



# Channel Coding Techniques for Wireless Communications

*K. Deergha Rao*

Download now

[Click here](#) if your download doesn't start automatically

# Channel Coding Techniques for Wireless Communications

*K. Deergha Rao*

## **Channel Coding Techniques for Wireless Communications** K. Deergha Rao

The book discusses modern channel coding techniques for wireless communications such as turbo codes, low parity check codes (LDPC), space-time coding, Reed Solomon (RS) codes and convolutional codes. Many illustrative examples are included in each chapter for easy understanding of the coding techniques. The text is integrated with MATLAB-based programs to enhance the understanding of the subject's underlying theories. It includes current topics of increasing importance such as turbo codes, LDPC codes, LT codes, Raptor codes and space-time coding in detail, in addition to the traditional codes such as cyclic codes, BCH and RS codes and convolutional codes. MIMO communications is a multiple antenna technology, which is an effective method for high-speed or high-reliability wireless communications. PC-based MATLAB m-files for the illustrative examples are included and also provided on the accompanying CD, which will help students and researchers involved in advanced and current concepts in coding theory. Channel coding, the core of digital communication and data storage, has undergone a major revolution as a result of the rapid growth of mobile and wireless communications.

The book is divided into 11 chapters. Assuming no prior knowledge in the field of channel coding, the opening chapters (1 - 2) begin with basic theory and discuss how to improve the performance of wireless communication channels using channel coding. Chapters 3 and 4 introduce Galois fields and present detailed coverage of BCH codes and Reed-Solomon codes. Chapters 5-7 introduce the family of convolutional codes, hard and soft-decision Viterbi algorithms, turbo codes, BCJR algorithm for turbo decoding and studies trellis coded modulation (TCM), turbo trellis coded modulation (TTCM), bit-interleaved coded modulation (BICM) as well as iterative BICM (BICM-ID) and compares them under various channel conditions. Chapters 8 and 9 focus on low-density parity-check (LDPC) codes, LT codes and Raptor codes. Chapters 10 and 11 discuss MIMO systems and space-time (ST) coding.

 [Download Channel Coding Techniques for Wireless Communicati ...pdf](#)

 [Read Online Channel Coding Techniques for Wireless Communica ...pdf](#)

## **Download and Read Free Online Channel Coding Techniques for Wireless Communications K. Deergha Rao**

---

### **From reader reviews:**

#### **Tony Hill:**

Have you spare time for a day? What do you do when you have considerably more or little spare time? Yep, you can choose the suitable activity with regard to spend your time. Any person spent their particular spare time to take a go walking, shopping, or went to the particular Mall. How about open or even read a book entitled Channel Coding Techniques for Wireless Communications? Maybe it is to get best activity for you. You already know beside you can spend your time with the favorite's book, you can better than before. Do you agree with the opinion or you have some other opinion?

#### **Fred Dean:**

The book Channel Coding Techniques for Wireless Communications make one feel enjoy for your spare time. You may use to make your capable a lot more increase. Book can for being your best friend when you getting anxiety or having big problem using your subject. If you can make reading through a book Channel Coding Techniques for Wireless Communications being your habit, you can get considerably more advantages, like add your current capable, increase your knowledge about a number of or all subjects. You may know everything if you like wide open and read a book Channel Coding Techniques for Wireless Communications. Kinds of book are a lot of. It means that, science guide or encyclopedia or other individuals. So , how do you think about this reserve?

#### **Elvis Harris:**

People live in this new moment of lifestyle always attempt to and must have the free time or they will get great deal of stress from both way of life and work. So , when we ask do people have time, we will say absolutely without a doubt. People is human not a robot. Then we request again, what kind of activity have you got when the spare time coming to a person of course your answer will certainly unlimited right. Then do you ever try this one, reading books. It can be your alternative throughout spending your spare time, the actual book you have read is usually Channel Coding Techniques for Wireless Communications.

#### **Stacy Abercrombie:**

This Channel Coding Techniques for Wireless Communications is great publication for you because the content which is full of information for you who always deal with world and still have to make decision every minute. That book reveal it info accurately using great plan word or we can say no rambling sentences included. So if you are read it hurriedly you can have whole information in it. Doesn't mean it only provides you with straight forward sentences but tricky core information with attractive delivering sentences. Having Channel Coding Techniques for Wireless Communications in your hand like having the world in your arm, info in it is not ridiculous one. We can say that no publication that offer you world within ten or fifteen minute right but this publication already do that. So , this is good reading book. Hey there Mr. and Mrs. stressful do you still doubt that will?

**Download and Read Online Channel Coding Techniques for  
Wireless Communications K. Deergha Rao #YA8LF1RBD9W**

## **Read Channel Coding Techniques for Wireless Communications by K. Deerga Rao for online ebook**

Channel Coding Techniques for Wireless Communications by K. Deerga Rao 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 Channel Coding Techniques for Wireless Communications by K. Deerga Rao books to read online.

### **Online Channel Coding Techniques for Wireless Communications by K. Deerga Rao ebook PDF download**

#### **Channel Coding Techniques for Wireless Communications by K. Deerga Rao Doc**

**Channel Coding Techniques for Wireless Communications by K. Deerga Rao Mobipocket**

**Channel Coding Techniques for Wireless Communications by K. Deerga Rao EPub**