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Nota di contenuto	Invited Papers -- Static Analysis of Concurrent Programs Using Ordinary Differential Equations -- The PlusCal Algorithm Language -- The Secret Art of Computer Programming -- Verification, Testing and Statistics -- Full Research Papers -- ?-Types for Effects and Freshness Analysis -- A First-Order Policy Language for History-Based Transaction Monitoring -- Checking Thorough Refinement on Modal Transition Systems Is EXPTIME-Complete -- Transmission Protocols for Instruction Streams -- A Deadlock-Free Semantics for Shared Memory Concurrency -- On the Expressiveness of Forwarding in Higher-Order Communication -- On the Hairpin Completion of Regular Languages -- Context-Free Languages of Countable Words -- Automatic Conflict Detection on Contracts -- A Sound Observational Semantics for Modal Transition Systems -- Regular Expressions with Numerical Constraints

and Automata with Counters -- On the Relative Expressive Power of Contextual Grammars with Maximal and Depth-First Derivations -- Integration Testing from Structured First-Order Specifications via Deduction Modulo -- A Minimized Assumption Generation Method for Component-Based Software Verification -- A Formal Approach to Heuristically Test Restorable Systems -- Constrained Reachability of Process Rewrite Systems -- Input-Output Model Programs -- Tool Papers -- IMITATOR: A Tool for Synthesizing Constraints on Timing Bounds of Timed Automata -- GSPeeDI – A Verification Tool for Generalized Polygonal Hybrid Systems -- Hierarchical Graph Rewriting as a Unifying Tool for Analyzing and Understanding Nondeterministic Systems.

Sommario/riassunto

This book constitutes the refereed proceedings of the 6th International Colloquium on Theoretical Aspects of Computing, ICTAC 2009 held in Kuala Lumpur, Malaysia, in August 2009. The 17 revised full papers and 3 revised papers presented with 4 invited lectures were carefully reviewed and selected from 81 submissions. The papers address all theoretical aspects and methodological issues of computing, such as software specification, refinement, verification and testing, model checking and theorem proving, software architectures, coordination and feature interaction, integration of theories, formal and engineering methods and tools, models of concurrency, security, and mobility, parallel, distributed, and internet-based (grid) computing, real-time, embedded and hybrid systems, automata theory and formal languages, principles and semantics of languages, logics and their applications, type and category theory in computer science, case studies, theories, tools and experiments of verified systems, service-oriented architectures, as well as domain modelling and domain-specific technology.
