1.	Record Nr.	UNISA996466651703316
	Autore	Iarrobino Anthony
	Titolo	Power sums, Gorenstein algebras, and determinantal loci / / Anthony Iarrobino, Vassil Kanev, S. L. Kleiman
	Pubbl/distr/stampa	Berlin ; ; Heidelberg : , : Springer-Verlag, , [1999] ©1999
	ISBN	3-540-46707-6
	Edizione	[1st ed. 1999.]
	Descrizione fisica	1 online resource (XXXIV, 354 p.)
	Collana	Lecture Notes in Mathematics ; ; 1721
	Disciplina	516.35
	Soggetti	Catalecticant matrices Determinantal varieties
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Bibliographic Level Mode of Issuance: Monograph
	Nota di contenuto	Forms and catalecticant matrices -- Sums of powers of linear forms, and gorenstein algebras -- Tangent spaces to catalecticant schemes -- The locus PS(s, j; r) of sums of powers, and determinantal loci of catalecticant matrices -- Forms and zero-dimensional schemes I: Basic results, and the case r=3 -- Forms and zero-dimensional schemes, II: Annihilating schemes and reducible Gor(T) -- Connectedness and components of the determinantal locus ?V s(u, v; r) -- Closures of the variety Gor(T), and the parameter space G(T) of graded algebras -- Questions and problems.
	Sommario/riassunto	This book treats the theory of representations of homogeneous polynomials as sums of powers of linear forms. The first two chapters are introductory, and focus on binary forms and Waring's problem. Then the author's recent work is presented mainly on the representation of forms in three or more variables as sums of powers of relatively few linear forms. The methods used are drawn from seemingly unrelated areas of commutative algebra and algebraic geometry, including the theories of determinantal varieties, of classifying spaces of Gorenstein-Artin algebras, and of Hilbert schemes of zero-dimensional subschemes. Of the many concrete examples given, some are calculated with the aid of the computer algebra program "Macaulay", illustrating the abstract material. The final chapter

considers open problems. This book will be of interest to graduate students, beginning researchers, and seasoned specialists. Prerequisite is a basic knowledge of commutative algebra and algebraic geometry.