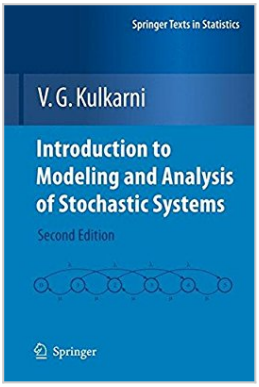


# Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics)

*By V. G. Kulkarni*



**Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics)** By V. G. Kulkarni

This book provides a self-contained review of all the relevant topics in probability theory. A software package called MAXIM, which runs on MATLAB, is made available for downloading. Vidyadhar G. Kulkarni is Professor of Operations Research at the University of North Carolina at Chapel Hill.

# Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics)

*By V. G. Kulkarni*

**Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics)** By V. G. Kulkarni

This book provides a self-contained review of all the relevant topics in probability theory. A software package called MAXIM, which runs on MATLAB, is made available for downloading. Vidyadhar G. Kulkarni is Professor of Operations Research at the University of North Carolina at Chapel Hill.

**Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics) By V. G. Kulkarni Bibliography**

- Sales Rank: #1731066 in Books
- Brand: Brand: Springer
- Published on: 2010-11-10
- Original language: English
- Number of items: 1
- Dimensions: 9.21" h x .75" w x 6.14" l, 1.40 pounds
- Binding: Hardcover
- 313 pages

## Editorial Review

Review

From the reviews of the second edition:

“The author has added a new chapter on Poisson processes and another one on Brownian motion. The discussion is kept on an elementary level and does not require any knowledge from measure theory or advanced calculus. … the text is suitable for an undergraduate course on probabilistic modeling for students from physics, engineering, operations research, computer science, business administration or some related field that needs advanced modeling techniques.” (H. M. Mai, Zentralblatt MATH, Vol. 1222, 2011)

“Suitable for undergraduates in Mathematics, Statistics, Operations Research, Computer Science, Business Administration, Public Policy, etc. This is a very clear and readable text on Markov chains, Poisson processes, continuous time Markov chains, renewal processes, and queuing processes. … The treatment is very clear, intuitive as well as rigorous, without being pedantic, and full of interesting examples and case studies. … The book should be fun to teach from and learn from.” (Jayanta K. Ghosh, International Statistical Review, Vol. 80 (3), 2012)

From the Back Cover
This is an introductory-level text on stochastic modeling. It is suited for undergraduate students in engineering, operations research, statistics, mathematics, actuarial science, business management, computer science, and public policy. It employs a large number of examples to teach the students to use stochastic models of real-life systems to predict their performance, and use this analysis to design better systems. The book is devoted to the study of important classes of stochastic processes: discrete and continuous time Markov processes, Poisson processes, renewal and regenerative processes, semi-Markov processes, queueing models, and diffusion processes. The book systematically studies the short-term and the long-term behavior, cost/reward models, and first passage times. All the material is illustrated with many examples, and case studies. The book provides a concise review of probability in the appendix. The book emphasizes numerical answers to the problems. A collection of MATLAB programs to accompany the this book can be downloaded from http://www.unc.edu/~vkulkarn/Maxim/maxim.zip. A graphical user interface to access the above files can be downloaded from http://www.unc.edu/~vkulkarn/Maxim/maximgui.zip . The second edition incorporates several changes. First its title reflects the changes in content: the chapters on design and control have been removed. The book now contains several case studies that teach the design principles. Two new chapters have been added. The new chapter on Poisson processes gives more attention to this important class of stochastic processes than the first edition did. The new chapter on Brownian motion reflects its increasing importance as an appropriate model for a variety of real-life situations, including finance. V. G. Kulkarni is Professor in the Department of Statistics and Operations Research in the University of North Carolina, Chapel Hill. He has authored a graduate-level text Modeling and Analysis of Stochastic Systems and dozens of articles on stochastic models of queues, computer and communications systems, and production and supply chain systems. He holds a patent on traffic management in telecommunication networks, and has served on the editorial boards of Operations Research Letters, Stochastic Models, and Queueing Systems and Their Applications.

About the Author

V. G. Kulkarni is Professor in the Department of Statistics and Operations Research in the University of North Carolina, Chapel Hill. He has authored a graduate-level text Modeling and Analysis of Stochastic Systems and dozens of articles on stochastic models of queues, computer and communications systems, and production and supply chain systems. He holds a patent on traffic management in telecommunication networks, and has served on the editorial boards of Operations Research Letters, Stochastic Models, and Queueing Systems and Their Applications.

## Users Review

**From reader reviews:**

**Cathy Spearman:**

As people who live in the modest era should be update about what going on or information even knowledge to make these keep up with the era that is always change and move forward. Some of you maybe will update themselves by looking at books. It is a good choice to suit your needs but the problems coming to you is you don't know which you should start with. This Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics) is our recommendation so you keep up with the world. Why, since this book serves what you want and wish in this era.

**Jennifer Vickery:**

The actual book Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics) has a lot of information on it. So when you check out this book you can get a lot of advantage. The book was authored by the very famous author. The author makes some research ahead of write this book. That book very easy to read you can get the point easily after reading this article book.

**Dorothy Penland:**

Many people spending their time period by playing outside along with friends, fun activity together with family or just watching TV all day every day. You can have new activity to invest your whole day by examining a book. Ugh, do you think reading a book can actually hard because you have to accept the book everywhere? It all right you can have the e-book, delivering everywhere you want in your Cell phone. Like Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics) which is getting the e-book version. So , why not try out this book? Let's find.

**Arthur Faust:**

Within this era which is the greater man or who has ability in doing something more are more important than other. Do you want to become one of it? It is just simple approach to have that. What you have to do is just spending your time not much but quite enough to enjoy a look at some books. One of the books in the top listing in your reading list will be Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics). This book that is certainly qualified as The Hungry Slopes can get you closer in growing to be precious person. By looking way up and review this reserve you can get many advantages.

# Read Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics) By V. G. Kulkarni for online ebook

Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics) By V. G. Kulkarni Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics) By V. G. Kulkarni books to read online.

## Online Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics) By V. G. Kulkarni ebook PDF download

### Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics) By V. G. Kulkarni Doc

**Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics) By V. G. Kulkarni Mobipocket**

**Introduction to Modeling and Analysis of Stochastic Systems (Springer Texts in Statistics) By V. G. Kulkarni EPub**