

Erratum

System Design Automation

Edited by R. Merker and W. Schwarz

ISBN 0-7923-7313-8

Please find here the missing pages of the article by U. Hatnik et al.,
p. 185, following page 194.

SYSTEM DESIGN AUTOMATION

System Design Automation

Fundamentals, Principles, Methods, Examples

Edited by

Renate Merker

and

Wolfgang Schwarz

Technische Universität Dresden, Germany



SPRINGER SCIENCE+BUSINESS MEDIA, LLC

A C.I.P. Catalogue record for this book is available from the Library of Congress.

ISBN 978-1-4419-4886-1 ISBN 978-1-4757-6666-0 (eBook)
DOI 10.1007/978-1-4757-6666-0

Printed on durable acid-free paper

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Originally published by Kluwer Academic Publishers, Boston in 2001

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Preface

Modern microelectronic technology provides the possibility to implement complex systems on single chips. Generally such systems include analogue and digital hardware, embedded software, peripheral controllers, sensors and actuators. Due to their complexity they cannot be analyzed and designed without the aid of computers. With the rapid progress of technology, the development of new principles, dedicated methods and tools for computer-aided design has become an indispensable and permanent requirement. As a consequence, the challenge facing the design community consists in the developing of methodologies and appropriate tool-support techniques for a systematic and efficient design automation.

Design automation of electronic and hybrid systems is accordingly a steadily growing field of interest and a permanent challenge for researchers in Electronics, Computer Engineering and Computer Science.

This book presents some recent results in design automation of different types of electronic and mechatronic systems.

It deals with various topics of design automation, ranging from high level digital system synthesis, through analogue and heterogeneous system analysis and design, up to system modeling and simulation. Design automation is treated from the aspects of its theoretical fundamentals, its basic approach and its methods and tools. Several application cases are presented in detail.

The book is organized as follows:

In the first chapter **High-Level System Synthesis** (Digital Hardware/Software Systems, Application Cases) embedded systems, distributed systems and processor arrays as well as hardware-software codesign are treated. Three special application cases are also discussed in detail.

The second chapter **Analog and Heterogeneous System Design** (System Approach and Methodology) faces issues of the analysis and design of hybrid systems composed of analog and digital, electronic and mechanical components.

In chapter three: **System Simulation and Evaluation** (Methods and Tools) object-oriented modeling, analog system simulation, including fault-simulation, parameter optimization and system validation are considered.

The contents of the book is based on material presented at the Workshop System Design Automation (SDA 2000) organized by the Sonderforschungsbereich 358 of the Deutsche Forschungsgemeinschaft at TU Dresden.

The editors are grateful to all authors for their excellent cooperation. Dirk Fimmel and Jan Müller deserve our special gratitude for the editorial production of this book.

Dresden, December 2000

Renate Merker, Wolfgang Schwarz

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