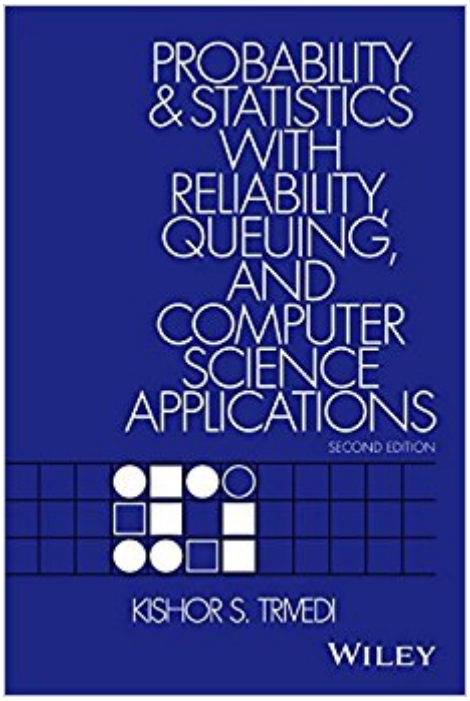
Probability And Statistics With Reliability, Queueing, And Computer Science Applications, 2nd Edition



Synopsis

An accessible introduction to probability, stochastic processes, and statistics for computer science and engineering applicationsThis updated and revised edition of the popular classic relates fundamental concepts in probability and statistics to the computer sciences and engineering. The author uses Markov chains and other statistical tools to illustrate processes in reliability of computer systems and networks, fault tolerance, and performance.This edition features an entirely new section on stochastic Petri netsÃ¢â ¬â •as well as new sections on system availability modeling, wireless system modeling, numerical solution techniques for Markov chains, and software reliability modeling, among other subjects. Extensive revisions take new developments in solution techniques and applications into account and bring this work totally up to date. It includes more than 200 worked examples and self-study exercises for each section.Probability and Statistics with Reliability, Queuing and Computer Science Applications, Second Edition offers a comprehensive introduction to probability, stochastic processes, and statistics for students of computer science, electrical and computer engineering, and applied mathematics. Its wealth of practical examples and up-to-date information makes it an excellent resource for practitioners as well. An Instructor's Manual presenting detailed solutions to all the problems in the book is available from the Wiley editorial department.

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Customer Reviews

"The book offers a comprehensive introduction to probability, stochastic processes, and statistics for

students of computer science, electrical and computer engineering, and applied mathematics. Its wealth of practical examples and up-to-date information makes it an excellent resource for practitioners as well." (Zentralblatt MATH, 2016) "I highly recommend this book for academics for use as a textbook and for researchers and professionals in the field as a useful reference." (Interfaces, September/ October 2004) "This introduction...uses Markov chains and other statistical tools to illustrate process in reliability of computer systems, fault tolerance, and performance." (SciTech Book News, Vol. 26, No. 2, June 2002) "...an excellent self-contained book.... I recommend the book to beginners and veterans in the field..." (Computer Journal, Vol.45, No.6, 2002) "This book is a tour de force of clear, virtually error-free exposition of probability as it is applied in a host of up-to-date contexts.... It will richly reward the...reader.... Read this book cover to cover. ItÃ¢â ¬â„¢s worth the effort." (Technometrics, Vol. 45, No. 1, February 2003)

An accessible introduction to probability, stochastic processes, and statistics for computer science and engineering applications This updated and revised edition of the popular classic relates fundamental concepts in probability and statistics to the computer sciences and engineering. The author uses Markov chains and other statistical tools to illustrate processes in reliability of computer systems and networks, fault tolerance, and performance. This edition features an entirely new section on stochastic Petri nets?as well as new sections on system availability modeling, wireless system modeling, numerical solution techniques for Markov chains, and software reliability modeling, among other subjects. Extensive revisions take new developments in solution techniques and applications into account and bring this work totally up to date. It includes more than 200 worked examples and self-study exercises for each section. Probability and Statistics with Reliability, Queuing and Computer Science Applications, Second Edition offers a comprehensive introduction to probability, stochastic processes, and statistics for students of computer science, electrical and computer engineering, and applied mathematics. Its wealth of practical examples and up-to-date information makes it an excellent resource for practitioners as well.

As someone who gives courses in Probability Theory for engineering and management students for many years, I must admit that this is one of the best textbooks on the subject. The theory is presented clearly with all necessary explanations and details. And the selection of examples and problems is really great!! I do not hestitate to recommend this text to anyone who teaches/studies Probability Theory for the purpose of applications.

I took this course from Kishor a long time ago, using the first edition. The only problem with the first edition was that the bindings wore out: as a result, I've had several copies (including copies of the Indian student's edition I got while it was out of print in this country.) I did not do particularly well in the class; none the less I use the things I learned from his book literally every working day.I'm about to order a copy of the second edition. Anyone else working with these things should do so also.

This book seems written more for people with experience in Probability and Statistics. The examples in the chapters were not explained very well for a novice. The text itself was helpful. This would be good as a side reference in a class, or it might benefit someone with more experience in the topic.

This book is very helpful in my work. Many things in engineering are discussed perhaps in only this book. Thanks, professor.

Very good book.

This book from Professor Kishor S. Trivedi is undoubtedly the main reference guide for every student, engineer, teacher, professor, researcher or any novice or veteran practitioner focused on the study of performance and reliability modeling.From Chapter 1 to Chapter 5, this book features the fundamental concepts in probability and statistics to the computer sciences, engineering, and applied mathematics, encompassing for instance the theory of random variables and conditional distributions. This could be the content for a one-semester course. From Chapter 6 to Chapter 11, the fantastic journey into the stochastic processes and performance and reliability modeling really starts. Topics such as Markov Chains and Networks of Queues are presented in a masterly way. This could be a subsequent one-semester course.It is worth mentioning that, besides a thorough and clear theory explanation of all topics, the reader is also provided with a number of examples from real life, what certainly turns to be an invaluable aid to fix the concepts much more easily. Besides, the text structure and organization yields a spontaneous logical interdependence. What is needed in the current chapter is what has just been discussed in the exact previous chapter.I used this book during my master as well as PhD programs. Now, as a professor and researcher, this is my main reference and highly recommend it to all of my students. To me this book was and will continue to be the real 'gold medal' of the study of performance and reliability modeling for ever and ever. Thanks Professor Kishor S. Trivedi for this masterpiece.

Second edition of "Probability and Statistics with Reliability, Queuing and Computer Science Applications" by Kishor S. Trivedi is a highly recommendable book. The concepts provided for probability theory and stochastic processes are excellent for students of communication, networking and computer science. It provides a good understanding of stochastic processes and Markov chains which are very relevant for students and teachers especially working in the speech processing area. I found the book and its contents very relevant and the examples provided could be very well related to networking and computer science, a unique aspect of this book. The students grasped the concepts well and found the problems very challenging and helpful in building up their concepts and knowledge. I had previously taught a number of other books and introduced this book last year at my University, I feel very satisfied and content with the decision of choosing this book for my students. All eleven chapters are equipped with excellent examples, problems and exercises broadening the reader’s mind. The first 5 chapters constitute the probability theory while the rest of the chapters emphasize on stochastic processes very relevant to students of advanced networking and speech processing. Other books on probability and statistics usually lack an important aspect specially when used for computer science and telecommunication students. The examples and exercises not only make students learn and understand and probability and statistics concepts but also create its relevance to their very fields, therefore the book is an extremely precious gift from Prof. Trivedi specially for the students of computer science and telecommunication. An inexpensive Asian edition (paperback), a solution manual and powerpoint slides of each chapter are now available.Prof. Trivedi has done a tremendous job in introducing topics of advanced research not found before; the students gained knowledge about the modern research environment and felt confident too. This book is not only recommended for beginners but also for professionals and engineers.

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