Record Nr. UNISA996418185103316 Handbook of geometry and topology of singularities I / / Josel Luis **Titolo** Cisneros Molina, Dung Traing Lei and Josei Seade (editors) Pubbl/distr/stampa Cham, Switzerland:,: Springer,, [2020] ©2020 3-030-53061-2 **ISBN** Edizione [1st ed. 2020.] 1 online resource (XVIII, 601 p. 128 illus., 54 illus. in color.) Descrizione fisica 516.35 Disciplina Soggetti Geometry, Algebraic Topological Groups, Lie Groups Several Complex Variables and Analytic Spaces Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Includes index. Foreword -- Preface -- 1 The Combinatorics of Plane Curve Nota di contenuto Singularities -- 2 The Topology of Surface Singularities -- 3 Resolution of Singularities: an Introduction -- 4 Stratification Theory -- 5 Morse Theory, Stratification and Sheaves -- 6 The Topology of the Milnor Fibration -- 7 Deformation and Smoothing of Singularities -- 8 Distinguished Bases and Monodromy of Complex Hypersurface Singularities -- 9 The Lefschetz Theorem for Hyperplane Sections -- 10 Finite Dimensional Lie Algebras in Singularities. -Index. This volume consists of ten articles which provide an in-depth and Sommario/riassunto reader-friendly survey of some of the foundational aspects of singularity theory. Authored by world experts, the various contributions deal with both classical material and modern developments, covering a wide range of topics which are linked to each other in fundamental ways. Singularities are ubiquitous in mathematics and science in general. Singularity theory interacts energetically with the rest of mathematics, acting as a crucible where different types of mathematical problems interact, surprising connections are born and simple questions lead to ideas which resonate in other parts of the subject. This is the first volume in a series which aims to provide an accessible

account of the state-of-the-art of the subject, its frontiers, and its

interactions with other areas of research. The book is addressed to graduate students and newcomers to the theory, as well as to specialists who can use it as a guidebook.