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| Titolo                  | Algebra, Meaning, and Computation [[electronic resource] ] : Essays dedicated to Joseph A. Goguen on the Occasion of His 65th Birthday // edited by Kokichi Futatsugi, Jean-Pierre Jouannaud, José Meseguer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Pubbl/distr/stampa      | Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2006                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| Edizione                | [1st ed. 2006.]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Descrizione fisica      | 1 online resource (XXXVIII, 650 p.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Collana                 | Theoretical Computer Science and General Issues, , 2512-2029 ; ; 4060                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Disciplina              | 512                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Soggetti                | Computer science<br>Machine theory<br>Artificial intelligence<br>Computer science—Mathematics<br>Computer Science Logic and Foundations of Programming<br>Formal Languages and Automata Theory<br>Artificial Intelligence<br>Theory of Computation<br>Mathematics of Computing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| Nota di bibliografia    | Includes bibliographical references and index.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Nota di contenuto       | Meaning -- Sync or Swarm: Musical Improvisation and the Complex Dynamics of Group Creativity -- My Friend Joseph Goguen -- Metalogic, Qualia, and Identity on Neptune's Great Moon: Meaning and Mathematics in the Works of Joseph A. Goguen and Samuel R. Delany -- Meta-Logic -- Quantum Institutions -- Jewels of Institution-Independent Model Theory -- Semantic Web Languages – Towards an Institutional Perspective -- Institutional 2-cells and Grothendieck Institutions -- Some Varieties of Equational Logic -- Complete Categorical Deduction for Satisfaction as Injectivity -- Specification and Composition -- Extension Morphisms for CommUnity -- Non-intrusive Formal Methods and Strategic Rewriting for a Chemical Application -- From OBJ to ML to Coq -- Weak Adhesive High-Level Replacement Categories and Systems: A Unifying Framework for Graph and Petri Net |

Transformations -- From OBJ to Maude and Beyond -- Constructive Action Semantics in OBJ -- Horizontal Composability Revisited -- Composition by Colimit and Formal Software Development -- Behaviour and Formal Languages -- Proving Behavioral Refinements of COL-specifications -- The Reactive Engine for Modular Transducers -- A Bialgebraic Review of Deterministic Automata, Regular Expressions and Languages -- Sheaves and Structures of Transition Systems -- Uniform Functors on Sets -- An Algebraic Approach to Regular Sets -- Models, Deduction, and Computation -- Elementary Algebraic Specifications of the Rational Complex Numbers -- From Chaos to Undefinedness -- Completion Is an Instance of Abstract Canonical System Inference -- Eliminating Dependent Pattern Matching -- Iterative Lexicographic Path Orders -- A Functorial Framework for Constraint Normal Logic Programming -- A Stochastic Theory of Black-Box Software Testing -- Some Tips on Writing Proof Scores in the OTS/CafeOBJ Method -- Drug Interaction Ontology (DIO) and the Resource-Sensitive Logical Inferences.

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### Sommario/riassunto

Joseph Goguen is one of the most prominent computer scientists worldwide. His numerous research contributions span many topics and have changed the way we think about many concepts. Our views about data types, programming languages, software specification and verification, computational behavior, logics in computer science, semiotics, interface design, multimedia, and consciousness, to mention just some of the areas, have all been enriched in fundamental ways by his ideas. This Festschrift volume - published to honor Joseph Goguen on his 65th Birthday on June 28, 2006 - includes 32 refereed papers by leading researchers in the different areas spanned by Joseph Goguen's work. The papers address a broad variety of topics from meaning, meta-logic, specification and composition, behavior and formal languages, as well as models, deduction, and computation. The papers were presented at a Symposium in San Diego, California, USA in June 2006. Both the Festschrift volume and the Symposium allow the articulation of a retrospective and prospective view of a range of related research topics by key members of the research community in computer science and other fields connected with Joseph Goguen's work.

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