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Nota di contenuto	Preface -- Prologue -- Introduction -- Homogeneous Quadratic Duality over a Base Ring -- Flat and Finitely Projective Koszulity -- Relative Nonhomogeneous Quadratic Duality -- The Poincare-Birkhoff-Witt Theorem -- Comodules and Contramodules over Graded Rings -- Relative Nonhomogeneous Derived Koszul Duality: the Comodule Side -- Relative Nonhomogeneous Derived Koszul Duality: the Contramodule Side -- The Co-Contra Correspondence -- Koszul Duality and Conversion Functor -- Examples -- References.
Sommario/riassunto	This research monograph develops the theory of relative nonhomogeneous Koszul duality. Koszul duality is a fundamental phenomenon in homological algebra and related areas of mathematics, such as algebraic topology, algebraic geometry, and representation theory. Koszul duality is a popular subject of contemporary research. This book, written by one of the world's leading experts in the area, includes the homogeneous and nonhomogeneous quadratic duality theory over a nonsemisimple, noncommutative base ring, the Poincare–Birkhoff–Witt theorem generalized to this context, and triangulated equivalences between suitable exotic derived categories of modules,

curved DG comodules, and curved DG contramodules. The thematic example, meaning the classical duality between the ring of differential operators and the de Rham DG algebra of differential forms, involves some of the most important objects of study in the contemporary algebraic and differential geometry. For the first time in the history of Koszul duality the derived D-\Omega duality is included into a general framework. Examples highly relevant for algebraic and differential geometry are discussed in detail.