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	Nota di contenuto	Chapter 1. Basic Probability Concepts -- Chapter 2. Some Initial Definitions -- Chapter 3. Some Results Independent of Specific Distributions -- Chapter 4. Discrete Distributions and Combinatorials -- Chapter 5. Specific Discrete Distributions -- Chapter 6. The Normal (or Gaussian) Distribution and Other Continuous Distributions -- Chapter 7. Generating Functions and Characteristic Functions -- Chapter 8. The Monte Carlo Method: Computer Simulation of Experiments -- Chapter 9. Queueing Theory and Other Probability Questions -- Chapter 10. Two-Dimensional and Multidimensional Distributions -- Chapter 11. The Central Limit Theorem -- Chapter 12. Choosing Hypotheses and Estimating Parameters from Experimental Data -- Chapter 13. Methods of Least Squares (Regression Analysis) -- Chapter 14. Inverse Probability; Confidence Limits -- Chapter 15. Curve Fitting -- Chapter 16. Fitting Data with Correlations and Constraints -- Chapter 17. Bartlett S Function; Estimating Likelihood Ratios Needed for an Experiment -- Chapter 18. Interpolating Functions and Unfolding Problems -- Chapter 19. Beyond Maximum Likelihood and Least Squares; Robust Methods -- Chapter 20. Characterization of Events -- Appendix -- Index.
	Sommario/riassunto	This book, now in its third edition, offers a practical guide to the use of probability and statistics in experimental physics that is of value for

both advanced undergraduates and graduate students. Focusing on applications and theorems and techniques actually used in experimental research, it includes worked problems with solutions, as well as homework exercises to aid understanding. Suitable for readers with no prior knowledge of statistical techniques, the book comprehensively discusses the topic and features a number of interesting and amusing applications that are often neglected. Providing an introduction to neural net techniques that encompasses deep learning, adversarial neural networks, and boosted decision trees, this new edition includes updated chapters with, for example, additions relating to generating and characteristic functions, Bayes' theorem, the Feldman-Cousins method, Lagrange multipliers for constraints, estimation of likelihood ratios, and unfolding problems.