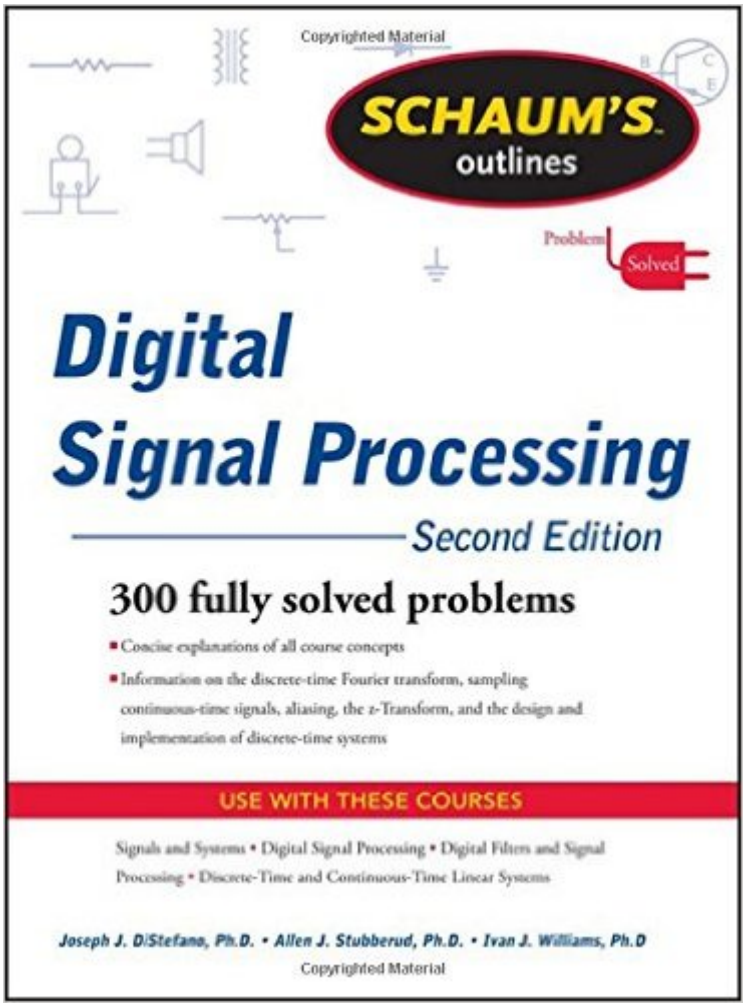
Schaums Outline Of Digital Signal Processing, 2nd Edition (Schaum's Outlines)



Synopsis

The ideal review for your digital signal processing course More than 40 million students have trusted Schaumâ ™s Outlines for their expert knowledge and helpful solved problems. Written by renowned experts in their respective fields, Schaumâ ™s Outlines cover everything from math to science, nursing to language. The main feature for all these books is the solved problems. Step-by-step, authors walk readers through coming up with solutions to exercises in their topic of choice. Outline format facilitates quick and easy review of course fundamentals Hundreds of examples illustrate applications and complex calculations More than 300 solved problems Exercises to help you test your mastery of digital signal processing Appropriate for the following courses: Signals and Systems; Digital Signal Processing; Digital Filters and Signal Processing; Discrete-Time and Continuous-Time Linear Systems Supports and supplements the bestselling textbooks in digital signal processing Easy-to-follow review of digital signal processing Solved problems demonstrate calculation techniques and applications Supports all the major textbooks for digital signal processing courses

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Customer Reviews

This outline could never stand alone as a DSP tutorial, but it is excellent if you need extra problems to solve or if you need a refresher course in elementary DSP topics. Chapter one starts where any DSP course usually starts - with a quick review of signals and systems. Chapter two is on Fourier

analysis and discusses all of the basics including the concept of filtering, interconnection of systems, and finally the discrete time Fourier transform and its properties. Chapter 3 is on sampling, and includes a good discussion of analog to digital conversion and how it can induce aliasing. Next the converse, digital to analog conversion, is discussed as well as discrete time processing of continuous signals and finally sample rate conversion. Chapter 3 is especially useful, since most DSP texts do not go into as much detail on practical A/D and D/A conversion topics as this chapter does. Chapter four finally gets into the z-transform - its definition, its properties, and its inverse. Chapter 5 is about the transform analysis of systems and specifically how the z transform makes the analysis of such systems much simpler than what was done in earlier chapters. Chapter six discusses the discrete Fourier transform, which is a finite-series version of the DTFT, which was discussed in chapter two. Because the Discrete Fourier Transform has a time complexity of NxN, the next chapter discusses its more practical alternative the Fast Fourier Transform, which has an NlogN time complexity. This might seem trivial at first, but if you are filtering 1Kx1K pixel images, the difference becomes significant. Although this chapter is very brief, it does a pretty good job of driving home the main points of the algorithm. Also, it has some pretty good exercises on the FFT, which are usually hard to find in textbooks.

(Schaum’s Outlines) Schaum’s Outline of Programming With Fortran 77 (Schaum’s Outlines)