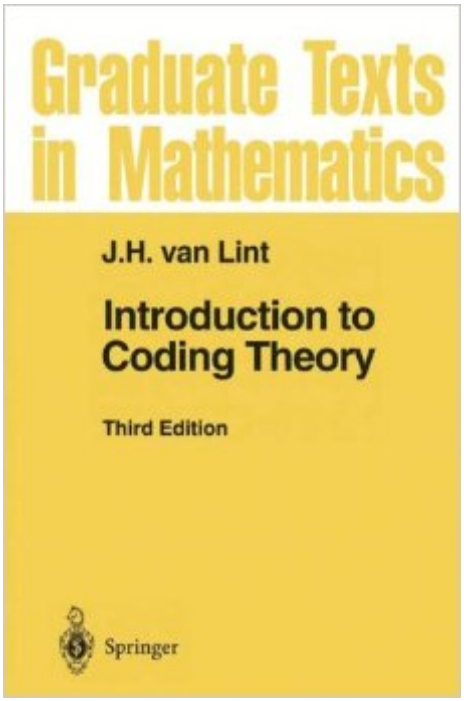
Introduction To Coding Theory (Graduate Texts In Mathematics)



Synopsis

It is gratifying that this textbook is still sufficiently popular to warrant a third edition. I have used the opportunity to improve and enlarge the book. When the second edition was prepared, only two pages on algebraic geometry codes were added. These have now been removed and replaced by a relatively long chapter on this subject. Although it is still only an introduction, the chapter requires more mathematical background of the reader than the remainder of this book. One of the very interesting recent developments concerns binary codes defined by using codes over the alphabet 7l.4â ¢ There is so much interest in this area that a chapter on the essentials was added. Knowledge of this chapter will allow the reader to study recent literature on 7l. -codes. 4 Furthermore, some material has been added that appeared in my Springer LecÂ- ture Notes 201, but was not included in earlier editions of this book, e. g. Generalized Reed-Solomon Codes and Generalized Reed-Muller Codes. In Chapter 2, a section on "Coding Gain" (the engineer's justification for using error-correcting codes) was added. For the author, preparing this third edition was a most welcome return to mathematics after seven years of administration. For valuable discussions on the new material, I thank C.P.I.M.Baggen, I. M.Duursma, H.D.L.Hollmann, H. C. A. van Tilborg, and R. M. Wilson. A special word of thanks to R. A. Pellikaan for his assistance with Chapter 10.

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Customer Reviews

Very good intro textbook. It gives short, detailed preps to various coding areas (linear, cyclic, convolutional). The biggest advantage this book has is that it does not throw at You tonnes of unnecessary info (like many other thick books do). That is, it assumes reader has some basic understanding of algebra and probability theory. Let's say, it gives good theoretical presentation such that the reader gets good theoretical understanding, it is not example-based.

This book is very terse, and assumes a lot of knowledge, which is to be expected. However, it does have a tendency to do in one line in a proof things that really aren't all that obvious to people who aren't math graduate students.I'm a CS undergrad with a math minor. I know math a lot better than most CS people. if you're just trying to kind of learn some coding theory, this is not a book for you. If you're a math major who wants to prove everything about coding theory as a pure math field, this is a book for you.

i think this book is very good for who's studying cryptography. if you are interested in combinatorics, i recommend to read this book.

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