

1. Record Nr.	UNINA9910960769203321
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Titolo	Chow Rings, Decomposition of the Diagonal, and the Topology of Families (AM-187) // Claire Voisin
Pubbl/distr/stampa	Princeton, NJ : , : Princeton University Press, , [2014] ©2014
ISBN	9781400850532 1400850533
Edizione	[Course Book]
Descrizione fisica	1 online resource (172 p.)
Collana	Annals of Mathematics Studies ; ; 211
Classificazione	SI 830
Disciplina	516.35
Soggetti	Algebraic varieties Decomposition (Mathematics) Homology theory Mathematics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front matter -- Contents -- Preface -- Chapter One. Introduction -- Chapter Two. Review of Hodge theory and algebraic cycles -- Chapter Three. Decomposition of the diagonal -- Chapter Four. Chow groups of large coniveau complete intersections -- Chapter Five. On the Chow ring of K3 surfaces and hyper-Kähler manifolds -- Chapter Six. Integral coefficients -- Bibliography -- Index
Sommario/riassunto	In this book, Claire Voisin provides an introduction to algebraic cycles on complex algebraic varieties, to the major conjectures relating them to cohomology, and even more precisely to Hodge structures on cohomology. The volume is intended for both students and researchers, and not only presents a survey of the geometric methods developed in the last thirty years to understand the famous Bloch-Beilinson conjectures, but also examines recent work by Voisin. The book focuses on two central objects: the diagonal of a variety-and the partial Bloch-Srinivas type decompositions it may have depending on the size of Chow groups-as well as its small diagonal, which is the right object to consider in order to understand the ring structure on Chow groups and cohomology. An exploration of a sampling of recent

works by Voisin looks at the relation, conjectured in general by Bloch and Beilinson, between the coniveau of general complete intersections and their Chow groups and a very particular property satisfied by the Chow ring of K3 surfaces and conjecturally by hyper-Kähler manifolds. In particular, the book delves into arguments originating in Nori's work that have been further developed by others.
