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	Soggetti	Probabilities
		Statistics
		Pattern recognition
		Operations research
		Decision making
		Electrical engineering
		Probability Theory and Stochastic Processes
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	Nota di contenuto	I. General properties of the quantization for probability distributions: Voronoi partitions. Centers and moments of probability distributions. The quantization problem. Basic properties of optimal quantizers. Uniqueness and optimality in one dimension -- II. Asymptotic quantization for nonsingular probability distributions: Asymptotics for the quantization error. Asymptotically optimal quantizers. Regular quantizers and quantization coefficients. Random quantizers and quantization coefficients. Asymptotics for the covering radius -- III. Asymptotic quantization for singular probability distributions: The quantization dimension. Regular sets and measures of dimension D. Rectifiable curves. Self-similar sets and measures.

Sommario/riassunto   Due to the rapidly increasing need for methods of data compression, quantization has become a flourishing field in signal and image processing and information theory. The same techniques are also used in statistics (cluster analysis), pattern recognition, and operations research (optimal location of service centers). The book gives the first mathematically rigorous account of the fundamental theory underlying these applications. The emphasis is on the asymptotics of quantization errors for absolutely continuous and special classes of singular probabilities (surface measures, self-similar measures) presenting some new results for the first time. Written for researchers and graduate students in probability theory the monograph is of potential interest to all people working in the disciplines mentioned above.