Record Nr. UNINA9910299961403321 Autore Rifford Ludovic Titolo Sub-Riemannian Geometry and Optimal Transport / / by Ludovic Rifford Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2014 **ISBN** 3-319-04804-X Edizione [1st ed. 2014.] Descrizione fisica 1 online resource (146 p.) Collana SpringerBriefs in Mathematics, , 2191-8198 Disciplina 516.0071 Soggetti Mathematical analysis Analysis (Mathematics) Differential geometry Mathematical optimization Measure theory System theory **Analysis** Differential Geometry Optimization Measure and Integration Systems Theory, Control 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 and index. 1 Sub-Riemannian structures -- 2 Sub-Riemannian geodesics -- 3 Nota di contenuto Introduction to optimal transport.- Appendix A Ordinary differential equations.- Appendix B Elements of differential calculus -- References. Sommario/riassunto The book provides an introduction to sub-Riemannian geometry and optimal transport and presents some of the recent progress in these two fields. The text is completely self-contained: the linear discussion, containing all the proofs of the stated results, leads the reader step by step from the notion of distribution at the very beginning to the existence of optimal transport maps for Lipschitz sub-Riemannian structure. The combination of geometry presented from an analytic

point of view and of optimal transport, makes the book interesting for

a very large community. This set of notes grew from a series of lectures given by the author during a CIMPA school in Beirut, Lebanon.