1. Record Nr. UNINA9910438033603321 Autore Harima Tadahito **Titolo** The Lefschetz Properties // by Tadahito Harima, Toshiaki Maeno. Hideaki Morita, Yasuhide Numata, Akihito Wachi, Junzo Watanabe Pubbl/distr/stampa Berlin, Heidelberg: .: Springer Berlin Heidelberg: .: Imprint: Springer. , 2013 **ISBN** 3-642-38206-1 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (XIX, 250 p. 20 illus.) Collana Lecture Notes in Mathematics, . 0075-8434 : : 2080 Disciplina 512/.44 Soggetti Algebra Algebraic geometry Combinatorics Algebraic Geometry Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Bibliographic Level Mode of Issuance: Monograph Note generali Nota di bibliografia Includes bibliographical references (pages 239-246) and index. Introduction and Historical Note -- 1. Poset Theory -- 2. Basics on the Nota di contenuto Theory of Local Rings -- 3. Lefschetz Properties -- 4. Compete Intersections with the SLP -- 5. A Generalization of Lefschetz Elements -- 6. k-Lefschetz Properties -- 7. Cohomology Rings -- 8. Invariant Theory and Lefschetz Property -- 9. The Strong Lefschetz Property and the Schur-Weyl Duality. Sommario/riassunto This is a monograph which collects basic techniques, major results and interesting applications of Lefschetz properties of Artinian algebras. The origin of the Lefschetz properties of Artinian algebras is the Hard Lefschetz Theorem, which is a major result in algebraic geometry. However, for the last two decades, numerous applications of the Lefschetz properties to other areas of mathematics have been found, as a result of which the theory of the Lefschetz properties is now of great interest in its own right. It also has ties to other areas, including combinatorics, algebraic geometry, algebraic topology, commutative algebra and representation theory. The connections between the Lefschetz property and other areas of mathematics are not only diverse, but sometimes guite surprising, e.g. its ties to the Schur-Weyl duality. This is the first book solely devoted to the Lefschetz properties

and is the first attempt to treat those properties systematically.