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Nota di contenuto	PREFACE; INSTRUCTIONS TO THE READER; Contents; CHAPTER I Elementary Theory in Cn; 1. Notation and Terminology; 2. Convergent Power Series; 3. Laurent Series; 4. Cauchy Theory; 5. Convexity in Rn1; 6. Laurent Expansion in Cn; 7. Domains of Holomorphy; 8. A Theorem of Rado; 9. Comments on Totally Disconnected Fields; CHAPTER II Weierstrass Preparation Theorem; 10. Weierstrass Preparation Theorem. Identity Theorem. Finite Ideal Bases and Unique Factorization in Power Series Rings. Implicit Function Theorem; 11. Continuity of Roots and Open Map Theorem 12. Hensel's Lemma. Continuity of Algebroid Functions13. Complex Weierstrass Preparation Theorem; 14. Riemann Extension Theorem and Connectivity of Algebroid Hypersurfaces; 15. Oka Coherence; 16. Cartan Module Bases; CHAPTER III Review from Local Algebra; 17. Depth Height and Dimension. Completions. Direct Sums. Resultants and Discriminants; 18. Quotient Rings; 19. Integral Dependence and Finite Generation; 20. Henselian Rings; 21. Order and Rank in Local Rings. Regular Local Rings; 22. Another Proof that a Formal Power Series Rings is Noetherian; CHAPTER IV Parameters in Power Series Rings 23. Parameters for Ideals24. Perfect Fields; 25. Regularity of Quotient Rings; 26. Translates of Ideals; 27. Dimension of an Intersection; 28.

Algebraic Lemmas on Algebroid Functions; CHAPTER V Analytic Sets; 29. The Language of Germs; 30. Decomposition of an Analytic Set Germ; 31. Ruckert-Weierstrass Parametrization of an Irreducible Analytic Set Germ; 32. Ruckert-Weierstrass Parametrization of an Irreducible Analytic Set Germ (Summary); 33. Local Properties of Analytic Sets; 34. Connectivity Properties of Complex Analytic Sets; 35. Parametrization of a Pure Dimensional Analytic Set
36. Normal Points of Complex Analytic Sets. Remarks on Algebraic Varieties37. Remmert-Stein-Thullen Theorem on Essential Singularities of Complex Analytic Sets. Theorem of Chow; 38. Topological Dimension; 39. Remarks on the Fundamental Group; CHAPTER VI Language of Sheaves; 40. Inductive Systems and Presheaves; 41. Sheaves; 42. Coherent Sheaves; CHAPTER VII Analytic Spaces; 43. Definitions; 44. Recapitulation of Properties of Analytic Spaces; 45. Invariance of Order and Rank; 46. Bimeromorphic Maps and Normalizations; BIBLIOGRAPHY; INDEX OF NOTATION; SUBJECT INDEX

Sommario/riassunto

This book provides, for use in a graduate course or for self-study by graduate students, a well-motivated treatment of several topics, especially the following: (1) algebraic treatment of several complex variables; (2) geometric approach to algebraic geometry via analytic sets; (3) survey of local algebra; (4) survey of sheaf theory. The book has been written in the spirit of Weierstrass. Power series play the dominant role. The treatment, being algebraic, is not restricted to complex numbers, but remains valid over any complete-valued field. This makes it applicable to situations arising from