



# Reliability and risk analysis in engineering and medicine /

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Springer,  
2021

Electronic books

Monografía

This graduate textbook imparts the fundamentals of reliability and risk that can be connected mathematically and applied to problems in engineering and medical science and practice. The book is divided into eight chapters, the first three of which deal with basic fundamentals of probability theory and reliability methods. The fourth chapter illustrates simulation methods needed to solve complex problems. Chapters 5-7 explain reliability codes and system reliability (which uses the component reliabilities discussed in previous chapters). The book concludes in chapter 8 with an examination of applications of reliability within engineering and medical fields. Presenting a highly relevant competency for graduates entering product research and development, or facilities operations sectors, this text includes many examples and end of chapter study questions to maximize student comprehension. Explains concepts of reliability and risk estimation techniques in the context of medicine and engineering; Elucidates the interplay between reliability and risk from design to operation phases; Uses real world examples from engineering structures and medical devices and protocols; Adopts a lucid yet rigorous presentation of reliability and risk calculations; Reinforces students understanding of concepts covered with end-of-chapter exercises

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**Título:** Reliability and risk analysis in engineering and medicine Chandrasekhar Putcha, Subhrajit Dutta, Sanjay K. Gupta

**Editorial:** Cham, Switzerland Springer 2021

**Descripción física:** 1 online resource

**Mención de serie:** Transactions on computational science and computational intelligence 2569-7080

**Bibliografía:** Includes bibliographical references and index

**Contenido:** Introduction -- Probability Theory -- Basic Reliability Methods -- Probabilistic Simulation Methods -- Reliability-Based Design Codes -- System Reliability -- Concepts of Risk Analysis -- Application of Reliability and Risk Principles to Medical Field

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**ISBN:** 9783030804541 electronic bk.) 3030804542 electronic bk.) 3030804534 9783030804534

**Materia:** Reliability (Engineering)- Mathematics Risk assessment Reliability (Engineering)- Mathematics Risk assessment

**Autores:** Dutta, Subhrajit, author Gupta, Sanjay K., author

**Enlace a formato físico adicional:** Original 3030804534 9783030804534 (OCoLC)1255465549

**Punto acceso adicional serie-Título:** Transactions on computational science and computational intelligence 2569-7080

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