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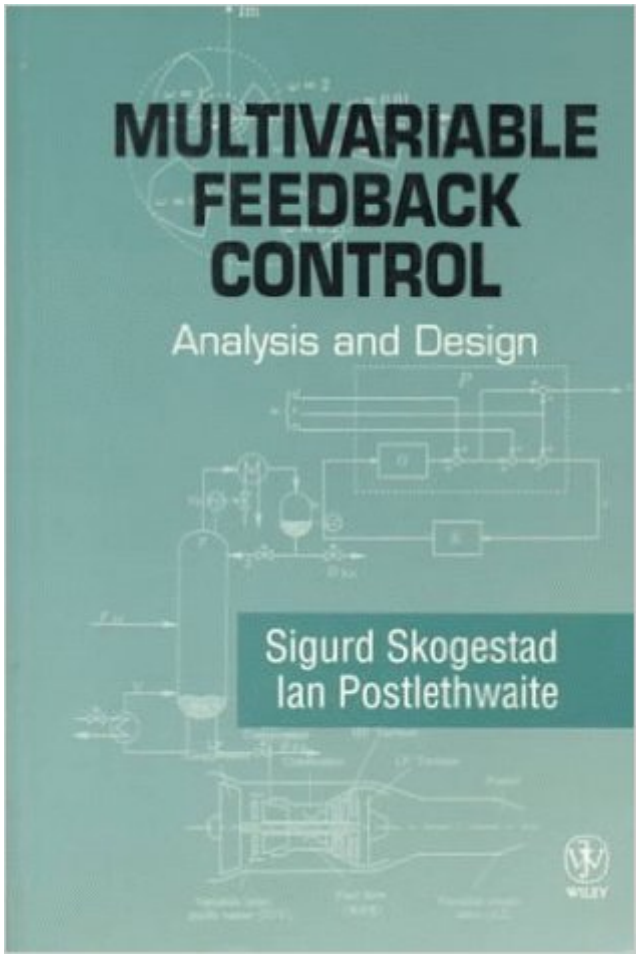
Multivariable Feedback Control: Analysis And Design



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Synopsis

Provides an ideal introduction to the analysis and design of robust multivariable control. Model uncertainty, multivariable systems, robustness, interactions between design and control, decentralized control, control structures, model reduction, and an overview of techniques for controller design are among the topics discussed. Includes numerous worked examples.

Book Information

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Customer Reviews

This is a very comprehensive book on multivariable control, particularly chapters 6, 7, 8 and 9 wich are very useful to people who want to understand robustness and are interested in studying these topics by themselves. It was of great help to me.

This is a excellent book for graduate student working in Control. It starts of with concepts in control and gradually goes into the details of multivariable control. Presentation on μ is clear and concise. I really liked the material on decentralzed control and control structure selection. Prof. Siguard Skogestad and Prof. Ian Postlethwaite did a excellent job. However, I wish there were more problems at the end of each chapter focussing on the research issues.

This is not a review of the content of the book (which is excellent) but the quality of the product.I purchased the paperbook version, and the print quality was appalling. It looks like it has been printed on the lowest quality setting of a cheap laser printer from a highly-compressed JPEG. The

text is gray and has all sorts of artifacts around it that make it very difficult to read. I'm not sure if this is just my copy or the whole batch, I will be trying to get it replaced.

This book saved my dissertation from total disaster. Anyone interested in decoupling control should read this book!This book is extremely cool and represents a unique and valuable perspective on control system design. Plain english is used with a modest amount of math. References are provided where the math is minimal for those interested in more rigorous proof. However, referencing other peoples work can sometimes lead to problems as is evidenced with the citation of J.C. Doyle and G. Stein's 1981 paper.Counter-example to the 1981 paper using notation in this book:G(s) = 1/s * -(s-20)/(s+20), K = 1, w_I = 5 Delta_I = 1 ... clearly this is still a stable feedback loop, however, the condition T < 1/|w_I| is clearly violated, where T = (1+GK)^-1*GK.This 1981 paper is grossly overemphasized in many control texts, some of which are still good texts. Keep your eyes and ears open. The singular value can only show stability; one cannot use the singular value to show instability.If you are reading this text, just beware that the arrows sometimes only go one way when the author makes the arrows go both ways.Even with this error in mind...buy this text. It is awesome. You will not be disappointed!!!

This book has some outstanding insights that are a real gem if you are working in controls. The order of topics though is odd, like starting the book with classical feedback etc and then reviews linear system theory in the third chapter. In parts of the text the authors seem scattered and do not articulate their thoughts well.Overall this is a good book, it is just a little odd.

The best controls texts I have come across. The layout can be a little confusing with tidbits all over the place (mark your pages well when you find what your after!). A must read for anyone interested in LTI control. Suitable for all - both advanced and fundamental concepts introduced with some matlab code included. A little disapointed with the quality of the print in my copy (some of the subscripts and code were quite hard to make out, though still legible). Cant say enough about the text itself. Though entitled multivarible control covers a bit of SISO as well. Going on my shelf along with Ogata, Khalil and the other must haves..

I recently used this book for a course in Robust Control Theory. The authors clearly know the material - there is no questioning that. However, the notation is atrocious and not very clear.There are SO MANY REFERENCES to flip to this equation number, that figure number, etc. that by the

time you find the reference you're looking for you forget what you were trying to understand to begin with. This happens all throughout the book and just thought there could be less of them.If you don't mind sifting through the material and flipping all over the place go for it.

This is a very good textbook. A perfect intermediate level controls text that focuses on application of control, not just theory. It is very readable and just overall a good text book.

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