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Altri autori (Persone)	FitzgeraldJohn <1965-> HayesIan TarleckiAndrzej
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Soggetti	Software engineering Computer science Compilers (Computer programs) Computer programming Machine theory Electronic data processing - Management Software Engineering Computer Science Logic and Foundations of Programming Compilers and Interpreters Programming Techniques Formal Languages and Automata Theory IT Operations
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	"13th International Symposium of Formal Methods Europe"--Pref.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Keynote Talks -- Formal Aids for the Growth of Software Systems -- Formal Methods and Testing: Hypotheses, and Correctness Approximations -- The Natural History of Bugs: Using Formal Methods to Analyse Software Related Failures in Space Missions -- Object Orientation -- Modular Verification of Static Class Invariants -- Decoupling in Object Orientation -- Controlling Object Allocation Using Creation Guards -- Symbolic Animation of JML Specifications --

Resource Analysis and Verification -- Certified Memory Usage Analysis -- Compositional Specification and Analysis of Cost-Based Properties in Probabilistic Programs -- Formally Defining and Verifying Master/Slave Speculative Parallelization -- Timing and Testing -- Systematic Implementation of Real-Time Models -- Timing Tolerances in Safety-Critical Software -- Timed Testing with TorX -- Automatic Verification and Conformance Testing for Validating Safety Properties of Reactive Systems -- CSP, B and Circus -- Adding Conflict and Confusion to CSP -- Combining CSP and B for Specification and Property Verification -- Operational Semantics for Model Checking Circus -- Control Law Diagrams in Circus -- Security -- Verification of a Signature Architecture with HOL-Z -- End-to-End Integrated Security and Performance Analysis on the DEGAS Choreographer Platform -- Formal Verification of Security Properties of Smart Card Embedded Source Code -- Networks and Processes -- A Formal Model of Addressing for Interoperating Networks -- An Approach to Unfolding Asynchronous Communication Protocols -- Semantics of BPEL4WS-Like Fault and Compensation Handling -- Abstraction, Retrenchment and Rewriting -- On Some Galois Connection Based Abstractions for the Mu-Calculus -- Retrenching the Purse: Finite Sequence Numbers, and the Tower Pattern -- Strategic Term Rewriting and Its Application to a Vdm-sl to Sql Conversion -- Scenarios and Modeling Languages -- Synthesis of Distributed Processes from Scenario-Based Specifications -- Verifying Scenario-Based Aspect Specifications -- An MDA Approach Towards Integrating Formal and Informal Modeling Languages -- Model Checking -- Model-Checking of Specifications Integrating Processes, Data and Time -- Automatic Symmetry Detection for Model Checking Using Computational Group Theory -- On Partitioning and Symbolic Model Checking -- Dynamic Component Substitutability Analysis -- Industry Day: Abstracts of Invited Talks -- Floating-Point Verification -- Preliminary Results of a Case Study: Model Checking for Advanced Automotive Applications -- Model-Based Testing in Practice -- Testing Concurrent Object-Oriented Systems with Spec Explorer -- ASD Case Notes: Costs and Benefits of Applying Formal Methods to Industrial Control Software -- The Informal Nature of Systems Engineering.

## Sommario/riassunto

This volume contains the proceedings of Formal Methods 2005, the 13th International Symposium on Formal Methods held in Newcastle upon Tyne, UK, during July 18–22, 2005. Formal Methods Europe (FME, [www.fmeurope.org](http://www.fmeurope.org)) is an independent association which aims to stimulate the use of, and research on, formal methods for system development. FME conferences began with a VDM Europe symposium in 1987. Since then, the meetings have grown and have been held about once every 18 months. Throughout the years the symposia have been notably successful in bringing together researchers, tool developers, vendors, and users, both from academia and from industry. Formal Methods 2005 confirms this success. We received 130 submissions to the main conference, from all over the world. Each submission was carefully refereed by at least three reviewers. Then, after an intensive, in-depth discussion, the Program Committee selected 31 papers for presentation at the conference. They form the bulk of this volume. We would like to thank all the Program Committee members and the referees for their excellent and efficient work. Apart from the selected contributions, the Committee invited three keynote lectures from Mathai Joseph, Marie-Claude Gaudel and Chris Johnson. You will find the abstracts/papers for their keynote lectures in this volume as well. An innovation for the FM2005 program was a panel discussion on the history of formal methods, with Jean-Raymond Abrial, Dines Bjørner, Jim

Horning and Clif Jones as panelists. Unfortunately, it was not possible to reflect this event in the current volume, but you will find the material documenting it elsewhere (see the conference Web page).

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