

1. Record Nr.	UNISA996466039903316
Titolo	Algebraic and Coalgebraic Methods in the Mathematics of Program Construction [[electronic resource] ] : International Summer School and Workshop, Oxford, UK, April 10-14, 2000, Revised Lectures // edited by Roland Backhouse, Roy Crole, Jeremy Gibbons
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2002
ISBN	3-540-47797-7
Edizione	[1st ed. 2002.]
Descrizione fisica	1 online resource (XIV, 390 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 2297
Disciplina	005
Soggetti	Software engineering Computers Programming languages (Electronic computers) Computer logic Mathematical logic Software Engineering Theory of Computation Software Engineering/Programming and Operating Systems Programming Languages, Compilers, Interpreters Logics and Meanings of Programs Mathematical Logic and Formal Languages
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Ordered Sets and Complete Lattices -- Algebras and Coalgebras -- Galois Connections and Fixed Point Calculus -- Calculating Functional Programs -- Algebra of Program Termination -- Exercises in Coalgebraic Specification -- Algebraic Methods for Optimization Problems -- Temporal Algebra.
Sommario/riassunto	Program construction is about turning specifications of computer software into implementations. Recent research aimed at improving the process of program construction exploits insights from abstract algebraic tools such as lattice theory, fixpoint calculus, universal

algebra, category theory, and allegory theory. This textbook-like tutorial presents, besides an introduction, eight coherently written chapters by leading authorities on ordered sets and complete lattices, algebras and coalgebras, Galois connections and fixed point calculus, calculating functional programs, algebra of program termination, exercises in coalgebraic specification, algebraic methods for optimization problems, and temporal algebra.

---