PROBABILITY MODELS AND APPLICATIONS
Corrected 2nd Edition

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Key Feature:
• Numerous examples with actual data where probability models can be applied in practice

Description:
Written by renowned experts in the field, this authorized reissue of a textbook has as its unifying theme the role that probability models have had, and continue to have, in scientific and practical applications. It includes many examples, with actual data, of real-world use of probability models, while expositing the mathematical theory of probability at an introductory calculus-based level. Detailed descriptions of the properties and applications of probability models that have successfully modeled real phenomena are given, as well as an explanation of methods for testing goodness of fit of these models. Readers will receive a firm foundation in techniques for deriving distributions of various summaries of data that will prepare them for subsequent studies of statistics, as well as a solid grounding in concepts such as that of conditional probability that will prepare them for more advanced courses in stochastic processes.
Contents:

- Introduction
- The Elements of Probability Theory
- Finite Probability Models and Random Sampling
- Conditional Probability and Probabilistic Independence
- Random Variables
- Descriptive Properties of Distributions
- Sums and Averages of Independent Random Variables
- Special Distributions: Discrete Case
- The Normal Distribution
- Special Distributions: Continuous Case
- Bivariate Distributions
- The Bivariate Normal Distribution
- Transformations of Two Random Variables
- Fitting and Testing Goodness of Fit of Probability Models