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Preface

This volume contains the papers accepted for presentation at the 6th International Conference on Verification, Model Checking and Abstract Interpretation (VMCAI 2005), which was held January 17–19, 2005 in Paris, France.

VMCAI provides a forum for researchers from the communities of verification, model checking, and abstract interpretation, facilitating interaction, cross-fertilization, and advancement of hybrid methods that combine the three areas. With the growing need for formal methods to reason about complex, infinite-state, and embedded systems, such hybrid methods are bound to be of great importance.

VMCAI 2005 received 92 submissions. Each paper was carefully reviewed, being judged according to scientific quality, originality, and relevance to the symposium topics. Following online discussions, the program committee met in Paris, France, at the École Normale Supérieure on October 30, 2004, and selected 27 papers.

In addition to the contributed papers, this volume includes contributions by outstanding invited speakers:

- Patrick Cousot (École Normale Supérieure, Paris), *Proving Program Invariance and Termination by Parametric Abstraction, Lagrangian Relaxation and Semidefinite Programming*;
- C.A.R. Hoare (Microsoft Research, Cambridge), *The Verifying Compiler, a Grand Challenge for Computing Research*;
- Amir Pnueli (New York University and Weizmann Institute of Science), *Abstraction for Liveness.*

The VMCAI 2005 program included an invited tutorial by Sriram K. Rajamani (Microsoft Research, Redmond) on *Model Checking, Abstraction and Symbolic Execution for Software.*

VMCAI 2005 was followed by workshops on Automatic Tools for Verification, Abstract Interpretation of Object-Oriented Languages, and Numerical & Symbolic Abstract Domains.

On behalf of the Program Committee, the Program Chair would like to thank the authors of the submitted papers, and the external referees, who provided timely and significant reviews. We owe special thanks to Jacques Beigbeder from the École Normale Supérieure for managing the submission site and the developers of CyberChair for the use of their software.

VMCAI 2005 was held in cooperation with the Association for Computing Machinery (ACM) and the European Association for Programming Languages and Systems (EAPLS).

November 2004 Radhia Cousot

Sponsoring Organizations

The 6th International Conference on Verification, Model Checking and Abstract Interpretation (VMCAI 2005) was held in cooperation with the Association for Computing Machinery (ACM) and the European Association for Programming Languages and Systems (EAPLS).

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Table of Contents

Invited Paper

Numerical Abstraction

Invited Talk

Verification I

Invited Talk

Heap and Shape Analysis

Abstract Model Checking

Model Checking

Applied Abstract Interpretation

Bounded Model Checking

Verification II