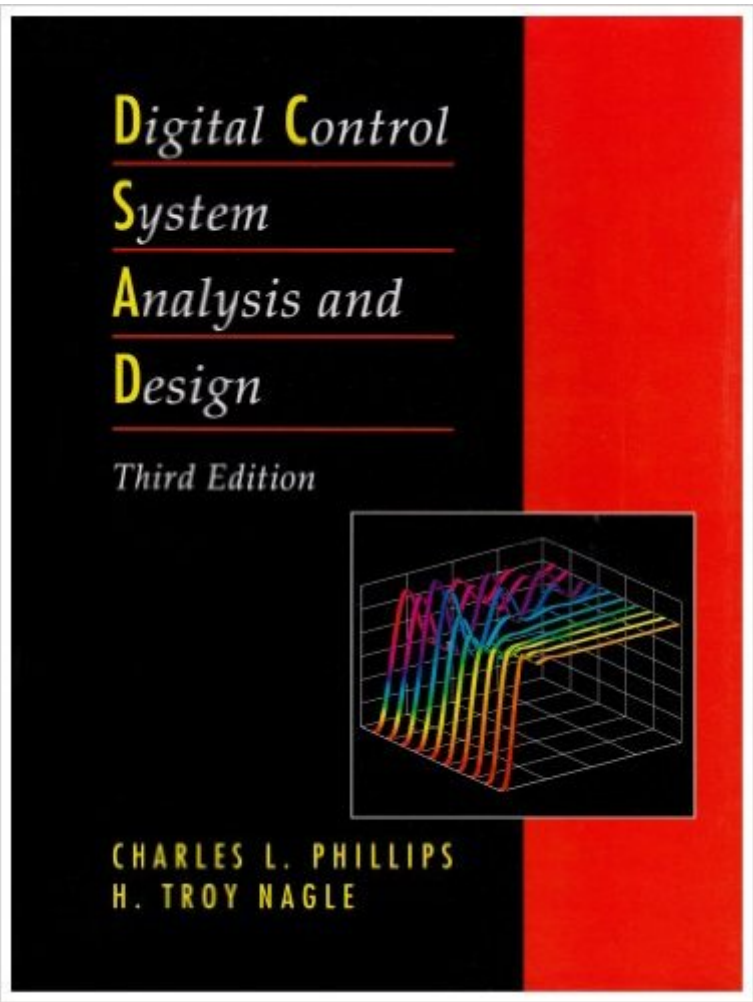
Digital Control System Analysis And Design (3rd Edition)



Synopsis

This revision of the best selling book for the digital controls course features new running applications and integration of MATLAB, the most widely used software in controls. Coverage of root locus design and the Fourier transform have also been increased.

Book Information

Hardcover: 704 pages

Publisher: Prentice Hall; 3 edition (November 17, 1994)

Language: English

ISBN-10: 013309832X

ISBN-13: 978-0133098327

Product Dimensions: 7.1 x 1.6 x 9.3 inches

Shipping Weight: 2.4 pounds

Average Customer Review: 3.3 out of 5 starsÂ Â See all reviewsÂ (13 customer reviews)

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Customer Reviews

Yup, a brief glimps at this book will tell you it won't be a smooth ride like Franklin's 'Digital Control of Dynamic systems'. I have the old edition of franklin's book and it's almost half the size of this book.Well let's not judge the book by its cover.It's a lot more comprehensive then Franklin's, and is composed of 15 chapters which include (in addition to Franklin's standard topics) :*An entire chapter on Stability Analysis Techniques*An entire chapter on Pole-Assignment Design and State Estimation*And most importantly: the book can also be used as a text (or reference text, at least) on Digital Filters (As the author mentions in the preface), Three chapters are completely devoted to Digital filters: Ch11: Sampled Data Transformation of Analog Filters Ch12: Digital filter Structures Ch13: Microcomputer Implementation of Digital FiltersI've taken this book in a senior level course on digital control systems, and most of the students in class were convinced that the book was too advanced for an undergraduate course, and I could't agree better. I think an exposition to the concepts of difference equations, sampling ,and the z-transform is to be done at an earlier stage (like in a course on Continuous and Discrete Signals and Systems) and not to be first introduced in

this book, which seems to assume mathematical fluency and maturity of the reader which is beyond most senior level students.Advanced book. Graduates yes, Undergrads no. That sums up my opinion.

I am just completing a course in discrete time systems, with this book as the textbook. Besides mediocre instructure from the professors, this course's main detraction is this book. There are very few derivations or explanations for many of the formulas, which tend to help me stay interested in the material. Phillips and Nagle have done a terrible job and I feel that I will have to relearn the material when I get to grad school. This book is written from the standpoint that the reader is an experienced engineer who has been working for years; it attempts to make extensions from the analog world to the digital world, and does so very badly. Why my professors chose this book, I will never know. There are very few examples within the chapters, and no answers for any of the problems. As a final note, the book is full of typos and errors. Whatever you do, don't buy this book!

Do not expect to learn anything from this book. The examples have holes. It will have you flipping between 6 different places in the book when it references other pages. The instruction assumes too much prior experience. It's the most frustrating book I've ever owned to supplement the dryest class I've ever taken.

Less or simple examples, and focus more on control maths than practical applications. It lacks details, and strong examples. Many students had problem follwing this book. You definetly need addition book as a refrence.

I used this book recently in a university course. I found it to be an excellent text and am surprised at the low ratings from some of the other reviews. I had no issues with errors (I didn't find any) - as mentioned by another reviewer. I found the subject matter to be well organized, written, and covered.I highly recommend this book for the study of basic digital control.

This is a book focus on the theory.It concentrate on how to derive equation with very few examples.Also, this book assumes that the readers are already familiar with z-Transform.You cannot even start Chapter 1 without knowing z-transform.I wouldn't recommend this book as a learning tool.Instead, I would suggest"Digital control of Dynamic System" by Franklin or"Discrete Time Control System" by Ogata.Both of them were far easier to read. and contains many examples

with MATLAB code.

I have used this book as an undergraduate text in Digital Control Systems. In general, it is a good book, and I have not heard complaints from my students. However a few remarks might be helpful. First, the book covers two different although related topics: digital control systems (Chapters from 1 to 10) and digital signal processing, from chapter 11 to the end of the book. I only used the first 9 chapters. The mathematical exposition of the material is fine: elegant, straight to the point, although it is probably a bit condensed for undergraduates. The chapter on control design in the frequency domain (Chapter 8) is, in my opinion, far the worse because it is, in fact, a chapter on CONTINUOUS control design (use of bilinear transformation from z to w and design in w). So if you are looking for a book that will cover classical digital design such as Deadbeat, Dahlin etc., this book will not suit your needs. On the other hand, the chapter on control design in the time domain (Chapter 9) is a very nice introduction to state feedback, observers (full- and reduced-order), controllability and observability. Chapter 10 is rather dense for a first (undergraduate) course in digital control. I have used the book examples in class room, and they prove to be helpful. Probably the two main weak points are: mathematical deductions are sometimes a bit brief (authors skip one or two steps now and then), and the fact that some of the material is presented in a rather algorithmical style: first step, second step etc. which is nice for those who want to learn how to do something without great concern for the underlying theory. Before closing, I should also say that the book does not have a lot of Matlab applications, but it does have a little bit. In general it is a good book.

Control System Toolbox (Bookware Companion (Paperback)) Feng Shui: Wellness and Peace-Interior Design, Home Decorating and Home Design (peace, home design, feng shui, home, design, home decor, prosperity) Digital System Design with SystemVerilog Software Receiver Design: Build your Own Digital Communication System in Five Easy Steps Modern Control System Theory and Design, 2nd Edition Wind Turbine Control Systems: Principles, Modelling and Gain Scheduling Design (Advances in Industrial Control) A Human Error Approach to Aviation Accident Analysis: The Human Factors Analysis and Classification System Analysis and Design of Digital Integrated Circuits CMOS Digital Integrated Circuits Analysis & Design Computer-Aided Control System Design Using Matlab