



Digital Signal Processing Using MATLAB for Students and Researchers

By John W. Leis



Digital Signal Processing Using MATLAB for Students and Researchers By John W. Leis

Quickly Engages in Applying Algorithmic Techniques to Solve Practical Signal Processing Problems

With its active, hands-on learning approach, this text enables readers to master the underlying principles of digital signal processing and its many applications in industries such as digital television, mobile and broadband communications, and medical/scientific devices. Carefully developed MATLAB® examples throughout the text illustrate the mathematical concepts and use of digital signal processing algorithms. Readers will develop a deeper understanding of how to apply the algorithms by manipulating the codes in the examples to see their effect. Moreover, plenty of exercises help to put knowledge into practice solving real-world signal processing challenges.

Following an introductory chapter, the text explores:

- Sampled signals and digital processing
- Random signals
- Representing signals and systems
- Temporal and spatial signal processing
- Frequency analysis of signals
- Discrete-time filters and recursive filters

Each chapter begins with chapter objectives and an introduction. A summary at the end of each chapter ensures that one has mastered all the key concepts and techniques before progressing in the text. Lastly, appendices listing selected web resources, research papers, and related textbooks enable the investigation of individual topics in greater depth.

Upon completion of this text, readers will understand how to apply key algorithmic techniques to address practical signal processing problems as well as develop their own signal processing algorithms. Moreover, the text provides a solid foundation for evaluating and applying new digital processing signal techniques as they are developed.

 [Download Digital Signal Processing Using MATLAB for Student ...pdf](#)

 [Read Online Digital Signal Processing Using MATLAB for Stude ...pdf](#)

Digital Signal Processing Using MATLAB for Students and Researchers

By John W. Leis

Digital Signal Processing Using MATLAB for Students and Researchers By John W. Leis

Quickly Engages in Applying Algorithmic Techniques to Solve Practical Signal Processing Problems

With its active, hands-on learning approach, this text enables readers to master the underlying principles of digital signal processing and its many applications in industries such as digital television, mobile and broadband communications, and medical/scientific devices. Carefully developed MATLAB® examples throughout the text illustrate the mathematical concepts and use of digital signal processing algorithms. Readers will develop a deeper understanding of how to apply the algorithms by manipulating the codes in the examples to see their effect. Moreover, plenty of exercises help to put knowledge into practice solving real-world signal processing challenges.

Following an introductory chapter, the text explores:

- Sampled signals and digital processing
- Random signals
- Representing signals and systems
- Temporal and spatial signal processing
- Frequency analysis of signals
- Discrete-time filters and recursive filters

Each chapter begins with chapter objectives and an introduction. A summary at the end of each chapter ensures that one has mastered all the key concepts and techniques before progressing in the text. Lastly, appendices listing selected web resources, research papers, and related textbooks enable the investigation of individual topics in greater depth.

Upon completion of this text, readers will understand how to apply key algorithmic techniques to address practical signal processing problems as well as develop their own signal processing algorithms. Moreover, the text provides a solid foundation for evaluating and applying new digital processing signal techniques as they are developed.

Digital Signal Processing Using MATLAB for Students and Researchers By John W. Leis

Bibliography

- Rank: #1691101 in Books
- Published on: 2011-08-23
- Original language: English
- Number of items: 1
- Dimensions: 9.21" h x 1.05" w x 6.46" l, 1.53 pounds
- Binding: Hardcover

- 396 pages



[Download Digital Signal Processing Using MATLAB for Student ...pdf](#)



[Read Online Digital Signal Processing Using MATLAB for Stude ...pdf](#)

Download and Read Free Online Digital Signal Processing Using MATLAB for Students and Researchers By John W. Leis

Editorial Review

Review

"Intended for undergraduate or graduate students in engineering or related disciplines, this introductory volume examines key theories in signal processing and presents this information optimized for use with MATLAB technical computing software." (Book News, 1 October 2011)

About the Author

John Leis, PhD, is Associate Professor of Electrical and Computer Engineering at the University of Southern Queensland. He has authored many technical papers in areas involving signal processing and networking. Dr. Leis's interests include signal processing for data compression and coding, medical signal processing, and advanced instrumentation using signal processing algorithms. He has collaborated internationally on various research projects. Dr. Leis has taught the subject material extensively in Australia and also Singapore. He is a Senior Member of the Institution of Electrical & Electronic Engineers and a Member of the Association for Computing Machinery.

Users Review

From reader reviews:

Christopher Rayes:

The actual book Digital Signal Processing Using MATLAB for Students and Researchers will bring you to definitely the new experience of reading any book. The author style to explain the idea is very unique. In case you try to find new book to see, this book very suited to you. The book Digital Signal Processing Using MATLAB for Students and Researchers is much recommended to you to read. You can also get the e-book through the official web site, so you can quicker to read the book.

Randy Garrison:

The e-book untitled Digital Signal Processing Using MATLAB for Students and Researchers is the book that recommended to you to read. You can see the quality of the book content that will be shown to you. The language that creator use to explained their way of doing something is easily to understand. The copy writer was did a lot of study when write the book, to ensure the information that they share to you is absolutely accurate. You also can get the e-book of Digital Signal Processing Using MATLAB for Students and Researchers from the publisher to make you far more enjoy free time.

Steven Anderson:

The reason why? Because this Digital Signal Processing Using MATLAB for Students and Researchers is an

unordinary book that the inside of the guide waiting for you to snap it but latter it will jolt you with the secret that inside. Reading this book alongside it was fantastic author who all write the book in such wonderful way makes the content interior easier to understand, entertaining way but still convey the meaning totally. So , it is good for you for not hesitating having this nowadays or you going to regret it. This book will give you a lot of positive aspects than the other book have got such as help improving your ability and your critical thinking way. So , still want to hesitate having that book? If I were you I will go to the reserve store hurriedly.

Bryan Donovan:

Beside that Digital Signal Processing Using MATLAB for Students and Researchers in your phone, it could give you a way to get nearer to the new knowledge or details. The information and the knowledge you will got here is fresh from the oven so don't possibly be worry if you feel like an outdated people live in narrow community. It is good thing to have Digital Signal Processing Using MATLAB for Students and Researchers because this book offers for you readable information. Do you often have book but you seldom get what it's interesting features of. Oh come on, that would not happen if you have this in the hand. The Enjoyable blend here cannot be questionable, just like treasuring beautiful island. Use you still want to miss that? Find this book as well as read it from today!

**Download and Read Online Digital Signal Processing Using
MATLAB for Students and Researchers By John W. Leis
#LHUDCOG6W4P**

Read Digital Signal Processing Using MATLAB for Students and Researchers By John W. Leis for online ebook

Digital Signal Processing Using MATLAB for Students and Researchers By John W. Leis 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 Digital Signal Processing Using MATLAB for Students and Researchers By John W. Leis books to read online.

Online Digital Signal Processing Using MATLAB for Students and Researchers By John W. Leis ebook PDF download

Digital Signal Processing Using MATLAB for Students and Researchers By John W. Leis Doc

Digital Signal Processing Using MATLAB for Students and Researchers By John W. Leis Mobipocket

Digital Signal Processing Using MATLAB for Students and Researchers By John W. Leis EPub