 9783319290003 3319290002 Descrizione fisica 1 online resource (xxii, 230 pages): illustrations (some color) Collana Lecture notes in mathematics, 0075-8434; 2155 Classificazione AMS 40-02 **LC QA295** Altri autori (Enti) SpringerLink (Online service) Disciplina 515.243 Soggetti Divergent series Summability theory Painlevé equations Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Includes bibliographical references and index Nota di bibliografia Nota di contenuto Avant-Propos: Preface to the three volumes: Preface to this volume: Some elements about ordinary differential equations: The first Painlevé equation: Tritruncated solutions for the first Painlevé equation: A step beyond Borel-Laplace summability: Transseries and formal integral for the first Painlevé equation; Truncated solutions for the first Painlevé equation; Supplements to resurgence theory; Resurgent structure for the first Painlevé equation : Index The aim of this volume is two-fold. First, to show how the resurgent Sommario/riassunto methods introduced in volume 1 can be applied efficiently in a nonlinear setting; to this end further properties of the resurgence theory must be developed. Second, to analyze the fundamental example of the First Painlevé equation. The resurgent analysis of singularities is pushed all the way up to the so-called "bridge equation", which concentrates all information about the non-linear Stokes phenomenon at infinity of the First Painlevé equation. The third in a series of three, entitled Divergent Series, Summability and Resurgence, this volume is aimed at graduate students, mathematicians and theoretical physicists

who are interested in divergent power series and related problems, such as the Stokes phenomenon. The prerequisites are a working

knowledge of complex analysis at the first-year graduate level and of the theory of resurgence, as presented in volume 1