

1. Record Nr.	UNISA996465780903316
Titolo	Integrated Formal Methods [[electronic resource]] : 12th International Conference, IFM 2016, Reykjavik, Iceland, June 1-5, 2016, Proceedings // edited by Erika Ábrahám, Marieke Huisman
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-33693-2
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (XIV, 538 p. 145 illus.)
Collana	Programming and Software Engineering ; ; 9681
Disciplina	004.0151
Soggetti	Software engineering Computer logic Programming languages (Electronic computers) Mathematical logic Software Engineering Logics and Meanings of Programs Programming Languages, Compilers, Interpreters Mathematical Logic and Formal Languages
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Invited Contributions -- Can Formal Methods Improve the Efficiency of Code Reviews.-Symbolic Computation and Automated Reasoning for Program Analysis -- Program verification -- On Type Checking Delta-Oriented Product Lines -- Verifying a priority scheduler for an SCJ runtime environment -- Why Just Boogie? Translating Between Intermediate Verification Languages -- Probabilistic systems -- Statistical Approximation of Optimal Schedulers for Probabilistic Timed Automata -- Probabilistic Formal Analysis of App Usage to Inform Redesign -- Extension of PRISM by Synthesis of Optimal Timeouts in Fixed-Delay CTMC -- Concurrency -- Monitoring Multi-threaded Component-Based Systems -- A Generalised Theory of Interface Automata, Component Compatibility and Error -- On Implementing a Monitor-Oriented Programming Framework for Actor Systems -- Towards a Thread-Local Proof Technique for Starvation Freedom --

Reasoning about Inheritance and Unrestricted Reuse in Object-Oriented Concurrent Systems -- A Formal Model of the Safety-Critical Java Level 2 Paradigm -- Safety and liveness -- Deciding Monadic Second Order Logic over omega-words by Specialized Finite Automata -- Property Preservation for Extension Patterns of State Transition Diagrams -- Symbolic Reachability Analysis of B through ProB and LTSmin -- Model learning -- Enhancing Automata Learning by Log-Based Metrics -- Refactoring of Legacy Software using Model Learning and Equivalence Checking: an Industrial Experience Report -- On Robust Malware Classifiers by Verifying Unwanted Behaviours -- SAT and SMT solving -- Efficient Deadlock-Freedom Checking using Local Analysis and SAT Solving -- SMT Solvers for Validation of B and Event-B models -- Avoiding Medication Conflicts for Patients with Multimorbidities -- Testing -- Temporal Random Testing for Spark Streaming -- Combining Static Analysis and Testing for Deadlock Detection -- Fuzzing JavaScript Engine APIs -- Theorem proving and constraint satisfaction -- A Component-based Approach to Hybrid Systems Safety Verification -- Verifying Pointer Programs using Separation Logic and Invariant Based Programming in Isabelle -- A Constraint Satisfaction Method for Configuring Non-Local Service Interfaces -- Case studies -- Rule-based Consistency Checking of Railway Infrastructure Designs -- Formal Verification of Safety PLC Based Control Software -- Enabling Static Driver Verifier using Microsoft Azure.

Sommario/riassunto

This book constitutes the refereed proceedings of the 12th International Conference on Integrated Formal Methods, IFM 2016, held in Reykjavik, Iceland, in June 2016. The 33 papers presented in this volume were carefully reviewed and selected from 99 submissions. They were organized in topical sections named: invited contributions; program verification; probabilistic systems; concurrency; safety and liveness; model learning; SAT and SMT solving; testing; theorem proving and constraint satisfaction; case studies. .
