

Preface

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.

In addition to these high quality technical papers, SAS'99 included in its program several outstanding invited speakers. Daniel Weise, Dennis Volpano, David MacAllester, Don Sannella, David Schmidt, Mary Lou Soffa, and Craig Chambers accepted our invitation to give invited talks or tutorials. Their contributions are also included in this volume.

In general, it is clear to us that the role of static analysis is bound to become more and more important in the future due to the enormous popularity of the Internet. For the latter requires the construction of increasingly complex software systems for which efficiency but also security are crucial issues.

The staff of the department of computer science at Ca' Foscari University and that of the department of mathematics at Padova University were extremely helpful in handling all aspects of the symposium.

Special thanks are also due to the institutions that sponsored the event: EAPLS, ALP, CNR, Compulog, Ca' Foscari University, and Padova University.

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