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Nota di contenuto	1.Introduction -- 2.System Reliability and Risk Analysis -- 3.Monte Carlo Simulation- the Method -- 4.System Reliability and Risk Analysis by Monte Carlo Simulation -- 5.Practical Applications of Monte Carlo Simulation for System Reliability Analysis -- 6.Advanced Mont Carlo Simulation Techniques for System Failure Probability Estimation -- 7. Practical Applications of Advanced Monte Carlo Simulation Techniques for System Techniques for System Failure Probability Estimation.
Sommario/riassunto	Monte Carlo simulation is one of the best tools for performing realistic analysis of complex systems as it allows most of the limiting assumptions on system behavior to be relaxed. The Monte Carlo Simulation Method for System Reliability and Risk Analysis comprehensively illustrates the Monte Carlo simulation method and its application to reliability and system engineering. Readers are given a sound understanding of the fundamentals of Monte Carlo sampling and simulation and its application for realistic system modeling. Whilst many of the topics rely on a high-level understanding of calculus, probability and statistics, simple academic examples will be provided in support to the explanation of the theoretical foundations to facilitate comprehension of the subject matter. Case studies will be introduced to provide the practical value of the most advanced techniques. This detailed approach makes The Monte Carlo Simulation Method for System Reliability and Risk Analysis a key reference for senior

undergraduate and graduate students as well as researchers and practitioners. It provides a powerful tool for all those involved in system analysis for reliability, maintenance and risk evaluations.

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