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| Nota di contenuto | 1. Basic properties in commutative algebra -- 2. Tree structure -- 3. Ultrametric absolute values -- 4. L-productal vector spaces -- 5. Multiplicative semi-norms and Shilov boundary -- 6. Spectral semi-norm -- 7. Hensel Lemma -- 8. Infraconnected sets -- 9. Monotonous filters -- 10. Circular filters -- 11. Tree structure and metric on circular filters -- 12. Rational functions and algebras R(D) -- 13. Simple convergence on Mult(K[x]) -- 14. Topologies on Mult(K[x]) -- 15. Spectral properties and Gelfand transforms -- 16. Analytic elements -- 17. Holomorphic properties on infraconnected sets -- 18. T-filters and T-sequences -- 19. Applications of T-filters and T-sequences -- 20. Analytic elements on classic partitions -- 21. Holomorphic properties on partitions -- 22. Shilov boundary for algebras H(D, O) -- 23. Holomorphic functional calculus -- 24. Uniform K-Banach algebras and properties (s) and (q) -- 25. Properties (o) and (q) in uniform Banach K-algebras -- 26. Properties (o) and (q) and strongly valued fields -- 27. Multbijective Banach K-algebras -- 28. Pseudo-density of Mult[symbol] -- 29. Polnorm on algebras and algebraic extensions -- 30. Definition of affinoid algebras -- 31. Algebraic properties of affinoid algebras -- 32. Jacobson radical of affinoid algebras -- 33. Salmon's theorems -- 34. Separable fields -- 35. Spectral norm of affinoid algebras -- 36. |

Spectrum of an element of an affinoid algebra -- 37. Krasner-Tate algebras -- 38. Universal generators in Tate algebras -- 39. Mappings from H(D) to the tree Mult(K[x]) -- 40. Continuous mappings on Mult(K[x]) -- 41. Examples and counterexamples -- 41. Associated idempotents -- 43. Krasner-Tate algebras among Banach K-algebras.

Sommario/riassunto

In this book, ultrametric Banach algebras are studied with the help of topological considerations, properties from affinoid algebras, and circular filters which characterize absolute values on polynomials and make a nice tree structure. The Shilov boundary does exist for normed ultrametric algebras. In uniform Banach algebras, the spectral norm is equal to the supremum of all continuous multiplicative seminorms whose kernel is a maximal ideal. Two different such seminorms can have the same kernel. Krasner-Tate algebras are characterized among Krasner algebras, affinoid algebras, and ultrametric Banach algebras. Given a Krasner-Tate algbebra A=K{t}[x], the absolute values extending the Gauss norm from K{t} to A are defined by the elements of the Shilov boundary of A.