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Nota di contenuto	Invited Papers -- Refactoring Using Type Constraints -- Programming Language Design and Analysis Motivated by Hardware Evolution -- Contributed Papers -- A Compilation Model for Aspect-Oriented Polymorphically Typed Functional Languages -- Lattice Automata: A Representation for Languages on Infinite Alphabets, and Some Applications to Verification -- Compositional Verification and 3-Valued Abstractions Join Forces -- Formalised Inductive Reasoning in the Logic of Bunched Implications -- Optimal Abstraction on Real-Valued Programs -- Taming the Wrapping of Integer Arithmetic -- Under-Approximations of Computations in Real Numbers Based on Generalized Affine Arithmetic -- A Framework for End-to-End Verification and Evaluation of Register Allocators -- A New Algorithm

for Identifying Loops in Decompilation -- Accelerated Data-Flow Analysis -- Abstract Error Projection -- Precise Thread-Modular Verification -- Modular Safety Checking for Fine-Grained Concurrency -- Static Analysis of Dynamic Communication Systems by Partner Abstraction -- Exploiting Pointer and Location Equivalence to Optimize Pointer Analysis -- Hierarchical Pointer Analysis for Distributed Programs -- Semantics-Based Transformation of Arithmetic Expressions -- A Fast Implementation of the Octagon Abstract Domain on Graphics Hardware -- Fixpoint-Guided Abstraction Refinements -- Guided Static Analysis -- Program Analysis Using Symbolic Ranges -- Shape Analysis with Structural Invariant Checkers -- Footprint Analysis: A Shape Analysis That Discovers Preconditions -- Arithmetic Strengthening for Shape Analysis -- Astrée: From Research to Industry -- Magic-Sets Transformation for the Analysis of Java Bytecode.

Sommario/riassunto

The aim of static analysis is to develop principles, techniques and tools for validatingpropertiesofprograms,fordesigningsemantics-basedtransformations of programs and for obtaining high-performance implementations of high-level programming languages. Over the years the series of static analysis symposia has served as the primary venue for presentation and discussion of theoretical, practical and innovative advances in the area. This volume contains the papers accepted for presentation at the 14th Int- national Static Analysis Symposium (SAS 2007). The meeting was held August, 22–24, 2007, at the Technical University of Denmark (DTU) in Kongens L- gby, Denmark. In response to the call for papers, 85 submissions were received. Each submission was reviewed by at least 3 experts and, based on these reports, 26 papers were selected after a week of intense electronic discussion using the EasyChair conference system. In addition to these 26 papers, this volume also containscontributionsbythetwoinvitedspeakers: FrankTip(IBMT.J.Watson Research Center, USA) and Alan Mycroft (Cambridge University, UK). On the behalf of the Program Committee, the Program Chairs would like to thank all the authors who submitted their work to the conference and also all the external referees who have been indispensable for the selection process. Special thanks go to TerkelTolstrup and J¨ org Bauer,who helped in handing the submitted papers and in organizing the structure of this volume. We would also like to thank the members of the Organizing Committee at DTU for their great work. Finally we want to thank the PhD school ITMAN at DTU for ?nancial support.