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Sommario/riassunto	The purpose of coding theory is the design of efficient systems for the transmission of information. The mathematical treatment leads to certain finite structures: the error-correcting codes. Surprisingly problems which are interesting for the design of codes turn out to be closely related to problems studied partly earlier and independently in pure mathematics. In this book, examples of such connections are presented. The relation between lattices studied in number theory and geometry and error-correcting codes is discussed. The book provides at the same time an introduction to the theory of integral lattices and modular forms and to coding theory. In the 3rd edition, again numerous corrections and improvements have been made and the text has been updated. Content Lattices and Codes - Theta Functions and Weight Enumerators - Even Unimodular Lattices - The Leech Lattice - Lattices over Integers of Number Fields and Self-Dual Codes. Readership Graduate Students in Mathematics and Computer Science Mathematicians and Computer Scientists About the Author Prof. Dr. Wolfgang Ebeling, Institute of Algebraic Geometry, Leibniz Universität Hannover, Germany.