

# COMPUTER SOUND DESIGN

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著者:Eduardo Miranda

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## Description

This comprehensive introduction to software synthesis techniques and programming is intended for students, researchers, musicians, sound artists and enthusiasts in the field of music technology. The art of sound synthesis is as important for the electronic musician as the art of orchestration is important for symphonic music composers. Those who wish to create their own virtual orchestra of electronic instruments and produce original sounds will find this book invaluable. It examines a variety of synthesis techniques and illustrates how to turn a personal computer into a powerful and flexible sound synthesiser. The book also discusses a number of ongoing developments that may play an important role in the future of electronic music making. Previously published as Computer Sound Synthesis for the Electronic Musician, this second edition features a foreword by Jean-Claude Risset and provides new information on: – the latest directions in digital sound representation – advances in physical modelling techniques – granular and pulsar synthesis – PSOLA technique – humanoid voice synthesis – artificial intelligence – evolutionary computing The accompanying CD-ROM contains examples, complementary tutorials and a number of synthesis systems for PC and Macintosh platforms, ranging from low level synthesis programming languages to graphic front-ends for instrument and sound design. These include fully working packages, demonstration versions of commercial software and experimental programs from top research centres in Europe, North and South America.

## Audience

Music Technology, Sound Synthesis, Music courses (undergrad. & postgrad. levels). Professional musicians/composers and producers. Also relevant to those composing for multimedia and film.

## Contents

Foreword by Jean-Claude Risset; Preface; Computer sound synthesis fundamentals; Loose modelling approaches: from modulation and waveshaping to Walsh and wavetable; Spectrum modelling approaches: from additive to analysis-resynthesis and formant; Source modelling approaches: from subtractive and waveguides to physical and modal; Time-based approaches: from granular and pulsar to PSOLA and statistical; Practical case studies and sound design secrets: from humanoid singing to Klingon phasers; Artificial intelligence, supercomputing and evolutionary computation: towards the cutting edge; Introduction to the software on the accompanying CD-ROM; Appendix 1: Mathematical specifications; Appendix 2: Formant values; Appendix 3: Artist's Inductive Machine Learning Algorithm; References; CD-ROM instructions.

作者介绍:

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标签

design

评论

导论性质，内容缺少展开

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主要是原理和算法

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书评

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