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Nota di contenuto	Formal Methods for the Analysis of Critical Control Systems Models: Combining Non-linear and Linear Analyses -- HyRev: A Tool for the Automatic Generation of Real-Time Routines for Enabling Fail-Safe Control in a Class of Safety-Critical Embedded Systems Using Backwards Reachability Analysis -- An Outline Workflow for Practical Formal Verification from Software Requirements to Object Code -- Boolean Quantifier Elimination for Automotive Configuration -- A Case Study -- Study on the Barriers to the Industrial Adoption of Formal Methods -- On the Effectiveness of Assertion-Based Verification in an Industrial Context -- Complex Digital System Design: A Methodology and Its Application to Medical Implants -- Formal Analysis of the ACE Specification for Cache Coherent Systems-on-Chip -- Predicate Abstraction for Programmable Logic Controllers -- High-Level

Guidance for Managers Deploying Formal Methods in Their Organisation -- Auditing User-Provided Axioms in Software Verification Conditions -- Formal Reliability Analysis of Protective Relays in Power Distribution Systems -- Specification and Verification Using Alloy of Optimistic Access Control for Distributed Collaborative Editors.

Sommario/riassunto

This book constitutes the thoroughly refereed conference proceedings of the 18th International Workshop on Formal Methods for Industrial Critical Systems, FMICS 2013, held in Madrid, Spain, in September 2013. The 13 papers presented were carefully selected from 25 submissions and cover topics such as design, specification, code generation and testing based on formal methods, methods, techniques and tools to support automated analysis, certification, debugging, learning, optimization and transformation of complex, distributed, dependable, real-time systems and embedded systems, verification and validation methods, tools for the development of formal design descriptions, case studies and experience reports on industrial applications of formal methods, impact of the adoption of formal methods on the development process and associated costs, application of formal methods in standardization and industrial forums.
