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Titolo	Closures, finiteness and factorization [[electronic resource] /] / edited by Christopher Francisco ... [et al.]
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ISBN	1-280-56956-5 9786613599162 3-11-027860-X
Descrizione fisica	1 online resource (328 p.)
Collana	Progress in commutative algebra ; ; 2
Altri autori (Persone)	FranciscoChristopher
Disciplina	512 512.24 512/.24
Soggetti	Commutative algebra
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"This collection of papers in commutative algebra stemmed out of the 2009 Fall Southeastern American Mathematical Society Meeting ..."--P. [v].
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Frontmatter -- Preface -- Contents -- A Guide to Closure Operations in Commutative Algebra / Epstein, Neil -- A Survey of Test Ideals / Schwede, Karl / Tucker, Kevin -- Finite-dimensional Vector Spaces with Frobenius Action / Enescu, Florian -- Finiteness and Homological Conditions in Commutative Group Rings / Glaz, Sarah / Schwarz, Ryan -- Regular Pullbacks / Boynton, Jason G. / Sather-Wagstaff, Sean -- Noetherian Rings without Finite Normalization / Olberding, Bruce -- Krull Dimension of Polynomial and Power Series Rings / Watkins, John J. -- The Projective Line over the Integers / Celikbas, Ela / Eubanks-Turner, Christina -- On Zero Divisor Graphs / Coykendall, Jim / Sather-Wagstaff, Sean / Sheppardson, Laura / Spiroff, Sandra -- A Closer Look at Non-Unique Factorization via Atomic Decay and Strong Atoms / Chapman, Scott T. / Krause, Ulrich
Sommario/riassunto	This is the second of two volumes of a state-of-the-art survey article collection which originates from three commutative algebra sessions at the 2009 Fall Southeastern American Mathematical Society Meeting at Florida Atlantic University. The articles reach into diverse areas of

commutative algebra and build a bridge between Noetherian and non-Noetherian commutative algebra. These volumes present current trends in two of the most active areas of commutative algebra: non-noetherian rings (factorization, ideal theory, integrality), and noetherian rings (the local theory, graded situation, and interactions with combinatorics and geometry). This volume contains surveys on aspects of closure operations, finiteness conditions and factorization. Closure operations on ideals and modules are a bridge between noetherian and nonnoetherian commutative algebra. It contains a nice guide to closure operations by Epstein, but also contains an article on test ideals by Schwede and Tucker and one by Enescu which discusses the action of the Frobenius on finite dimensional vector spaces both of which are related to tight closure. Finiteness properties of rings and modules or the lack of them come up in all aspects of commutative algebra. However, in the study of non-noetherian rings it is much easier to find a ring having a finite number of prime ideals. The editors have included papers by Boynton and Sather-Wagstaff and by Watkins that discuss the relationship of rings with finite Krull dimension and their finite extensions. Finiteness properties in commutative group rings are discussed in Glaz and Schwarz's paper. And Olberding's selection presents us with constructions that produce rings whose integral closure in their field of fractions is not finitely generated. The final three papers in this volume investigate factorization in a broad sense. The first paper by Celikbas and Eubanks-Turner discusses the partially ordered set of prime ideals of the projective line over the integers. The editors have also included a paper on zero divisor graphs by Coykendall, Sather-Wagstaff, Sheppardson and Spiroff. The final paper, by Chapman and Krause, concerns non-unique factorization.