

<<List Decoding of Err>>

图书基本信息

书名：<<List Decoding of Error-Correcting Codes纠错码的列表解码>>

13位ISBN编号：9783540240518

10位ISBN编号：3540240519

出版时间：北京燕山出版社

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页数：350

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内容概要

This monograph is a thoroughly revised and extended version of the author's PhD thesis, which was selected as the winning thesis of the 2002 ACM Doctoral Dissertation Competition. Venkatesan Guruswami did his PhD work at the MIT with Madhu Sudan as thesis adviser. Starting with the seminal work of Shannon and Hamming, coding theory has generated a rich theory of error-correcting codes. This theory has traditionally gone hand in hand with the algorithmic theory of decoding that tackles the problem of recovering from the transmission errors efficiently. This book presents some spectacular new results in the area of decoding algorithms for error-correcting codes. Specifically, it shows how the notion of list-decoding can be applied to recover from far more errors, for a wide variety of error-correcting codes, than achievable before. The style of the exposition is crisp and the enormous amount of information on combinatorial results, polynomial time list decoding algorithms, and applications is presented in well structured form.

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