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Titolo	A Course on Holomorphic Discs // by Hansjörg Geiges, Kai Zehmisch
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Birkhäuser, , 2023
ISBN	3-031-36064-8
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (XVIII, 189 p. 11 illus.)
Collana	Birkhäuser Advanced Texts Basler Lehrbücher, , 2296-4894
Disciplina	516.36
Soggetti	Functions of complex variables Geometry, Differential Global analysis (Mathematics) Manifolds (Mathematics) Functional analysis Several Complex Variables and Analytic Spaces Differential Geometry Global Analysis and Analysis on Manifolds Functional Analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Gromov's Nonsqueezing Theorem -- Compactness -- Bounds of Higher Order -- Elliptic Regularity -- Transversality.
Sommario/riassunto	This textbook, based on a one-semester course taught several times by the authors, provides a self-contained, comprehensive yet concise introduction to the theory of pseudoholomorphic curves. Gromov's nonsqueezing theorem in symplectic topology is taken as a motivating example, and a complete proof using pseudoholomorphic discs is presented. A sketch of the proof is discussed in the first chapter, with succeeding chapters guiding the reader through the details of the mathematical methods required to establish compactness, regularity, and transversality results. Concrete examples illustrate many of the more complicated concepts, and well over 100 exercises are distributed throughout the text. This approach helps the reader to gain a thorough understanding of the powerful analytical tools needed for the study of more advanced topics in symplectic topology. This text can be used as

the basis for a graduate course, and it is also immensely suitable for independent study. Prerequisites include complex analysis, differential topology, and basic linear functional analysis; no prior knowledge of symplectic geometry is assumed. This book is also part of the Virtual Series on [Symplectic Geometry](#).

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