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Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 2999
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Soggetti	Computers Computer logic Computer programming Software engineering Programming languages (Electronic computers) Theory of Computation Logics and Meanings of Programs Programming Techniques Software Engineering Programming Languages, Compilers, Interpreters
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Invited Talks -- SLAM and Static Driver Verifier: Technology Transfer of Formal Methods inside Microsoft -- Design Verification for Control Engineering -- Integrating Model Checking and Theorem Proving in a Reflective Functional Language -- Tutorial -- A Tutorial Introduction to Designs in Unifying Theories of Programming -- Contributed Papers -- An Integration of Program Analysis and Automated Theorem Proving -- Verifying Controlled Components -- Efficient CSP Z Data Abstraction -- State/Event-Based Software Model Checking -- Formalising Behaviour Trees with CSP -- Generating MSCs from an Integrated Formal

Specification Language -- UML to B: Formal Verification of Object-Oriented Models -- Software Verification with Integrated Data Type Refinement for Integer Arithmetic -- Constituent Elements of a Correctness-Preserving UML Design Approach -- Relating Data Independent Trace Checks in CSP with UNITY Reachability under a Normality Assumption -- Linking CSP-OZ with UML and Java: A Case Study -- Object-Oriented Modelling with High-Level Modular Petri Nets -- Specification and Verification of Synchronizing Concurrent Objects -- Understanding Object-Z Operations as Generalised Substitutions -- Embeddings of Hybrid Automata in Process Algebra -- An Optimal Approach to Hardware/Software Partitioning for Synchronous Model -- A Many-Valued Logic with Imperative Semantics for Incremental Specification of Timed Models -- Integrating Temporal Logics -- Integration of Specification Languages Using Viewpoints -- Integrating Formal Methods by Unifying Abstractions -- Formally Justifying User-Centred Design Rules: A Case Study on Post-completion Errors -- Using UML Sequence Diagrams as the Basis for a Formal Test Description Language -- Viewpoint-Based Testing of Concurrent Components -- A Method for Compiling and Executing Expressive Assertions.

Sommario/riassunto

The fourth conference in the series of international meetings on Integrated F- mal Methods, IFM, was held in Canterbury, UK, 4–7 April 2004. The conference was organized by the Computing Laboratory at the University of Kent, whose main campus is just outside the ancient town of Canterbury, part of the county of Kent. Kent is situated in the southeast of England, and the university sits on a hill overlooking the city of Canterbury and its world-renowned cathedral. The UniversityofKentwasgranteditsRoyalCharterin1965.Todaythereare almost 10,000 full-time and part-time students, with over 110 nationalities represented. The IFM meetings have proven to be particularly successful. The ?rst m- ting was held in York in 1999, and subsequently we held events in Germany in 2000, and then Finland in 2002. The conferences are held every 18 months or so, and attract a wide range of participants from Europe, the Americas, Asia and Australia. The conference is now ?rmly part of the formal methods conference calendar. The conference has also evolved in terms of themes and subjects - presented, and this year, in line with the subject as a whole, we saw more work on veri?cation as some of the challenges in this subject are being met. The work reported at IFM conferences can be seen as part of the attempt to manage complexity by combining paradigms of speci?cation and design, so that the most appropriate design tools are used at di?erent points in the life-cycle.