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   Soggetti   Software engineering
                          Compilers (Computer programs)
                          Machine theory
                          Operating systems (Computers)
                          Computer science
                          Computer programming
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   Nota di contenuto   Requirements and Architectures -- Temporal Logic Framework for Performance Analysis of Architectures of Systems -- On Implementing Real-time Specification Patterns Using Observers -- Contract-Based Verification of Complex Time-Dependent Behaviors in Avionic Systems -- ARSENAL: Automatic Requirements Specification Extraction from Natural Language -- Testing and Run-time Enforcement -- Assisted Coverage Closure -- Synthesizing Runtime Enforcer of Safety Properties under Burst Error -- Compositional Runtime Enforcement -- Improving an Industrial Test Generation Tool using SMT Solver -- The comKorat

Tool: Unified Combinatorial and Constraint-based Generation of Structurally Complex Tests -- Theorem Proving and Proofs -- Specification and Proof of High-Level Functional Properties of Bit-Level Programs -- Formal Verification of an Executable LTL Model Checker with Partial Order Reduction -- Verifying Relative Safety, Accuracy, and Termination for Program Approximations -- A Proof Infrastructure for Binary Programs.-Application of Formal Methods -- A Formally Verified Checker of the Safe Distance Traffic Rules for Autonomous Vehicles -- Probabilistic Formal Verification of the SATS Concept of Operation -- Formal Translation of IEC 61131-3 Function Block Diagrams to PVS with Nuclear Application -- Formal Analysis of Extended Well-Clear Boundaries for Unmanned Aircraft -- Formal Validation and Verification Framework and Models for Model-Based and Adaptive Control Systems -- Code Generation and Synthesis -- Automated Synthesis of Safe Autonomous Vehicle Control Under Perception Uncertainty -- Obfuscator Synthesis for Privacy and Utility -- Code Generation Using A Formal Model of Reference Counting -- EventB2Java: A Code Generator for Event-B -- Model Checking and Verification -- A Modular Way to Reason About Iteration -- Bandwidth and Wavefront Reduction for Static Variable Ordering in Symbolic Reachability Analysis -- Gray-box Learning of Serial Compositions of Mealy Machines -- Hierarchical Verification of Quantum Circuits -- Correctness and Certification -- Semantics for Locking Specifications -- From Design Contracts to Component Requirements Verification -- A Hybrid Architecture for Correct-by-Construction Hybrid Planning and Control.

Sommario/riassunto	This book constitutes the proceedings of the 8th International Symposium on NASA Formal Methods, NFM 2016, held in Minneapolis, MN, USA, in June 2016. The 19 full and 10 short papers presented in this volume were carefully reviewed and selected from 70 submissions. The papers were organized in topical sections named: requirements and architectures; testing and run-time enforcement; theorem proving and proofs; application of formal methods; code generation and synthesis; model checking and verification; and correctness and certification. .