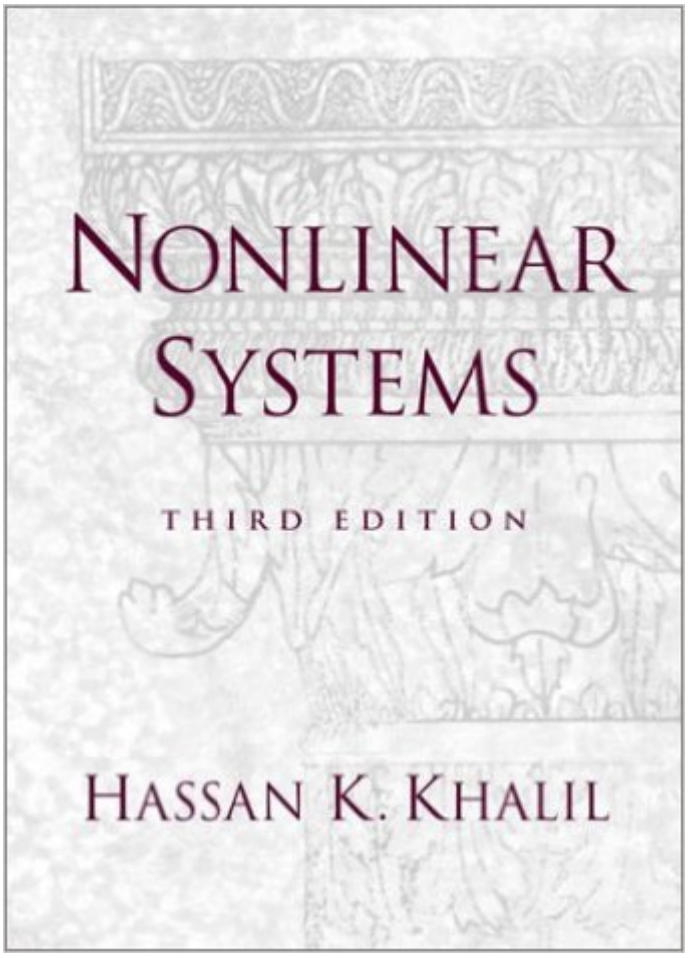
The book was found

Nonlinear Systems (3rd Edition)



PDF
Adobe
DOWNLOAD EBOOK

Synopsis

This book is written is such a way that the level of mathematical sophistication builds up from chapter to chapter. It has been reorganized into four parts: basic analysis, analysis of feedback systems, advanced analysis, and nonlinear feedback control. Updated content includes subjects which have proven useful in nonlinear control design in recent yearsâ ”new in the 3rd edition are: expanded treatment of passivity and passivity-based control; integral control, high-gain feedback, recursive methods, optimal stabilizing control, control Lyapunov functions, and observers. For use as a self-study or reference guide by engineers and applied mathematicians.

Book Information

Hardcover: 750 pages

Publisher: Pearson; 3 edition (December 28, 2001)

Language: English

ISBN-10: 0130673897

ISBN-13: 978-0130673893

Product Dimensions: 6.9 x 1.7 x 9.3 inches

Shipping Weight: 2.5 pounds (View shipping rates and policies)

Average Customer Review: 4.2 out of 5 starsÂ Â See all reviewsÂ (24 customer reviews)

Best Sellers Rank: #650,559 in Books (See Top 100 in Books) #95 inÂ Books > Science & Math > Mathematics > Applied > Linear Programming #3076 inÂ Books > Engineering & Transportation > Engineering > Electrical & Electronics #6222 inÂ Books > Textbooks > Science & Mathematics > Mathematics

Customer Reviews

This is a really great book. It is very much at a high level, so I wouldn’t recommend ordering it unless you have the proper background (a linear systems course and several classes in math or engineering) If you do have the proper background, its pretty easy to read and the order makes good sense.

Used this for a Nonlinear Control Theory Class. It was a little short on Control Theory (didn’t include much adaptive control etc) but has such good coverage of nonlinear stability theory that it is extremely applicable for a Control Theory class. Does a great job explaining complicated ideas, and does a spectacular job providing references for more information.This book won the IFAC Control Engineering Textbook Prize in 2002, but its greatness can more accurately be established by simply

noting that it is used as THE nonlinear controls textbook by many engineering departments.

Pretty Good Book. You'll need extensive knowledge of linear control system theory. Usually two undergraduate classes and a graduate class. Some of the math is tough, even for an electrical engineer. The set theory stuff will take a while to figure out. Overall, a good book though.

The book is great, just make sure you get the paperback. It's showed up with several covers, and I can't figure out which is which, but make sure you're not spending hundreds on this. It can be had for far cheaper.

I'm a beginner in non-linear control research so I'm not claiming that I know this topic very well to talk like an expert but I think that this book is a little bit overrated. It's the textbook in most of the highest ranked universities in engineering that probably where ever you go, you will hear about it. I passed my course with using lecture notes and tutorials I found on internet more than I used this book. I know some great professors who think that this is the best nonlinear controls book tho, I totally respect them but to me it's not a great one for beginners. Note that this is not my final judgement and I'll update my review in a year. Maybe I'll think differently about it as I advance.

This is the one textbook any engineer in advanced control systems needs to own. Each chapter is perfectly constructed to build a foundation that expertly leads into next. The book culminates in a series of simulations, using systems from previous chapters to explore and reinforce concepts presented. This is the text you need if you want to call yourself a master of control systems.

This book has everything a one semester graduate course in nonlinear control would generally cover and much more. Despite the presence of other good books, most notably those by Vidyasagar and Sastry, this will definitely be the first book one will turn to in case of a doubt.The book is very readable even though it has a lot of jargon (read heavy mathematics). The author starts off with an introduction to nonlinear systems, then moves on to phase portraits for 2-D systems, before moving on to advanced concepts of stability theory and feedback linearization. My favorite was the third chapter which had a neat collection of mathematical results, with quite a few of the proofs pushed to the appendices.Exercises are fun to solve, has a lot of application based problems, and pretty comprehensive.The only negative - I feel he could have dealt with bifurcations and describing functions a little more in detail.

The third edition contains material about high gain observers and sliding modes which are welcome additions. The book also contains sections about backstepping and passivity techniques. As in the first edition the author's writing is clear and concise. It is a good complement to Vidyasagar's Nonlinear Systems book.

Download to continue reading...

Global Propagation of Regular Nonlinear Hyperbolic Waves (Progress in Nonlinear Differential Equations and Their Applications, No. 76) Nonlinear Systems (3rd Edition) Nonlinear Systems: Analysis, Stability, and Control (Interdisciplinary Applied Mathematics) Identification of Nonlinear Systems Using Neural Networks and Polynomial Models: A Block-Oriented Approach (Lecture Notes in Control and Information Sciences) Nonlinear Power Flow Control Design: Utilizing Exergy, Entropy, Static and Dynamic Stability, and Lyapunov Analysis (Understanding Complex Systems) Handbook of Optics, Third Edition Volume IV: Optical Properties of Materials, Nonlinear Optics, Quantum Optics (set) Applications of Nonlinear Fiber Optics, Second Edition (Optics and Photonics Series) Student Solutions Manual for Nonlinear Dynamics and Chaos, 2nd edition Advances in Chemical Physics: Modern Nonlinear Optics, Volume 119, Part 1, 2nd Edition Theory of Nonlinear Structural Analysis: The Force Analogy Method for Earthquake Engineering Seismic Design Aids for Nonlinear Pushover Analysis of Reinforced Concrete and Steel Bridges (Advances in Earthquake Engineering) Lectures on Light: Nonlinear and Quantum Optics using the Density Matrix Nonlinear Analysis for Human Movement Variability Nonlinear Analysis of Concrete-Filled Steel Tubular Columns Behavioral Modeling of Nonlinear RF and Microwave Devices Constellation Shaping, Nonlinear Precoding, and Trellis Coding for Voiceband Telephone Channel Modems: with Emphasis on ITU-T Recommendation V.34 (The ... Series in Engineering and Computer Science) Nonlinear Pricing: Published in association with the Electric Power Research Institute Nonlinear Dynamics And Chaos: With Applications To Physics, Biology, Chemistry, And Engineering (Studies in Nonlinearity) Nonlinear Programming Nonlinear Programming: Concepts, Algorithms, and Applications to Chemical Processes (MPS-SIAM Series on Optimization)

Dmca