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Nota di contenuto	""Contents""; ""Preface""; ""A singularly perturbed Riccati equation""; ""On global aspects of exact WKB analysis of operators admitting infinitely many phases""; ""Asymptotic differential algebra""; ""Introduction""; ""1. Hardy Fields""; ""2. The Field of Logarithmic-Exponential Series""; ""3. H-Fields and Asymptotic Couples""; ""4. Algebraic Differential Equations over H-Fields""; ""References""; ""Formally well-posed Cauchy problems for linear partial differential equations with constant coefficients""; ""Non-oscillating integral curves and O-minimal structures""; ""1. Introduction"" ""2. Definitions and examples"" ""2.1 Hardy fields and o-minimal structures""; ""2.2 Boshernitzan's example""; ""2.3 Quasianalytic Denjoy-Carleman classes""; ""3. Euler's equation""; ""3.1 Euler's equation in the real plane""; ""3.2 Euler's equation in the complex plane""; ""3.3 Formal conjugation""; ""Asymptotics and singularities for a class of difference equations""; ""Topological construction of transseries and introduction to generalized Borel summability""; ""1. Introduction""; ""1.1. Abstract multiseries""; ""1.2. Topology on

multiseries"; "1.3. Contractive operators"
"1.4. Inductive construction of logarithm-free transseries""1.5. The space T of general transseries"; "2. Equations in T: examples"; "2.1. Multidimensional systems: transseries solutions at irregular singularities of rank one"; "3. Borel summation techniques"; "3.1. Borel summation of transseries: a first order example"; "3.2. Generalized Borel summation for rank one ODEs"; "3.3. Difference equations and PDEs"; "3.4. More general irregular singularities and multisummability"; "References"; "Addendum to the hyperasymptotics for multidimensional Laplace integrals"
"Higher-order terms for the de Moivre-Laplace theorem""Twisted resurgence monomials and canonical-spherical synthesis of local objects"; "1. Introduction: Object Analysis and Object Synthesis"; "1.1 The notion of Local Analytic Object"; "1.2 Object Analysis: the Bridge Equation"; "1.3 Object Synthesis: semi-formal candidates"; "1.4 Object Synthesis: from semi-formal to effective"; "2. Reminders about moulds, resurgent functions, alien derivations"; "2.1 Moulds/comoulds"; "2.2 Resurgent functions"; "2.3 Alien derivations or automorphisms. Their weights"
"2.4 Resurgence monomials""3. Object Analysis: six basic examples"; "3.1 Example 1: shift-like diffeomorphism"; "3.2 Example 2: Euler-like differential equation"; "3.3 Example 3: monocritical linear differential system"; "3.4 Example 4: monocritical non-linear differential system"; "3.5 Example 5: polycritical linear differential system"; "3.6 Example 6: polycritical non-linear differential system"; "4. The reverse problem: Object Synthesis"; "4.1 Standard or hyperlogarithmic resurgence monomials and monics"; "4.2 Semi-formal synthesis in Example 1"; "4.3 Semi-formal synthesis in Example 2"
