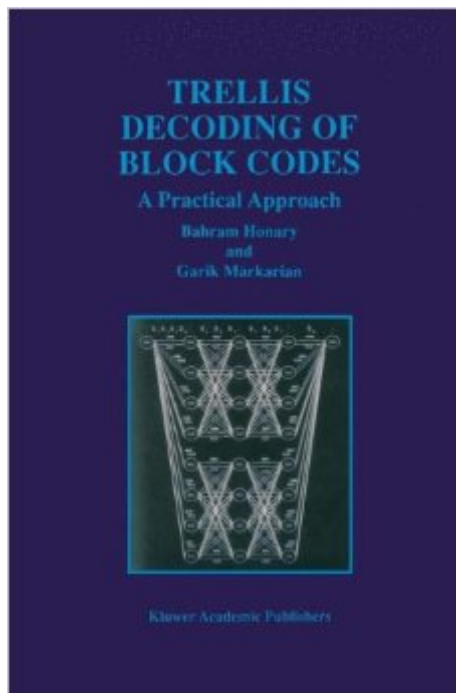# Trellis Decoding Of Block Codes: A Practical Approach (The Kluwer International Series In Engineering And Computer Science, 391)

Synopsis

It is a great pleasure to be asked to write the Preface for this book on trellis decoding of error correcting block codes. The subject is extremely significant both theoretically and practically, and is very timely because of recent develÂ- opments in the microelectronic implementation and range of application of error-control coding systems based on block codes. The authors have been notably active in signal processing and coding research and development for several years, and therefore very well placed to contribute to the state of the art on the subject of trellis decoding. In particular, the book represents a unique approach to many practical aspects of the topic. As the authors point out, there are two main classes of error control codes: block codes and convolutinal codes. Block codes came first historically and have a well-developed mathematical structure. Convolutional codes come later, and have developed heuristically, though a more formal treatment has emerged via recent developments in the theory of symbolic dynamics. MaxÂ- imum likelihood (ML) decoding of powerful codes in both these classes is computationally complex in the general case; that is, ML decoding fails into the class of NP-hard computational problems. This arieses because the deÂ-coding complexity is an exponential function of key parameters of the code.

Book Information

Hardcover: 265 pages

Publisher: Kluwer Academic; 1997 edition (February 28, 1997)

Language: English

ISBN-10: 0792398602

ISBN-13: 978-0792398608

Product Dimensions: 6.1 x 0.7 x 9.2 inches

Shipping Weight: 1.2 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #7,599,989 in Books (See Top 100 in Books)   #89 inÂ Books > Computers & Technology > Programming > Software Design, Testing & Engineering > Coding Theory   #2321 inÂ Books > Computers & Technology > Computer Science > Systems Analysis & Design   #10757 inÂ Books > Computers & Technology > Computer Science > AI & Machine Learning

Trellis Decoding of Block Codes: A Practical Approach (The Kluwer International Series in Engineering and Computer Science, 391) Face Image Analysis by Unsupervised Learning (The Kluwer International Series in Engineering and Computer Science, Volume 612) (The Springer

International Series in Engineering and Computer Science) Black & Decker Codes for Homeowners: Electrical Codes, Mechanical Codes, Plumbing Codes, Building Codes Constellation Shaping, Nonlinear Precoding, and Trellis Coding for Voiceband Telephone Channel Modems: with Emphasis on ITU-T Recommendation V.34 (The ... Series in Engineering and Computer Science) Aircraft Repossession Enforcement Practical Aspects Volume Ii (Kluwer Law International: International Bar Association) HACKING: Beginner's Crash Course - Essential Guide to Practical: Computer Hacking, Hacking for Beginners, & Penetration Testing (Computer Systems, Computer Programming, Computer Science Book 1) Hunter Block by Bloody Block Residential Inspector's Guide to Codes, Forms, & Complaints (Residential Inspector's Guide to Codes, Forms, and Complaints) Introductory Logic and Sets for Computer Scientists (International Computer Science Series) Web Caching and Its Applications (The Springer International Series in Engineering and Computer Science) Applications of Digital Signal Processing to Audio and Acoustics (The Springer International Series in Engineering and Computer Science) Radiowave Propagation and Smart Antennas for Wireless Communications (The Springer International Series in Engineering and Computer Science) Face Image Analysis by Unsupervised Learning (The Springer International Series in Engineering and Computer Science) Optical Character Recognition: An Illustrated Guide to the Frontier (The Springer International Series in Engineering and Computer Science) Analog Design Essentials (The Springer International Series in Engineering and Computer Science) Low Power Design Methodologies (The Springer International Series in Engineering and Computer Science) Analog Design for CMOS VLSI Systems (The Springer International Series in Engineering and Computer Science) Computer Analysis of Images and Patterns: 7th International Conference, CAIP '97, Kiel, Germany, September 10-12, 1997. Proceedings. (Lecture Notes in Computer Science) Computer Analysis of Images and Patterns: 8th International Conference, CAIP'99 Ljubljana, Slovenia, September 1-3, 1999 Proceedings (Lecture Notes in Computer Science) Computer Processing of Oriental Languages. Beyond the Orient: The Research Challenges Ahead: 21st International Conference, ICCPOL 2006, Singapore, ... (Lecture Notes in Computer Science)