Preface

This volume contains the revised version of papers presented at VMCAI 2002, the Third International Workshop on Verification, Model Checking, and Abstract Interpretation, Venice (Italy), January 21-22, 2002.

The main goal of the workshop was to give an overview of the main directions decisive for the growth and cross-fertilization of major research activities in program analysis and verification.

The VMCAI series was started in 1997 with the aim of gathering researchers interested in investigating similarities and differences among these three research methodologies, that may be summarized as follows:

- program verification aims at proving that programs meet their specifications, i.e., that the actual program behavior corresponds to the desired one.
- model checking is a specific approach to the verification of temporal properties of reactive and concurrent systems, which has been very successful in the area of finite-state programs.
- abstract interpretation is a method for designing and comparing semantics of program, expressing various types of program properties; in particular, it has been successfully used to infer run-time program properties that can be valuable in optimizing programs.

The program committee selected 22 papers out of 41 submissions on the basis of at least 3 reviews. The principal selection criteria were relevance, quality, and clarity. The resulting volume offers the reader an interesting perspective of the current research trends in the area. In particular, the papers contribute to the following topics: Security and Protocols, Timed Systems and Games, Static Analysis, Optimizations, Types and Verification, and Temporal Logics and Systems.

The quality of the papers, the interesting discussions at the workshop, and the friendly atmosphere enjoyed by all participants in Venice, encouraged us in the project of making VMCAI an annual privileged forum for researchers in the area.

Special thanks are due to the institutions that sponsored the event: the Computer Science Department of the University Ca' Foscari, the European Association for Programming Languages and Systems (EAPLS), the MIUR Project "Interpretazione Astratta, Type Systems e Analisi Control-Flow" and the MIUR Project "Metodi Formali per la Sicurezza - MEFISTO". We are especially grateful to C. Braghin for her helpful support in organizing the workshop.

March 2002   Agostino Cortesi

Program Committee Chair

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