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Soggetti	Computer-aided engineering Computer logic Computer communication systems Special purpose computers Software engineering Programming languages (Electronic computers) Computer-Aided Engineering (CAD, CAE) and Design Logics and Meanings of Programs Computer Communication Networks Special Purpose and Application-Based Systems Software Engineering Programming Languages, Compilers, Interpreters
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Keynote Speeches -- Ranking Abstraction as a Companion to Predicate Abstraction -- Termination and Invariance Analysis of Loops -- Some Perspectives of Infinite-State Verification -- Model Checking -- Verifying Very Large Industrial Circuits Using 100 Processes and Beyond -- A New Reachability Algorithm for Symmetric Multi-processor Architecture -- Comprehensive Verification Framework for Dependability of Self-optimizing Systems -- Exploiting Hub States in Automatic Verification -- Combined Methods -- An Approach for the

Verification of SystemC Designs Using AsmL -- Decomposition-Based
 Verification of Cyclic Workflows -- Timed, Embedded, and Hybrid
 Systems (I) -- Guaranteed Termination in the Verification of LTL
 Properties of Non-linear Robust Discrete Time Hybrid Systems --
 Computation Platform for Automatic Analysis of Embedded Software
 Systems Using Model Based Approach -- Quantitative and Qualitative
 Analysis of Temporal Aspects of Complex Activities -- Automatic Test
 Case Generation with Region-Related Coverage Annotations for Real-
 Time Systems -- Abstraction and Reduction Techniques -- Selective
 Search in Bounded Model Checking of Reachability Properties --
 Predicate Abstraction of RTL Verilog Descriptions Using Constraint
 Logic Programming -- State Space Exploration of Object-Based
 Systems Using Equivalence Reduction and the Sweepline Method --
 Syntactical Colored Petri Nets Reductions -- Decidability and
 Complexity -- Algorithmic Algebraic Model Checking II: Decidability of
 Semi-algebraic Model Checking and Its Applications to Systems Biology
 -- A Static Analysis Using Tree Automata for XML Access Control --
 Reasoning About Transfinite Sequences -- Semi-automatic Distributed
 Synthesis -- Established Formalisms and Standards -- A New Graph of
 Classes for the Preservation of Quantitative Temporal Constraints --
 Comparison of Different Semantics for Time Petri Nets -- Introducing
 Dynamic Properties with Past Temporal Operators in the B Refinement
 -- Approximate Reachability for Dead Code Elimination in Esterel??? --
 Compositional Verification and Games -- Synthesis of Interface
 Automata -- Multi-valued Model Checking Games -- Timed,
 Embedded, and Hybrid Systems (II) -- Model Checking Prioritized
 Timed Automata -- An MTBDD-Based Implementation of Forward
 Reachability for Probabilistic Timed Automata -- Protocols Analysis,
 Case Studies, and Tools -- An EFSM-Based Intrusion Detection System
 for Ad Hoc Networks -- Modeling and Verification of a
 Telecommunication Application Using Live Sequence Charts and the
 Play-Engine Tool -- Formal Construction and Verification of Home
 Service Robots: A Case Study -- Model Checking Real Time Java Using
 Java PathFinder -- Infinite-State and Parameterized Systems -- Using
 Parametric Automata for the Verification of the Stop-and-Wait Class of
 Protocols -- Flat Acceleration in Symbolic Model Checking -- Flat
 Counter Automata Almost Everywhere!.

Sommario/riassunto

The Automated Technology for Verification and Analysis (ATVA) international symposium series was initiated in 2003, responding to a growing interest in formal verification spurred by the booming IT industry, particularly hardware design and manufacturing in East Asia. Its purpose is to promote research on automated verification and analysis in the region by providing a forum for interaction between the regional and the international research/industrial communities of the field. ATVA 2005, the third of the ATVA series, was held in Taipei, Taiwan, October 4–7, 2005. The main theme of the symposium encompasses design complexities, tools, and applications of automated methods for verification and analysis. The symposium was co-located and had a two-day overlap with FORTE 2005, which was held October 2–5, 2005. We received a total of 95 submissions from 17 countries. Each submission was assigned to three Program Committee members, who were helped by their subreviewers, for rigorous and fair evaluation. The final deliberation by the Program Committee was conducted over email for a duration of about 10 days after nearly all review reports had been collected. In the end, 33 papers were selected for inclusion in the program. ATVA2005 had three keynote speeches given respectively by Amir Pnueli (joint with FORTE 2005), Zohar Manna, and Wolfgang Thomas. The

main symposium was preceded by a tutorial day, consisting of three two-hour lectures given also by the keynote speakers.
