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| Altri autori (Persone) | GuoLi |
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| Nota di contenuto | Contents ; Foreword ; Workshop Participants ; Workshop Program ; The Ritt-Kolchin Theory for Differential Polynomials ; Preface ; 1 Basic Definitions ; 2 Triangular Sets and Pseudo-Division ; 3 Invertibility of Initials ; 4 Ranking and Reduction Concepts ; 5 Characteristic Sets<br>6 Reduction Algorithms 7 Rosenfeld Properties of an Autoreduced Set ; 8 Coherence and Rosenfeld's Lemma ; 9 Ritt-Raudenbush Basis Theorem ; 10 Decomposition Problems ; 11 Component Theorems ; 12 The Low Power Theorem ; Appendix: Solutions and hints to selected exercises ; References<br>Differential Schemes 1 Introduction ; 2 Differential rings ; 3 Differential spectrum ; 4 Structure sheaf ; 5 Morphisms ; 6 A-Schemes ; 7 A-Zeros ; 8 Differential spectrum of R ; 9 AAD modules ; 10 Global sections of AAD rings ; 11 AAD schemes ; 12 AAD reduction<br>13 Based schemes 14 Products ; References |

; Differential Algebra - A Scheme Theory Approach
; Introduction ; 1 Differential Rings ; 2 Kolchin's Irreducibility Theorem ; 3 Descent for Projective Varieties ; 4 Complements and Questions ; References
Model Theory and Differential Algebra 1 Introduction ; 2 Notation and conventions in differential algebra ; 3 What is model theory? ; 4 Differentially closed fields ; 5 O-minimal theories ; 6 Valued differential fields ; 7 Model theory of difference fields ; References
Inverse Differential Galois Theory

Sommario/riassunto

Differential algebra explores properties of solutions to systems of (ordinary or partial, linear or nonlinear) differential equations from an algebraic point of view. It includes as special cases algebraic systems as well as differential systems with algebraic constraints. This algebraic theory of Joseph F Ritt and Ellis R Kolchin is further enriched by its interactions with algebraic geometry, Diophantine geometry, differential geometry, model theory, control theory, automatic theorem proving, combinatorics, and difference equations. Differential algebra now plays an important role in comput