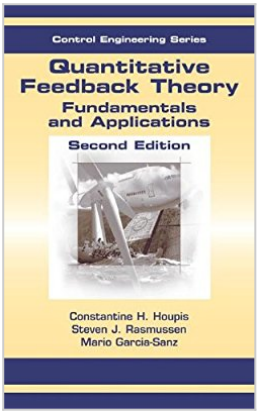

Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering)

By Constantine H. Houpis, Steven J. Rasmussen, Mario Garcia-Sanz

Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) By Constantine H. Houpis, Steven J. Rasmussen, Mario Garcia-Sanz

The first edition of Quantitative Feedback Theory gained enormous popularity by successfully bridging the gap between theory and real-world engineering practice. Avoiding mathematical theorems, lemmas, proofs, and correlaries, it boiled down to the essential elements of quantitative feedback theory (QFT) necessary to readily analyze, develop, and implement robust control systems. Thoroughly updated and expanded, Quantitative Feedback Theory: Fundamentals and Applications, Second Edition continues to provide a platform for intelligent decision making and design based on knowledge of the characteristics and operating scenario of the plant.

Beginning with the fundamentals, the authors build a background in analog and discrete-time multiple-input-single-output (MISO) and multiple-input-multiple-output (MIMO) feedback control systems along with the fundamentals of the QFT technique. The remainder of the book links these concepts to practical applications. Among the many enhancements to this edition are a new section on large wind turbine control system, four new chapters, and five new appendices. The new chapters cover non-diagonal compensator design for MIMO systems, QFT design involving Smith predictors for time delay systems with uncertainty, weighting matrices and control authority, and QFT design techniques applied to real-world industrial systems.

Quantitative Feedback Theory: Fundamentals and Applications, Second Edition includes new and revised examples and end-of-chapter problems. The theory presented in the book can be easily applied using the QFT Control Toolbox (or QFTCT) for Matlab developed by Prof. Garcia-Sanz (See also the website codypower.com).

Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering)

By Constantine H. Houpis, Steven J. Rasmussen, Mario Garcia-Sanz

Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) By Constantine H. Houpis, Steven J. Rasmussen, Mario Garcia-Sanz

The first edition of Quantitative Feedback Theory gained enormous popularity by successfully bridging the gap between theory and real-world engineering practice. Avoiding mathematical theorems, lemmas, proofs, and correlaries, it boiled down to the essential elements of quantitative feedback theory (QFT) necessary to readily analyze, develop, and implement robust control systems. Thoroughly updated and expanded, Quantitative Feedback Theory: Fundamentals and Applications, Second Edition continues to provide a platform for intelligent decision making and design based on knowledge of the characteristics and operating scenario of the plant.

Beginning with the fundamentals, the authors build a background in analog and discrete-time multiple-input-single-output (MISO) and multiple-input-multiple-output (MIMO) feedback control systems along with the fundamentals of the QFT technique. The remainder of the book links these concepts to practical applications. Among the many enhancements to this edition are a new section on large wind turbine control system, four new chapters, and five new appendices. The new chapters cover non-diagonal compensator design for MIMO systems, QFT design involving Smith predictors for time delay systems with uncertainty, weighting matrices and control authority, and QFT design techniques applied to real-world industrial systems.

Quantitative Feedback Theory: Fundamentals and Applications, Second Edition includes new and revised examples and end-of-chapter problems. The theory presented in the book can be easily applied using the QFT Control Toolbox (or QFTCT) for Matlab developed by Prof. Garcia-Sanz (See also the website codypower.com).

Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) By Constantine H. Houpis, Steven J. Rasmussen, Mario Garcia-Sanz Bibliography

- Sales Rank: #4407027 in Books
- Brand: Brand: CRC Press
- Published on: 2005-12-09
- Original language: English
- Number of items: 1
- Dimensions: 9.00" h x 6.25" w x 1.50" l, 2.12 pounds
- Binding: Hardcover
- 624 pages

Editorial Review

About the Author
Prof. Mario Garcia-Sanz is one of the pioneers in the QFT robust control arena. Over the last 30 years, he has developed new QFT control theory and has designed many commercial control solutions for industry and space agencies. With over 20 industrial patents and 200 research papers, he has been the Principal Investigator of over 50 funded research projects for industry, and has worked as an international expert on wind turbine design and control in patent litigation at the British Court. As a Full Professor at the Public University of Navarra and Senior Advisor for European wind energy companies he played a central role in the design and field experimentation of multi-megawatt wind turbines for industry, including the advice of many PhD students and engineers in the field. Dr. Garcia-Sanz is currently a Professor and Founding Director of the Control and Energy Systems Center, and the inaugural Maltz Endowed Chair in Energy Innovation at Case Western Reserve University (cesc.case.edu). He also has been NATO/RTO Lecture Series Director, Visiting Professor at UMIST (UK); at Oxford University (UK); at NASA-JPL (California); and at the European Space Agency ESA-ESTEC (The Netherlands). He founded CoDyPower LLC, a consulting firmspecialized on control systems, energy innovation and optimum planning of electrical distribution networks (codypower.com). Professor Garcia-Sanz's CRC-Press three books "*Quantitative Feedback Theory: Theory and Applications*" (2006),"*Wind Energy Systems: Control Engineering Design*" (2012), and "*Robust Control Engineering: Practical QFT Solutions*" (2017) are among the best-selling books in QFT and Wind turbine control. His *QFT Control Toolbox* for Matlab is considered as the top tool for designing QFT control systems. Dr. Garcia-Sanz is Subject Editor of the International Journal of Robust and Nonlinear Control,and received the IEE Heaviside Prize (UK), the BBVA research award (Spain) and the CWRU Diekhoff Teaching Award (USA).

Users Review

From reader reviews:

Jared Smith:

Do you among people who can't read enjoyable if the sentence chained in the straightway, hold on guys this particular aren't like that. This Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) book is readable by you who hate the straight word style. You will find the data here are arrange for enjoyable studying experience without leaving possibly decrease the knowledge that want to deliver to you. The writer regarding Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) content conveys prospect easily to understand by a lot of people. The printed and e-book are not different in the information but it just different available as it. So , do you still thinking Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) is not loveable to be your top listing reading book?

Eduardo Ford:

Often the book Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation

and Control Engineering) will bring you to the new experience of reading some sort of book. The author style to describe the idea is very unique. In case you try to find new book you just read, this book very suitable to you. The book Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) is much recommended to you to study. You can also get the e-book from the official web site, so you can more easily to read the book.

Jerry Blair:

This Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) is great publication for you because the content which can be full of information for you who else always deal with world and get to make decision every minute. This kind of book reveal it data accurately using great organize word or we can declare no rambling sentences within it. So if you are read the item hurriedly you can have whole details in it. Doesn't mean it only will give you straight forward sentences but difficult core information with splendid delivering sentences. Having Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) in your hand like having the world in your arm, details in it is not ridiculous one particular. We can say that no reserve that offer you world within ten or fifteen moment right but this e-book already do that. So , this really is good reading book. Hey Mr. and Mrs. hectic do you still doubt which?

Roy Jordan:

This Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) is fresh way for you who has intense curiosity to look for some information since it relief your hunger of knowledge. Getting deeper you upon it getting knowledge more you know otherwise you who still having bit of digest in reading this Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) can be the light food in your case because the information inside this specific book is easy to get by anyone. These books create itself in the form which is reachable by anyone, yes I mean in the e-book type. People who think that in publication form make them feel drowsy even dizzy this reserve is the answer. So there is absolutely no in reading a reserve especially this one. You can find what you are looking for. It should be here for a person. So , don't miss the idea! Just read this e-book kind for your better life along with knowledge.

Read Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) By Constantine H. Houpis, Steven J. Rasmussen, Mario Garcia-Sanz for online ebook

Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) By Constantine H. Houpis, Steven J. Rasmussen, Mario Garcia-Sanz Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) By Constantine H. Houpis, Steven J. Rasmussen, Mario Garcia-Sanz books to read online.

Online Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) By Constantine H. Houpis, Steven J. Rasmussen, Mario Garcia-Sanz ebook PDF download

Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) By Constantine H. Houpis, Steven J. Rasmussen, Mario Garcia-Sanz Doc

Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) By Constantine H. Houpis, Steven J. Rasmussen, Mario Garcia-Sanz Mobipocket

Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) By Constantine H. Houpis, Steven J. Rasmussen, Mario Garcia-Sanz EPub

KUT4V51Z2JH: Quantitative Feedback Theory: Fundamentals and Applications, Second Edition (Automation and Control Engineering) By Constantine H. Houpis, Steven J. Rasmussen, Mario Garcia-Sanz