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Titolo	Categorical Methods in Computer Science [[electronic resource]] : With Aspects from Topology // edited by Hartmut Ehrig, Horst Herrlich, Hans-Jörg Kreowski, Gerhard Preuß
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Descrizione fisica	1 online resource (VI, 354 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 393
Disciplina	004.0151
Soggetti	Computers Computer logic Mathematical logic Software engineering Programming languages (Electronic computers) K-theory Theory of Computation Logics and Meanings of Programs Mathematical Logic and Formal Languages Software Engineering Programming Languages, Compilers, Interpreters K-Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	A categorical concept of constraints for algebraic specifications -- The integration of logical and algebraic types -- Colimits as parameterized data types -- Empty carriers: The categorical burden on logic -- Monads, matrices and generalized dynamic algebra -- Foundations are rich institutions, but institutions are poor foundations -- Development of algebraic specifications with constraints -- Revised ACT ONE: Categorical constructions for an algebraic specification language -- Objects, object types, and object identification -- Categories for the development of algebraic module specifications -- Parameterized data

type and process specifications using projection algebras --
Parameterized algebraic domain equations -- Semantical constructions
for categories of behavioural specifications -- Relation-sorted
algebraic specifications with built-in coercers: Parameterization and
parameter passing -- On declarations -- Cauchy sequences in quasi-
uniform spaces: Categorical aspects -- The construct PRO of projection
spaces: its internal structure -- Categories and mathematical
morphology -- Topological spaces for cpos -- On the topological
structures of nets -- Description of the topological universe hull -- On
residuated approximations -- On convergence of filters and ultrafilters
to subsets.

Sommario/riassunto

This volume contains selected papers of the International Workshop on "Categorical Methods in Computer Science - with Aspects from Topology" and of the "6th International Data Type Workshop" held in August/September 1988 in Berlin. The 23 papers of this volume are grouped into three parts: Part 1 includes papers on categorical foundations and fundamental concepts from category theory in computer science. Part 2 presents applications of categorical methods to algebraic specification languages and techniques, data types, data bases, programming, and process specifications. Part 3 comprises papers on categorial aspects from topology which mainly concentrate on special adjoint situations like cartesian closeness, Galois connections, reflections, and coreflections which are of growing interest in categorical topology and computer science.
