1.	Record Nr.	UNINA9910484901403321
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	Titolo	Algebraic Geometry I: Schemes : With Examples and Exercises / / by Ulrich Görtz, Torsten Wedhorn
	Pubbl/distr/stampa	Wiesbaden : , : Springer Fachmedien Wiesbaden : , : Imprint : Springer Spektrum, , 2020
	ISBN	3-658-30733-1
	Edizione	[2nd ed. 2020.]
	Descrizione fisica	1 online resource (VII, 626 p. 15 illus.)
	Collana	Springer Studium Mathematik - Master, , 2509-9329
	Disciplina	516.35
	Soggetti	Algebraic geometry Algebraic Geometry
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Introduction -- 1 Prevarieties -- 2 Spectrum of a Ring -- 3 Schemes -- 4 Fiber products -- 5 Schemes over fields -- 6 Local Properties of Schemes -- 7 Quasi-coherent modules -- 8 Representable Functors -- 9 Separated morphisms -- 10 Finiteness Conditions -- 11 Vector bundles -- 12 Affine and proper morphisms -- 13 Projective morphisms -- 14 Flat morphisms and dimension -- 15 One-dimensional schemes -- 16 Examples. .
	Sommario/riassunto	This book introduces the reader to modern algebraic geometry. It presents Grothendieck's technically demanding language of schemes that is the basis of the most important developments in the last fifty years within this area. A systematic treatment and motivation of the theory is emphasized, using concrete examples to illustrate its usefulness. Several examples from the realm of Hilbert modular surfaces and of determinantal varieties are used methodically to discuss the covered techniques. Thus the reader experiences that the further development of the theory yields an ever better understanding of these fascinating objects. The text is complemented by many exercises that serve to check the comprehension of the text, treat further examples, or give an outlook on further results. The volume at hand is an introduction to schemes. To get started, it requires only basic knowledge in abstract algebra and topology. Essential facts from commutative algebra are assembled in an appendix. It will be

complemented by a second volume on the cohomology of schemes. For the second edition, several mistakes and many smaller errors and misprints have been corrected. Contents Prevarieties - Spectrum of a Ring - Schemes - Fiber products - Schemes over fields - Local properties of schemes - Quasi-coherent modules - Representable functors - Separated morphisms - Finiteness Conditions - Vector bundles - Affine and proper morphisms - Projective morphisms - Flat morphisms and dimension - One-dimensional schemes - Examples About the Authors Prof. Dr. Ulrich Görtz, Institute of Experimental Mathematics, University Duisburg-Essen Prof. Dr. Torsten Wedhorn, Department of Mathematics, Technical University of Darmstadt.