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Nota di contenuto	Frontmatter -- Preface (DG Edition) -- Preface (USTC Edition) -- Contents -- 1. Abstract Graphs -- 2. Abstract Maps -- 3. Duality -- 4. Orientability -- 5. Orientable Maps -- 6. Nonorientable Maps -- 7. Isomorphisms of Maps -- 8. Asymmetrization -- 9. Asymmetrized Petal Bundles -- 10. Asymmetrized Maps -- 11. Maps within Symmetry -- 12. Genus Polynomials -- 13. Census with Partitions -- 14. Equations with Partitions -- 15. Upper Maps of a Graph -- 16. Genera of a Graph -- 17. Isogemial Graphs -- 18. Surface Embeddability -- Appendix 1: Concepts of Polyhedra, Surfaces, Embeddings and Maps -- Appendix 2: Table of Genus Polynomials for Embeddings and Maps of Small Size -- Appendix 3: Atlas of Rooted and Unrooted Maps for Small Graphs -- Bibliography -- Author Index -- Subject Index
Sommario/riassunto	This book studies algebraic representations of graphs in order to investigate combinatorial structures via local symmetries. Topological, combinatorial and algebraic classifications are distinguished by invariants of polynomial type and algorithms are designed to determine all such classifications with complexity analysis. Being a summary of the author's original work on graph embeddings, this book is an essential reference for researchers in graph theory. ContentsAbstract GraphsAbstract MapsDualityOrientabilityOrientable MapsNonorientable