1. Record Nr. UNINA9910725088203321 Autore Budden Mark R. Titolo Star-Critical Ramsey Numbers for Graphs / / by Mark R. Budden Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2023 9783031299810 **ISBN** 9783031299803 Edizione [1st ed. 2023.] Descrizione fisica 1 online resource (102 pages) Collana SpringerBriefs in Mathematics, , 2191-8201 Disciplina 511.5 Soggetti Graph theory **Graph Theory** Teoria de Ramsey Teoria de grafs Llibres electrònics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Includes bibliographical references and index. Nota di bibliografia 1. Multi Star-Critical Ramsey Numbers -- 2. Non-Complete Graphs --Nota di contenuto 3. Generalizations of Star-Critical Ramsey Numbers -- 4. Open Problems. This text is a comprehensive survey of the literature surrounding star-Sommario/riassunto critical Ramsey numbers. First defined by Jonelle Hook in her 2010 dissertation, these numbers aim to measure the sharpness of the corresponding Ramsey numbers by determining the minimum number of edges needed to be added to a critical graph for the Ramsey property to hold. Despite being in its infancy, the topic has gained significant attention among Ramsey theorists. This work provides researchers and students with a resource for studying known results and their complete proofs. It covers typical results, including multicolor star-critical Ramsey numbers for complete graphs, trees, cycles, wheels, and n-good graphs, among others. The proofs are streamlined and, in some cases, simplified, with a few new results included. The

> book also explores the connection between star-critical Ramsey numbers and deleted edge numbers, which focus on destroying the Ramsey property by removing edges. The book concludes with open

problems and conjectures for researchers to consider, making it a valuable resource for those studying the field of star-critical Ramsey numbers.