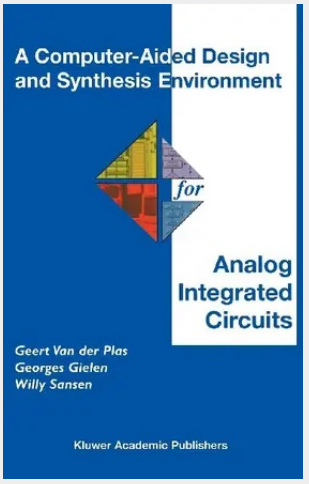
Van der Plas / Gielen / Sansen

A Computer-Aided Design and Synthesis Environment for Analog Integrated Circuits



In the first part the AMGIE analog synthesis system is described. AMGIE is the first analog synthesis system that automates the full design process from specifications down to verified layout. It is targeted to the design of moderate-complexity circuits. It relies on design and circuit knowledge stored in the tool's libraries and can be used by both novice and experienced analog designers as well as system-level designers. The inner workings are explained in detail, with (practical) examples to demonstrate how the implemented algorithms and techniques work. Experimental results obtained with the AMGIE system are reported, including actual fabricated and measured circuits.

The second approach, i.e. the systematic design of high-performance analog circuits, is discussed in the second part of the book. This approach is supported by tools to boost the productivity of the designer. An example of such a tool is Mondriaan, that is targeted towards the automatic layout generation of highly regular analog blocks. The proposed systematic design methodology is then applied to the design of high-accuracy current-steering digital to analog converters (DACs). The full design path is discussed in detail.

Both complementary approaches increase analog design productivity. Design times of the different design experiments undertaken are reported throughout the book to demonstrate this.

In the first part the AMGIE analog synthesis system is described. AMGIE is the first analog synthesis system that automates the full design process from specifications down to verified layout. It is targeted to the design of moderate-complexity circuits. It relies on design and circuit knowledge stored in the tool's libraries and can be used by both novice and experienced analog designers as well as system-level designers. The inner workings are explained in detail, with (practical) examples to demonstrate how the implemented algorithms and techniques work. Experimental results obtained with the AMGIE system are reported, including actual fabricated and measured circuits. The second approach, i.e. the systematic design of high-performance analog circuits, is discussed in the second part of the book. This approach is supported by tools to boost the productivity of the designer. An example of such a tool is Mondriaan, that is targeted towards the automatic layout generation of highly regular analog blocks. The proposed systematic design methodology is then applied to the design of high-accuracy current-steering digital to analog converters (DACs). The full design path is discussed in detail. Both complementary approaches increase analog design productivity. Design times of the different design experiments undertaken are reported throughout the book to demonstrate this.

160,49 €
149,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9780792376972
Medium: Buch
ISBN: 978-0-7923-7697-2
Verlag: Humana
Erscheinungstermin: 30.04.2002
Sprache(n): Englisch
Auflage: Erscheinungsjahr 2002
Serie: The Springer International Series in Engineering and Computer Science
Produktform: Gebunden
Gewicht: 1120 g
Seiten: 212
Format (B x H): 160 x 241 mm

Kundenservice Verlag Dr. Otto Schmidt KG
Neumannstraße 10, 40235 Düsseldorf | kundenservice@otto-schmidt.de | 0221-93738-997 (Inland)