

1. Record Nr.	UNINA9910508482303321
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Titolo	Graphs from Rings // by David F. Anderson, T. Asir, Ayman Badawi, T. Tamizh Chelvam
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021
ISBN	3-030-88410-4
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (548 pages) : illustrations
Collana	Mathematics and Statistics Series
Disciplina	511.5
Soggetti	Commutative algebra Commutative rings Graph theory Commutative Rings and Algebras Graph Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Distances in zero-divisor graphs -- Properties of zero-divisor graphs -- Genus of zero-divisor graphs -- Zero-divisor graph generalizations -- Total graphs of commutative rings -- Graphs from total graphs -- Generalized total graphs -- Other graphs associated with rings -- Bibliography -- Index.
Sommario/riassunto	This book gives an overview of research on graphs associated with commutative rings. The study of the connections between algebraic structures and certain graphs, especially finite groups and their Cayley graphs, is a classical subject which has attracted a lot of interest. More recently, attention has focused on graphs constructed from commutative rings, a field of study which has generated an extensive amount of research over the last three decades. The aim of this text is to consolidate this large body of work into a single volume, with the intention of encouraging interdisciplinary research between algebraists and graph theorists, using the tools of one subject to solve the problems of the other. The topics covered include the graphical and topological properties of zero-divisor graphs, total graphs and their transformations, and other graphs associated with rings. The book will

be of interest to researchers in commutative algebra and graph theory  
and anyone interested in learning about the connections between these  
two subjects.

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