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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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   Collana   Lecture Notes in Computer Science, , 0302-9743 ; ; 393

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   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

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   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.