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Altri autori (Persone)	LiuZhiming <1961-> ArakiKeijiro <1954->
Disciplina	004
Soggetti	Computer science Machine theory Compilers (Computer programs) Software engineering Theory of Computation Computer Science Logic and Foundations of Programming Formal Languages and Automata Theory Compilers and Interpreters Software Engineering
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Invited Speakers -- Software Services: Scientific Challenge or Industrial Hype? -- Integrating Variants of DC -- Challenges in Increasing Tool Support for Programming -- A Predicate Spatial Logic and Model Checking for Mobile Processes -- Concurrent and Distributed Systems -- Object Connectivity and Full Abstraction for a Concurrent Calculus of Classes -- Specifying Software Connectors -- Replicative -- Distribution Rules in P Systems with Active Membranes -- A Generalisation of a Relational Structures Model of Concurrency -- A Logical Characterization of Efficiency Preorders -- Inherent Causal Orderings of Partial Order Scenarios -- Atomic Components -- Towards an Optimization-Based Method for Consolidating Domain Variabilities in Domain-Specific Web Services Composition -- Model

Integration and Theory Unification -- A Formal Framework for Ontology  
Integration Based on a Default Extension to DDL -- A Predicative  
Semantic Model for Integrating UML Models -- An Automatic Mapping  
from Statecharts to Verilog -- Reverse Observation Equivalence  
Between Labelled State Transition Systems -- Program Reasoning and  
Testing -- Minimal Spanning Set for Coverage Testing of Interactive  
Systems -- An Approach to Integration Testing Based on Data Flow  
Specifications -- Combining Algebraic and Model-Based Test Case  
Generation -- Verifying OWL and ORL Ontologies in PVS -- Verification  
-- Symbolic and Parametric Model Checking of Discrete-Time Markov  
Chains -- Verifying Linear Duration Constraints of Timed Automata --  
Idempotent Relations in Isabelle/HOL -- Program Verification Using  
Automatic Generation of Invariants, -- Theories of Programming and  
Programming Languages -- Random Generators for Dependent Types  
-- A Proof of Weak Termination Providing the Right Way to Terminate  
-- Nelson-Oppen, Shostak and the Extended Canonizer: A Family  
Picture with a Newborn -- Real Time Reactive Programming in Lucid  
Enriched with Contexts -- Revision Programs with Explicit Negation --  
Real-Time and Co-design -- An Algebraic Approach for Codesign --  
Duration Calculus: A Real-Time Semantic for B -- An Algebra of Petri  
Nets with Arc-Based Time Restrictions -- A Calculus for Shapes in Time  
and Space -- A Framework for Specification and Validation of Real-  
Time Systems Using Circus Actions -- Automata Theory and Logics --  
Switched Probabilistic I/O Automata -- Decomposing Controllers into  
Non-conflicting Distributed Controllers -- Reasoning About Co-Büchi  
Tree Automata -- Foundations for the Run-Time Monitoring of Reactive  
Systems -- Fundamentals of the MaC Language -- Tutorials at ICTAC  
2004 -- A Summary of the Tutorials at ICTAC 2004.

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## Sommario/riassunto

This volume contains the proceedings of ICTAC 2004, the 1st International Colloquium on Theoretical Aspects of Computing, which was held in Guiyang, China on 20-24 September 2004. ICTAC was founded by the International Institute for Software Technology of the United Nations University (UNU-IIST). Its aim is to bring together practitioners and researchers from academia, industry, and government to present research results, and exchange experience, ideas, and solutions for their problems in theoretical aspects of computing. The geographic focus of the ICTAC events is on developing countries to help to strengthen them in their research, teaching, and development in computer science and engineering, to encourage research cooperation among developing countries, and to improve the links between developing countries and industrial countries. The Program Committee of ICTAC 2004 received 111 submissions from over 30 countries and regions. Each paper was reviewed, mostly by at least three referees working in relevant fields, but by two in a few cases. Borderline papers were further discussed during an online meeting of the Program Committee. Thirty-four papers were accepted based on originality, technical soundness, presentation and relevance to software engineering and formal methods. We sincerely thank all the authors who submitted their work for consideration. We thank the Program Committee members and the other referees for their great effort and professional work in the reviewing and selecting process. Their names are listed on the following pages. In addition to the contributed papers, the proceedings also includes contributions from the invited speakers: Jos´e Luiz Fiadeiro, He Jifeng, Huimin Lin and Rustan Leino.

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