

1. Record Nr.	UNINA9910143648003321
Titolo	Static Analysis : 6th International Symposium, SAS'99, Venice, Italy, September 22-24, 1999, Proceedings / / edited by Agostino Cortesi, Gilberto File
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1999
ISBN	3-540-48294-6
Edizione	[1st ed. 1999.]
Descrizione fisica	1 online resource (VIII, 360 p.)
Collana	Lecture Notes in Computer Science, , 1611-3349 ; ; 1694
Disciplina	005.131
Soggetti	Software engineering Computer science Compilers (Computer programs) Computer programming Software Engineering Theory of Computation Compilers and Interpreters Programming Techniques Computer Science Logic and Foundations of Programming
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Synchronization in JAVA Programs -- A Formal Study of Slicing for Multi-threaded Programs with JVM Concurrency Primitives -- Static Analyses for Eliminating Unnecessary Synchronization from Java Programs -- Synchronous Languages -- Dynamic Partitioning in Analyses of Numerical Properties -- Polyhedral Analysis for Synchronous Languages -- Abstract Domains -- Decomposing Non-redundant Sharing by Complementation -- Freeness Analysis Through Linear Refinement -- Binary Decision Graphs -- Binding-Time Analysis for Both Static and Dynamic Expressions -- Concurrency -- Abstract Interpretation of Mobile Ambients -- Abstracting Cryptographic Protocols with Tree Automata -- State Space Reduction Based on Live Variables Analysis -- Static Single Assignment -- Partial Dead Code Elimination Using Extended Value Graph -- Translating Out of Static

Single Assignment Form -- Optimizations -- Eliminating Dead Code on Recursive Data -- Detecting Equalities of Variables: Combining Efficiency with Precision -- Foundations -- A New Class of Functions for Abstract Interpretation -- Equational Semantics -- Abstract Animator for Temporal Specifications: Application to TLA -- Invited Talks and Tutorials -- Static Analysis of Mega-Programs -- Safety versus Secrecy -- On the Complexity Analysis of Static Analyses -- Model-Checking -- Tutorial: Techniques to Improve the Scalability and Precision of Data Flow Analysis.

Sommario/riassunto

Static analysis is increasingly recognized as a fundamental research area aimed at studying and developing tools for high performance implementations and verification systems for all programming language paradigms. The last two decades have witnessed substantial developments in this field, ranging from theoretical frameworks to design, implementation, and application of analyzers in optimizing compilers. Since 1994, SAS has been the annual conference and forum for researchers in all aspects of static analysis. This volume contains the proceedings of the 6th International Symposium on Static Analysis (SAS'99) which was held in Venice, Italy, on 22-24 September 1999. The previous SAS conferences were held in Namur (Belgium), Glasgow (UK), Aachen (Germany), Paris (France), and Pisa (Italy). The program committee selected 18 papers out of 42 submissions on the basis of at least three reviews. The resulting volume offers to the reader a complete landscape of the research in this area. The papers contribute to the following topics: foundations of static analysis, abstract domain design, and applications of static analysis to different programming paradigms (concurrent, synchronous, imperative, object oriented, logical, and functional). In particular, several papers use static analysis for obtaining state space reduction in concurrent systems. New application fields are also addressed, such as the problems of security and secrecy.
