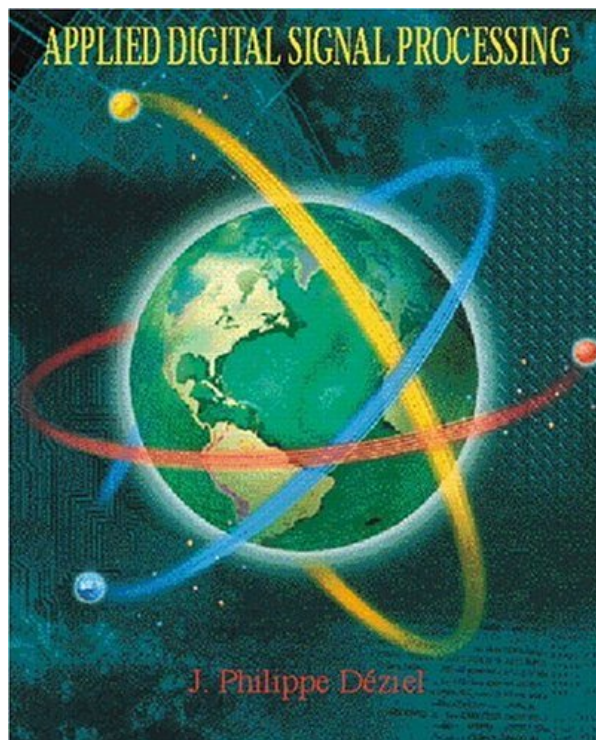
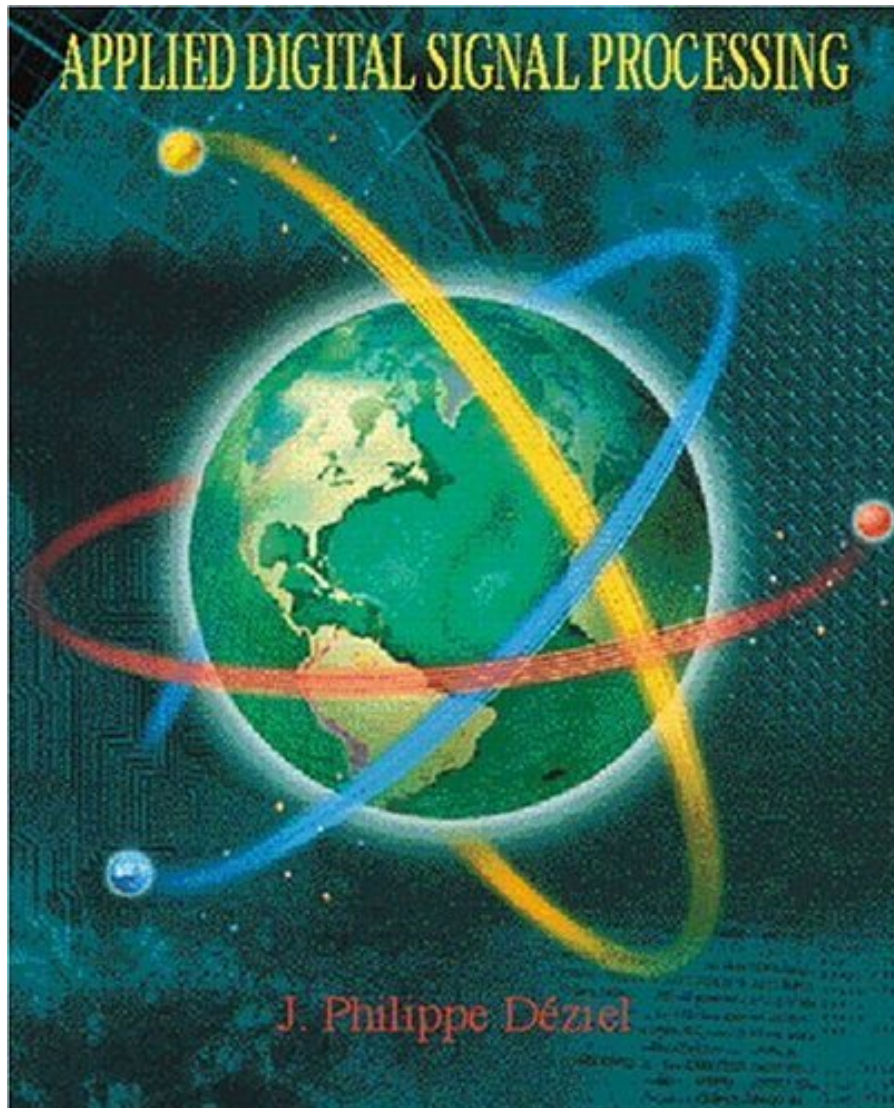


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From the Inside Flap  
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- Sales Rank: #4019740 in Books
- Published on: 2000-07-05
- Original language: English
- Number of items: 1
- Dimensions: 9.10" h x .90" w x 7.40" l, 1.68 pounds
- Binding: Hardcover
- 388 pages

From the Inside Flap

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Very Usefull and Interesting intro into DSP

By Mediterranean

I've a Mechanical Engineering background, I've always been deterred from delving into the world of DSP by complexities involved. However reading this book has enabled me to do some serious work using the current microprocessors and the available programming libraries which tackle almost all fundamental mathematical chores. If you're like me, don't waste this opportunity to introduce yourself to a very interesting domain.

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From the Inside Flap  
PREFACE

The digital signal processing (DSP) revolution has drastically changed the way electronic circuits are designed. It has brought new possibilities that were once deemed impossible using conventional analog circuitry. Digital signal processors are used in CD players, cellular telephones, music synthesizers, and high-speed modems, to name just a few of the items that are now considered among the necessities of life. What magic makes these marvelous devices work? What do readers need to know to start using this technology? The goal of this book is to introduce readers to DSP so that they can incorporate some of this technology into their designs.

This book is based on seven years of experience teaching this subject at the college level. The goal is for readers to understand the fundamentals of DSP so that they may design and implement signal synthesis, signal analysis, filters, and modulators on any digital signal processor. The book provides readers the background necessary to attend seminars and to further their studies.

It is widely recognized that the mathematics supporting DSP prevents many good technically-oriented people from studying the subject. The challenge was to find an approach that would be both intuitive and familiar to undergraduate students. Since vector arithmetic is used very early in most technology programs to explain the basics of most scientific topics, this book relies on these simple arrows along with some of the basic rules of mathematics to introduce the subject. This allows the use of an intuitive graphical approach. Readers will be surprised at how fast they become familiar with the material. They will quickly acquire enough DSP literacy to understand the basics that drive this technology and the major issues that drive practical designs. In the process, they will acquire the basic knowledge to implement simple DSP applications.

This book delivers enough of the basics so readers can use many features of the readily available filter design software packages that automatically perform most of the math. For example, readers will be able to use filter design software packages to design almost any of the standard filters, including Butterworth and Chebyshev filters. Readers will then be able to program these filters onto a digital signal processor of their choice. Additionally, the equations that are developed in this book may be exercised using popular number-calculating software such as spreadsheets. **TARGET AUDIENCE**

It is assumed that readers are either engineers who have forgotten a good deal of math or undergraduate students who understand the basics of passive circuits such as RC networks. Readers should also have some

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From the Back Cover

This important book introduces the fundamentals of digital signal processing. Its goal is to help the reader design and implement signal synthesis, signal analysis, filters, and modulators on any digital signal processor. The following unique features differentiate this book from others:

- Use of an intuitive graphical approach
- Use of vector arithmetic
- Includes manipulation of binary numbers
- Presents filter performance issues
- Contains real, practical applications

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