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| Autore                  | Singh V. P (Vijay P.)   |
| Titolo                  | Risk and reliability analysis : a handbook for civil and environmental engineers / / Vijay P. Singh, Sharad K., Jain Aditya Tyagi   |
| Pubbl/distr/stampa      | Reston, VA, : American Society of Civil Engineers, c2007  |
| ISBN                    | 0-7844-7180-0   |
| Descrizione fisica      | 1 online resource (800 p.)  |
| Altri autori (Persone)  | JainS. K <1960-> (Sharad Kumar)<br>TyagiAditya K  |
| Disciplina              | 620/.00452  |
| Soggetti                | Engineering - Management<br>Reliability (Engineering)<br>Risk assessment  |
| Lingua di pubblicazione | Inglese   |
| Formato                 | Materiale a stampa  |
| Livello bibliografico   | Monografia  |
| Note generali           | Description based upon print version of record.   |
| Nota di bibliografia    | Includes bibliographical references and index.  |
| Nota di contenuto       | Rational Decision Making Under Uncertainty; Elements of Probability; Moments and Expectation; Discrete and Continuous Probability Distributions; Limit and Other Distributions; Impulse Response Functions as Probability Distributions; Multivariate Probability Distributions; Parameter Estimation; Entropy Theory and Its Applications in Risk Analysis; Error and Uncertainty Analysis; Monte Carlo Simulation; Stochastic Processes; Stochastic Differential Equations; Reliability Analysis and Estimation; Risk Analysis and Management; Reliability Analysis of Water Distribution Networks; References; Index; Back Matter  |
| Sommario/riassunto      | When it comes to the planning, design, construction, and management of engineering systems, risk and uncertainty are unavoidable. The consideration of the risk involved in any situation, project, or plan becomes an integral part of the decision-making process. Risk and Reliability Analysis: A Handbook for Civil and Environmental Engineers presents key concepts of risk and reliability that apply to a wide array of problems in civil and environmental engineering. The authors begin with an overview of the art of making decisions in the presence of uncertainty and then explain the fundamentals of probability that will be applied throughout the book. In the second part of the book, the |

authors discuss various techniques used in probability distributions and parameter estimation. A third section of the book considers different aspects of uncertainty analysis, especially risk analysis and risk management, providing instructive examples. The final group of chapters addresses reliability analysis and design, focusing particularly on the important area of water distribution networks. Ample illustrations and detailed real-life examples make Risk and Reliability Analysis essential reading for present and future engineers in the fields of civil, environmental, biological, and agricultural engineering, as well as the watershed sciences. Awards This book was named an Outstanding Academic Title in 2008 by Choice: Reviews for Academic Libraries.

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