1. Record Nr. UNINA9910483215203321

Titolo	Specification, Algebra, and Software [[electronic resource]] : Essays Dedicated to Kokichi Futatsugi / / edited by Shusaku Iida, José Meseguer, Kazuhiro Ogata
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2014
ISBN	3-642-54624-2
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (XXII, 657 p. 115 illus.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 8373
Disciplina	004
Soggetti	Computer science Machine theory Software engineering Compilers (Computer programs) Computer Science Logic and Foundations of Programming Formal Languages and Automata Theory Software Engineering Compilers and Interpreters
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Domain Endurants: An Analysis and Description Process Model -- On Formal Definition and Analysis of Formal Verification Processes -- CafeOBJ Traces -- Parchments for CafeOBJ Logics -- Incremental Proofs of Termination, Confluence and Sufficient Completeness of OBJ Specifications -- The Versatile Synchronous Observer -- Model Checking TLR* Guarantee Formulas on Infinite Systems -- Towards a Combination of CafeOBJ and PAT.-Negative Variables and the Essence of Object-Oriented Programming -- Reasoning (on) Service Component Ensembles in Rewriting Logic -- Dynamic Validation of Maude Prototypes of UML Models -- Inspecting Rewriting Logic Computations (in a Parametric and Stepwise Way) -- The Semantics of Datalog for the Evidential Tool Bus (Extended Abstract) -- Synthesis of Infinite-State Abstractions and Their Use for Software Validation -- Behavioral Rewrite Systems and Behavioral Productivity -- Functional Logic

Programming in Maude -- Confluence: The Unifying, Expressive Power of Locality -- Foundations for Ensemble Modeling – The Helena Approach: Handling Massively Distributed Systems with ELaborate ENsemble Architectures -- Behaviour, Interaction and Dynamics -- Partially Ordered Knowledge Sharing and Fractionated Systems in the Context of other Models for Distributed Computing -- Extending Operation Semantics to Enhance the Applicability of Formal Refinement -- An Institution for Imperative RSL Specifications -- 8k-ary Grid Graph Models of Tabular Forms -- Everlasting Challenges with the OBJ Language Family -- Formal Modeling and Analysis of Google's Megastore in Real-Time Maude -- EHRA: Specification and Analysis of Energy-Harvesting Wireless Sensor Networks -- Some Engineering Applications of the OTS/CafeOBJ Method -- Verifying the Design of Dynamic Software Updating in the OTS/CafeOBJ Method -- On Automation of OTS/CafeOBJ Method -- Mechanical Analysis of Reliable Communication in the Alternating Bit Protocol Using the Maude Invariant Analyzer Tool -- Theorem Proving Based on Proof Scores for Rewrite Theory Specifications of OTSs.

Sommario/riassunto

This Festschrift volume, published in honor of Kokichi Futatsugi, contains 31 invited contributions from internationally leading researchers in formal methods and software engineering. Prof. Futatsugi is one of the founding fathers of the field of algebraic specification and verification and is a leading researcher in formal methods and software engineering. He has pioneered and advanced novel algebraic methods and languages supporting them such as OBJ and CafeOBJ and has worked tirelessly over the years to bring such methods and tools in contact with software engineering practice. This volume contains contributions from internationally leading researchers in formal methods and software engineering.