

1. Record Nr.	UNINA9910784812903321
Autore	Geiges Hansjörg <1966->
Titolo	An introduction to contact topology / / Hansjörg Geiges [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2008
ISBN	1-107-17883-5 1-281-24339-6 9786611243395 0-511-37796-7 0-511-37706-1 0-511-37612-X 0-511-37461-5 0-511-61143-9 0-511-37885-8
Descrizione fisica	1 online resource (xv, 440 pages) : digital, PDF file(s)
Collana	Cambridge studies in advanced mathematics ; ; 109
Disciplina	514.72
Soggetti	Symplectic and contact topology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Cover; Half-title; Series-title; Title; Copyright; Dedication; Contents; Contents; Preface; Preface; 1 Facets of contact geometry; 2 Contact manifolds; 3 Knots in contact 3-manifolds; 4 Contact structures on 3-manifolds; 5 Symplectic fillings and convexity; 6 Contact surgery; 7 Further constructions of contact manifolds; 8 Contact structures on 5-manifolds; Appendix A: The generalised Poincaré lemma; Appendix B: Time-dependent vector fields; References; Notation index; Author index; Subject index
Sommario/riassunto	This text on contact topology is a comprehensive introduction to the subject, including recent striking applications in geometric and differential topology: Eliashberg's proof of Cerf's theorem via the classification of tight contact structures on the 3-sphere, and the Kronheimer-Mrowka proof of property P for knots via symplectic fillings of contact 3-manifolds. Starting with the basic differential

topology of contact manifolds, all aspects of 3-dimensional contact manifolds are treated in this book. One notable feature is a detailed exposition of Eliashberg's classification of overtwisted contact structures. Later chapters also deal with higher-dimensional contact topology. Here the focus is on contact surgery, but other constructions of contact manifolds are described, such as open books or fibre connected sums. This book serves both as a self-contained introduction to the subject for advanced graduate students and as a reference for researchers.

---