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Hybrid Systems: Computation and Control

Second International Workshop, HSCC'99
Berg en Dal, The Netherlands, March 29-31, 1999
Proceedings

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Preface

This volume contains the proceedings of the *Second International Workshop on Hybrid Systems: Computation and Control* (HSCC'99) to be held March 29-31, 1999, in the village Berg en Dal near Nijmegen, The Netherlands. The first workshop of this series was held in April 1998 at the University of California at Berkeley. The series follows meetings that were initiated by Anil Nerode at Cornell University. The proceedings of those meetings were published in the Springer-Verlag LNCS Series, Volumes 736, 999, 1066, 1201, and 1273. The proceedings of the first workshop of the new series was published in LNCS 1386.

The focus of the workshop is on modeling, control, synthesis, design, and verification of hybrid systems. A hybrid system is a theoretical model for a computer controlled engineering system, with a dynamics that evolves both in a discrete state set and in a family of continuous state spaces. Research is motivated by, for example, control of electro-mechanical systems (robots), air traffic control, control of automated freeways, and chemical process control. The emerging research area of hybrid systems overlaps both with computer science and with control theory. The interaction between researchers from these fields is expected to be fruitfull for the development of the area of hybrid systems.

The scientific program of the workshop consists of three invited lectures, one tutorial lecture, and 19 contributed lectures. The following researchers have been invited to present a lecture: P. Baufreton (Snecma, France), B.H. Krogh (CMU, USA), and N. Lynch (MIT, USA). The tutorial lecture will be presented by C. Miller (Ohio State University, USA). The contributed lectures are based on the papers in this proceedings. In addition, there will be demonstrations of software tools for the design, analysis, and simulation of hybrid systems.

The program committee, chaired by the editors, has selected the 19 contributed papers out of 44 submitted papers. The editors are grateful to the members of the program committee for their generous support with the reviewing and the selection process.

The editors are grateful to the invited speakers, the contributed lecture speakers, the participants for their willingness to participate in the workshop, and the sponsoring institutions whose support has made this event possible. Finally, they would like to thank Ansgar Fehnker for making such excellent web pages, and Mirèse Willems and Lieke Schultze for efficient secretarial support.

January 1999

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