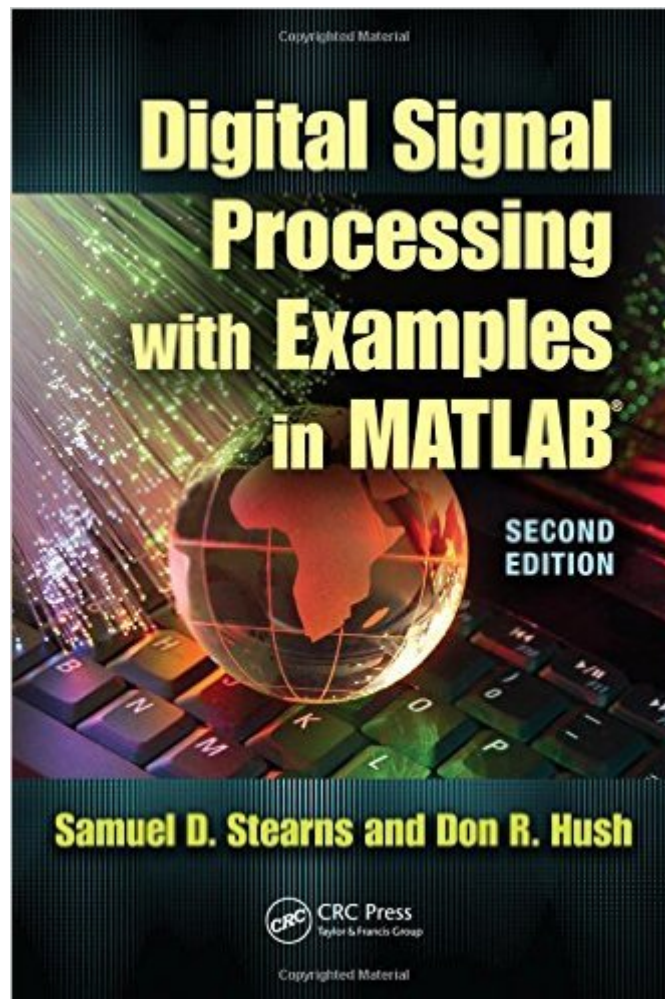


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# Digital Signal Processing With Examples In MATLAB®<sup>®</sup>, Second Edition (Electrical Engineering & Applied Signal Processing Series)



## Synopsis

Based on fundamental principles from mathematics, linear systems, and signal analysis, digital signal processing (DSP) algorithms are useful for extracting information from signals collected all around us. Combined with today's powerful computing capabilities, they can be used in a wide range of application areas, including engineering, communications, geophysics, computer science, information technology, medicine, and biometrics. Updated and expanded, *Digital Signal Processing with Examples in MATLAB®*, Second Edition introduces the basic aspects of signal processing and presents the fundamentals of DSP. It also relates DSP to continuous signal processing, rather than treating it as an isolated operation. New to the Second Edition: Discussion of current DSP applications; New chapters on analog systems models and pattern recognition using support vector machines; New sections on the chirp z-transform, resampling, waveform reconstruction, discrete sine transform, and logarithmic and nonuniform sampling; A more comprehensive table of transforms. Developing the fundamentals of DSP from the ground up, this bestselling text continues to provide readers with a solid foundation for further work in most areas of signal processing. For novices, the authors review the basic mathematics required to understand DSP systems and offer a brief introduction to MATLAB. They also include end-of-chapter exercises that not only provide examples of the topics discussed, but also introduce topics and applications not covered in the chapters.

## Book Information

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## Customer Reviews

I used this book for a first course on DSP. This book is very practical. It is loaded with Matlab algorithms that will make your discrete signal processing simulation development enjoyable and challenging. The Matlab examples cover just about every thing encountered in DSP development. It covers statistical signal analysis, adaptive filter design, FIR, IIR and other important topics. Readers of this book should download the entire code examples used in this book off the website assigned to this book.

I bought this text as a self-study aid, primarily because the book is advertised as including the solutions to the problems at the end of each chapter. I was very disappointed to find that the answers are provided, but the zip files for the solutions are password protected and made available to only universities. What a shamocary. Other than that, the book has proved to be very light in the discussion section and heavy in the problem sets - so the solutions are very much needed to derive any good use from the material.

This book deviates from the normal dsp book in that it deals with real data as opposed to analytical signals. The author favors engineering frequency units instead of normalized frequencies. Try explaining normalized frequency to an engineer who is not a dsp guy and the eyes will glaze over. Emphasis is on the DFT as opposed to all the other transforms. Overall, a very good book for an engineer.

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