Record Nr. UNINA9910595051803321 Autore Li Yusheng Titolo Elementary Methods of Graph Ramsey Theory / / by Yusheng Li, Qizhong Lin Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2022 **ISBN** 3-031-12762-5 Edizione [1st ed. 2022.] Descrizione fisica 1 online resource (349 pages) Collana Applied Mathematical Sciences, , 2196-968X;; 211 511.5 Disciplina Soggetti Graph theory Discrete mathematics **Probabilities Graph Theory Applications of Discrete Mathematics Probability Theory** Teoria de Ramsev Llibres electrònics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Existence -- Small Ramsey Numbers -- Basic Probalistic Method --Random Graph -- Lovász Local Lemma -- Constructive Lower Bounds -- Turán Number and Related Ramsey Number -- Communication Channels -- Dependent Random Choice -- Quasi-Random Graphs --Regularity Lemma and van der Waerden Number -- More Ramsey Linear Functions -- Various Ramsey Problems. Sommario/riassunto This book is intended to provide graduate students and researchers in graph theory with an overview of the elementary methods of graph Ramsey theory. It is especially targeted towards graduate students in extremal graph theory, graph Ramsey theory, and related fields, as the included contents allow the text to be used in seminars. It is structured in thirteen chapters which are application-focused and largely independent, enabling readers to target specific topics and information

to focus their study. The first chapter includes a true beginner's

overview of elementary examples in graph Ramsey theory mainly using

combinatorial methods. The following chapters progress through topics including the probabilistic methods, algebraic construction, regularity method, but that's not all. Many related interesting topics are also included in this book, such as the disproof for a conjecture of Borsuk on geometry, intersecting hypergraphs, Turán numbers and communication channels, etc.