"Discrete linear systems and digital signal processing have been treated for years in separate publications. ElAli has skillfully combined these two subjects into a single and very useful volume. Useful for electrical and computer engineering students and working professionals. "Summing Up: Highly Recommended." S.T. Karris, University of California, Berkeley in CHOICE. Typically, books on linear systems combine coverage of both discrete and continuous systems all in a single volume. The result is usually a daunting mountain of information that fails to sufficiently explain either subject. With this in mind, Discrete Systems and Digital Signal Processing with MATLAB®, Second Edition responds to the need in engineering for a text that provides complete, focused coverage of discrete linear systems and associated problem solution methods. With its simplified presentation, this book follows a logical development that builds on basic mathematical principles to cover both discrete linear systems and signal processing. The author covers all traditional topics and includes numerous examples that are solved analytically and, when applicable, numerically using the latest version of MATLAB®. In addition to the classical coverage, the author includes complete and stand-alone chapters on IIR and FIR filter design, block diagrams, state-space, and sampling and transformations, as well as a unique chapter on FFT and its many applications. The book also introduces many examples using the MATLAB data acquisition toolbox in different chapters. Ideal either as a textbook for the required course in the electrical and computer engineering curriculum or as an updated refresher for seasoned engineers, this resource offers a wealth of examples, exercises, problems, and author insights.

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Customer Reviews

The concept seems simple enough: make an intro-level DSP book that is simple to understand, straight to the point, and filled with examples of almost every conceivable variety. However, this textbook is easily the worst textbook I've ever used. Before I get to the bad points, let me go over the few good points first. Generally, the book is easy to understand and the concepts are presented directly. Proofs are simple and direct, and the language is straight-forward. Nearly every concept has at least one example associated with it, and each chapter includes an exhaustive treatise on applying Matlab to solving the problems in the book. Now, for bad points. This textbook is RIFE WITH ERRORS. It's ridiculous: on average I'd say there is at least one major typographical or math error. The typographical errors come at the worst possible place every time: right in the middle of a critical example. The errors cause the examples to be done WRONG. Additionally, a lot of the concepts and math in the book is just plain WRONG. For example, the section on circular convolution in Chapter 7 doesn't just include the usual typographical errors, the formula they give is as wrong as wrong can get. The example given after the wrong formula they give doesn't even follow the wrong formula, and even then they manage to do the example wrong. I don't understand how this book made it through editing with so many errors getting through. There are so many errors and so many wrong formulas, it makes the book unusable. I feel robbed of my money. If this author took my DSP class, he would have received an F. The editor, too. Furthermore, many critical concepts that you'd think would be in any intro-level DSP book, such as Fast Fourier Transforms, are missing.

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