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# Modern Control Engineering (4th Edition)

## Synopsis

This comprehensive treatment of the analysis and design of continuous-time control systems provides a gradual development of control theoryâ ”and shows how to solve all computational problems with MATLAB. It avoids highly mathematical arguments, and features an abundance of examples and worked problems throughout the book.  Chapter topics include the Laplace transform; mathematical modeling of mechanical systems, electrical systems, fluid systems, and thermal systems; transient and steady-state-response analyses, root-locus analysis and control systems design by the root-locus method; frequency-response analysis and control systems design by the frequency-response; two-degrees-of-freedom control; state space analysis of control systems and design of control systems in state space.  For control systems engineers.

## Book Information

Hardcover: 970 pages

Publisher: Prentice Hall; 4 edition (November 23, 2001)

Language: English

ISBN-10: 0130609072

ISBN-13: 978-0130609076

Product Dimensions:  8 x 1.6 x 8.8 inches

Shipping Weight: 3.6 pounds

Average Customer Review:  3.8 out of 5 starsÂ Â See all reviewsÂ (43 customer reviews)

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## Customer Reviews

I have taught control theory for over 20 years, used over 20 different textbooks, and read over 100 different control theory books. Nothing beats Ogata for a first book. His forte is a very wide-ranging selection of detailed worked out sample problems, with NO steps left out, and; NO "easily shown by the reader", cop outs. He also uses the best computational crutch since the programmable calculator (or the slide rule for those over 55 or 60), namely MATLAB. MATLAB, MATHMATICA, MATHCAD, and SPICE are all powerful tools for the aspiring electrical engineer, but MATLAB excels for ease of use when dealing with control theory, and Ogata wisely relies on MATLAB. However, before you start plugging numbers into some computer simulation, you need to know the

basics, so that you can reject the ever present garbage answers, resulting from a faulty keystroke. Ogata provides the best basics available anywhere. Which is why I recommend it, just as I recommend Hagan Das coffee ice cream,--- the best available.Richard G. Costello, Ph.D. A Mechanic Of New York, who admires Peter Cooper, who invented Jello, the I beam, and founded The Cooper Union in 1859. costello@cooper.edu 1/29/97

Strangely, of the numerous textbooks on control systems I own, just one of them sticks out. I've got many of the major ones, in particular Kuo 9e, Ogata 5e, Franklin 5e, Dorf/Bishop, and Nise 5e. Franklin is worst -- rambling, unstructured, Ogata is almost as bad -- poor English, loose, unmotivated advice with a handbook feel to it, and Kuo ranks between so-so and decent -- I suspect it was better organized in the older revisons. Dorf I've not used as much (my feeling is it's partly all right). On the other hand, Nise: Of the 60 or so textbooks on electrical and mechanincal engineering I have, Nise is top three and probably at the very top. Its language and stuctured organization is superb. Ogata as well as the others mentioned have an excellent command of their material, but their presentations are inadequate. I just wanted to let you know that there is an exception that serves up in both departments.

This is an excellent controls text. All concepts are beautifully explained and developed. The examples in the book are clear and concise and the exercises cover a broad range of control system design applications. One of the greatest perks of this book is the extensive coverage of MATLAB applications to control system design. Not only do you learn how to do it mathematically but you learn how to program and let MATLAB aid you. You get double the learning for the price of one text!

I remember studying control Engineering in 2007, and all the nights of rage I had with this useless book.Poorly explained, I can see we have here a PhD in anti didactism writing a book. At the time, I remember having the feeling that this subject shold be quite easy, but that in the hands of this author it was becoming a very big pile of terrorism to learn this topic.I looked for some book at the time which could be more didactic, and found it eventualy. I cant remember the name of the book, but it was so much more clear!Just stay away from this Ogata book!

As an undergrad Electrical Engineer, I wish I had found this book sooner! In the first few chapters, Ogata concisely (yet thoroughly) explains everything that was taught in two semesters' worth of

signal theory and complex linear algebra. The explanations are complete and Ogata doesn't cut corners with the dreaded "it is easily shown that..." cop-out many technical text authors use to drive us undergrads slowly insane.Furthermore, he goes out of his way to show the relationships between ideas and reinforce properties and behaviors introduced earlier in the book. Whether you're looking for a powerful and fast introduction to control theory with linear systems (the first few chapters) or a desk reference for advanced material (the later chapters), this is the book for you.

The book itself is in great condition, but the paper back version is horrible. Who ever printed it did not ensure the paper was thick enough for double sided pages. Every single page is hard to read because the text from the opposite side bleeds through, making it a pain in the butt to read small graphs.

This is my favorite controls book. It might not be the best but it is very good. My dynamic systems and vibrations book was horrible and this book covered that whole book better. Shows good examples too and has lots of them, almost like a solution manual. The book also shows you matlab code in examples which is nice so you dont have to spend hours trying to figure out exactly how the codes work. Very good book.

This was the textbook for my controls class in college. Its a good book with a lot of information but I found some explanations complicated. I had to research some things online to get better explanations.

Modern Control Engineering (4th Edition) Control Self-Assessment: Reengineering Internal Control (Enterprise Governance, Control, Audit, Security, Risk Management and Business Continuity) Modern Geothermal HVAC Engineering and Control Applications Electricity, Electronics, and Control Systems for HVAC (4th Edition) Yeast Control in Seven Days - How to Rebuild Health and Control Candida Infection Control and Management of Hazardous Materials for the Dental Team, 3e (INFECTION CONTROL & MGT/ HAZARDOUS MAT/ DENTAL TEAM ( MILLER)) Show Networks and Control Systems: Formerly "Control Systems for Live Entertainment" Money Management Tips: Control Money Don't Let It Control You (Budgeting your money, How to save money tips, Get out of debt fast, Live cheap, Debt free, Spend less) Energy Audit of Building Systems: An Engineering Approach, Second Edition (Mechanical and Aerospace Engineering Series) Orbital Mechanics for Engineering Students, Third Edition (Aerospace Engineering) A Primer For The Mathematics Of

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