Record Nr. UNINA9910299872103321 Autore Armanini Aronne Titolo Principles of River Hydraulics / / by Aronne Armanini Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2018 3-319-68101-X **ISBN** Edizione [1st ed. 2018.] Descrizione fisica 1 online resource (XVIII, 217 p. 127 illus., 126 illus. in color.) Disciplina 624.15 Soggetti Engineering geology Engineering—Geology **Foundations Hydraulics** Hydrology Hydrogeology Geoengineering, Foundations, Hydraulics Hydrology/Water Resources Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references at the end of each chapters and index. Nota di contenuto Roughness in Fixed-Bed Streams -- Introduction to Sediment Transport -- Initiation of Sediment Motion -- Resistance to Flow in Mobile-Bed Channels -- Bed-Load Transport. This book presents key principles of the hydraulics of river basins, with Sommario/riassunto a unique focus on the interplay between stream flows and sediment transport. Addressing a number of basic topics related to the hydraulics of natural waterways, it above all emphasizes applicative aspects in order to provide the reader with a solid grasp of river engineering. The first chapter explores many of the fixed base hydraulic topics that are normally neglected in traditional texts, namely the effects on motion produced by the vegetation and macroroughnesses that characterize many mountain streams. The

remaining chapters are devoted entirely to hydraulics with mobile riverbeds and put particular emphasis on inhomogeneous river

channels. The book's approach goes beyond classical treatments, so as

to not only introduce readers to the fundamentals of mobile riverbeds, but also enable today's river engineers to successfully design and maintain natural riverbeds.