Preface

This volume contains the proceedings of the Fourth Biennial Conference on *Formal Methods in Computer-Aided Design* (FMCAD). The conference is devoted to the use of mathematical methods for the analysis of digital hardware circuits and systems. The work reported in this book describes the use of formal mathematics and associated tools to design and verify digital hardware systems.

Functional verification has become one of the principal costs in a modern computer design effort. FMCAD provides a venue for academic and industrial researchers and practitioners to share their ideas and experiences of using discrete mathematical modeling and verification. Over the past 20 years, this area has grown from just a few academic researchers to a vibrant worldwide community of people from both academia and industry. This volume includes 23 papers selected from the 47 submitted papers, each of which was reviewed by at least three program committee members.

The history of FMCAD dates back to 1984, when the earliest meetings on this topic occurred as part of IFIP WG10.2.

IFIP WG10.2 Workshops

1984	Darmstadt	Eveking
1985	Edinburgh	Milne and Subrahmanyam
1986	Grenoble	Borrione
1988	Glasgow	Milne
1989	Leuven	Claessen
1990	Miami	Subrahmanyam
1991	Torino	Prinetto and Camurati

At the IFIP WG10.2 meeting in 1991 a presentation by the ESPRIT group "CHARME" led to the creation of the conference on Correct Hardware Design and Verification Methods (CHARME). For several years, CHARME alternated with the conference on Theorem Provers in Circuit Design (TPCD), which evolved into FMCAD. Traditionally, FMCAD and CHARME are held on alternate years on different continents.

Correct Hardware Design and Verification Methods (CHARME)

1993	Arles	Milne and Pierre (LNCS 683)
1995	Frankfort	Eveking and Camurati (LNCS 987)
1997	Montreal	Li and Probst
1999	Bad Herrenalb	Kropf and Pierre (LNCS 1703)
2001	Livingstone	Margaria and Melham (LNCS 2144)

Theorem Provers in Circuit Design		(TPCD)
1992	Nijmegen	Boute, Melham, and Stavridou
1994	Bad Herrenalb	Kropf and Kumar (LNCS 901)

Formal Methods in Computer-Aided Design (FMCAD)		
1996	San Jose	Camilleri and Srivas (LNCS 1166)
1998	San Jose	Gopalakrishnan and Windley (LNCS 1522)
2000	Austin	Hunt and Johnson (LNCS 1954)

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Waterloo, Ontario — Mark D. Aagaard
Portland, Oregon — John W. O'Leary
November 2002

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