

1. Record Nr.	UNINA9910254075903321
Titolo	K3 Surfaces and Their Moduli // edited by Carel Faber, Gavril Farkas, Gerard van der Geer
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2016
ISBN	3-319-29959-X
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (403 p.)
Collana	Progress in Mathematics, , 2296-505X ; ; 315
Disciplina	516.35
Soggetti	Algebraic geometry Algebraic Geometry
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 at the end of each chapters.
Nota di contenuto	Introduction -- Samuel Boissière, Andrea Cattaneo, Marc Nieper-Wisskirchen, and Alessandra Sarti: The automorphism group of the Hilbert scheme of two points on a generic projective K3 surface -- Igor Dolgachev: Orbital counting of curves on algebraic surfaces and sphere packings -- V. Gritsenko and K. Hulek: Moduli of polarized Enriques surfaces -- Brendan Hassett and Yuri Tschinkel: Extremal rays and automorphisms of holomorphic symplectic varieties -- Gert Heckman and Sander Rieken: An odd presentation for $W(E_6)$ -- S. Katz, A. Klemm, and R. Pandharipande, with an appendix by R. P. Thomas: On the motivic stable pairs invariants of K3 surfaces -- Shigeyuki Kondō: The Igusa quartic and Borcherds products -- Christian Liedtke: Lectures on supersingular K3 surfaces and the crystalline Torelli theorem -- Daisuke Matsushita: On deformations of Lagrangian fibrations -- G. Oberdieck and R. Pandharipande: Curve counting on $K3 \times E$, the Igusa cusp form X_{10} , and descendent integration -- Keiji Oguiso: Simple abelian varieties and primitive automorphisms of null entropy of surfaces -- Ichiro Shimada: The automorphism groups of certain singular K3 surfaces and an Enriques surface -- Alessandro Verra: Geometry of genus 8 Nikulin surfaces and rationality of their moduli -- Claire Voisin: Remarks and questions on coisotropic subvarieties and 0-cycles of hyper-Kähler varieties.
Sommario/riassunto	This book provides an overview of the latest developments concerning

the moduli of K3 surfaces. It is aimed at algebraic geometers, but is also of interest to number theorists and theoretical physicists, and continues the tradition of related volumes like “The Moduli Space of Curves” and “Moduli of Abelian Varieties,” which originated from conferences on the islands Texel and Schiermonnikoog and which have become classics. K3 surfaces and their moduli form a central topic in algebraic geometry and arithmetic geometry, and have recently attracted a lot of attention from both mathematicians and theoretical physicists. Advances in this field often result from mixing sophisticated techniques from algebraic geometry, lattice theory, number theory, and dynamical systems. The topic has received significant impetus due to recent breakthroughs on the Tate conjecture, the study of stability conditions and derived categories, and links with mirror symmetry and string theory. At the same time, the theory of irreducible holomorphic symplectic varieties, the higher dimensional analogues of K3 surfaces, has become a mainstream topic in algebraic geometry. Contributors: S. Boissière, A. Cattaneo, I. Dolgachev, V. Gritsenko, B. Hassett, G. Heckman, K. Hulek, S. Katz, A. Klemm, S. Kondo, C. Liedtke, D. Matsushita, M. Nieper-Wisskirchen, G. Oberdieck, K. Oguiso, R. Pandharipande, S. Rieken, A. Sarti, I. Shimada, R. P. Thomas, Y. Tschinkel, A. Verra, C. Voisin.
