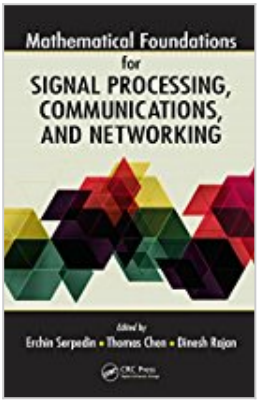

Mathematical Foundations for Signal Processing, Communications, and Networking

From CRC Press

Mathematical Foundations for Signal Processing, Communications, and Networking From CRC Press

Mathematical Foundations for Signal Processing, Communications, and Networking describes mathematical concepts and results important in the design, analysis, and optimization of signal processing algorithms, modern communication systems, and networks. Helping readers master key techniques and comprehend the current research literature, the book offers a comprehensive overview of methods and applications from linear algebra, numerical analysis, statistics, probability, stochastic processes, and optimization.

From basic transforms to Monte Carlo simulation to linear programming, the text covers a broad range of mathematical techniques essential to understanding the concepts and results in signal processing, telecommunications, and networking. Along with discussing mathematical theory, each self-contained chapter presents examples that illustrate the use of various mathematical concepts to solve different applications. Each chapter also includes a set of homework exercises and readings for additional study.

This text helps readers understand fundamental and advanced results as well as recent research trends in the interrelated fields of signal processing, telecommunications, and networking. It provides all the necessary mathematical background to prepare students for more advanced courses and train specialists working in these areas.

Mathematical Foundations for Signal Processing, Communications, and Networking

From CRC Press

Mathematical Foundations for Signal Processing, Communications, and Networking From CRC Press

Mathematical Foundations for Signal Processing, Communications, and Networking describes mathematical concepts and results important in the design, analysis, and optimization of signal processing algorithms, modern communication systems, and networks. Helping readers master key techniques and comprehend the current research literature, the book offers a comprehensive overview of methods and applications from linear algebra, numerical analysis, statistics, probability, stochastic processes, and optimization.

From basic transforms to Monte Carlo simulation to linear programming, the text covers a broad range of mathematical techniques essential to understanding the concepts and results in signal processing, telecommunications, and networking. Along with discussing mathematical theory, each self-contained chapter presents examples that illustrate the use of various mathematical concepts to solve different applications. Each chapter also includes a set of homework exercises and readings for additional study.

This text helps readers understand fundamental and advanced results as well as recent research trends in the interrelated fields of signal processing, telecommunications, and networking. It provides all the necessary mathematical background to prepare students for more advanced courses and train specialists working in these areas.

Mathematical Foundations for Signal Processing, Communications, and Networking From CRC Press Bibliography

- Sales Rank: #2950101 in eBooks
- Published on: 2011-12-21
- Released on: 2011-12-21
- Format: Kindle eBook

Editorial Review

Review

"Here is a book providing the mathematical tools for a large range of researchers, more precisely for future researchers. First, we remark that the involved range is quite new, since many books give mathematical tools for signal processing, for communications or for networking. But this volume gives the tools for all three domains. In this way, a large group of students and researchers is addressed. Therefore the diversity of the subjects is larger. ... the chapters are written by well-known active workers in the domain. ... The included examples are interesting and suggestive. ... The book will be helpful for students and researchers to be acquainted with the recent trends in the areas included in the book. We think we are faced with an excellent book that will soon become a standard reference in the respective areas."
?Dumitru Stanomir (Bucure?ti), *Zentralblatt MATH*, 1254 ? 1

About the Author

Erchin Serpedin is a professor in the Department of Electrical Engineering at Texas A&M University. Dr. Serpedin has been an associate editor of several journals and has received numerous honors, including a National Science Foundation CAREER Award, a National Research Council Fellow Award, and an American Society for Engineering Education Fellow Award. His research focuses on statistical signal processing, wireless communications, and bioinformatics.

Thomas Chen is a professor of networks at Swansea University. Dr. Chen is technical editor for IEEE Press, editor-in-chief of *IEEE Network*, senior editor of *IEEE Communications Magazine*, and associate editor of *International Journal of Security and Networks, Journal on Security and Communication Networks,* and *International Journal of Digital Crime and Forensics*. His research areas encompass web filtering, web classification, traffic classification, smart grid security, privacy, cyber crime, and malware.

Dinesh Rajan is an associate professor in the Department of Electrical Engineering at Southern Methodist University. An IEEE senior member, Dr. Rajan has received several awards, including a National Science Foundation CAREER Award. His research interests include communications theory, wireless networks, information theory, and computational imaging.

Users Review

From reader reviews:

Martin Phair:

A lot of people always spent all their free time to vacation or go to the outside with them household or their friend. Did you know? Many a lot of people spent that they free time just watching TV, or even playing video games all day long. If you want to try to find a new activity this is look different you can read a book. It is really fun for you personally. If you enjoy the book that you just read you can spent all day every day to reading a publication. The book Mathematical Foundations for Signal Processing, Communications, and

Networking it is quite good to read. There are a lot of people who recommended this book. These were enjoying reading this book. Should you did not have enough space bringing this book you can buy the e-book. You can m0ore effortlessly to read this book from a smart phone. The price is not too expensive but this book provides high quality.

John Silverstein:

Your reading sixth sense will not betray an individual, why because this Mathematical Foundations for Signal Processing, Communications, and Networking e-book written by well-known writer we are excited for well how to make book that can be understand by anyone who else read the book. Written within good manner for you, still dripping wet every ideas and composing skill only for eliminate your own personal hunger then you still doubt Mathematical Foundations for Signal Processing, Communications, and Networking as good book not just by the cover but also through the content. This is one guide that can break don't assess book by its cover, so do you still needing one more sixth sense to pick this particular!? Oh come on your examining sixth sense already alerted you so why you have to listening to an additional sixth sense.

Christy McCurry:

This Mathematical Foundations for Signal Processing, Communications, and Networking is brand-new way for you who has fascination to look for some information as it relief your hunger details. Getting deeper you in it getting knowledge more you know otherwise you who still having little digest in reading this Mathematical Foundations for Signal Processing, Communications, and Networking can be the light food for you because the information inside this kind of book is easy to get by simply anyone. These books develop itself in the form which is reachable by anyone, yes I mean in the e-book web form. People who think that in publication form make them feel drowsy even dizzy this publication is the answer. So there is not any in reading a reserve especially this one. You can find actually looking for. It should be here for you. So , don't miss the idea! Just read this e-book variety for your better life in addition to knowledge.

Maria Mariani:

That guide can make you to feel relax. This specific book Mathematical Foundations for Signal Processing, Communications, and Networking was bright colored and of course has pictures around. As we know that book Mathematical Foundations for Signal Processing, Communications, and Networking has many kinds or category. Start from kids until teens. For example Naruto or Investigator Conan you can read and think that you are the character on there. Therefore not at all of book usually are make you bored, any it makes you feel happy, fun and chill out. Try to choose the best book for you personally and try to like reading which.

#9WAFD8O2BQX

Read Mathematical Foundations for Signal Processing, Communications, and Networking From CRC Press for online ebook

Mathematical Foundations for Signal Processing, Communications, and Networking From CRC Press 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 Mathematical Foundations for Signal Processing, Communications, and Networking From CRC Press books to read online.

Online Mathematical Foundations for Signal Processing, Communications, and Networking From CRC Press ebook PDF download

Mathematical Foundations for Signal Processing, Communications, and Networking From CRC Press Doc

Mathematical Foundations for Signal Processing, Communications, and Networking From CRC Press Mobipocket

Mathematical Foundations for Signal Processing, Communications, and Networking From CRC Press EPub