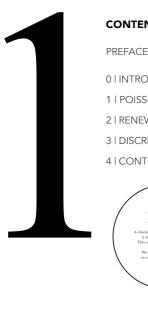


Yellow Series | Science & Technology Series | #1



CONTENTS

0 | INTRODUCTION TO STOCHASTIC PROCESSES

- **1 | POISSON PROCESSES**
- 2 | RENEWAL PROCESSES

NOTE

- **3 | DISCRETE-TIME MARKOV CHAINS**
- 4 | CONTINUOUS-TIME MARKOV CHAINS



This series is dedicated to providing advanced textbooks in the fields of Engineering, Science and Mathematics, ensuring both high scientific rigour and pedagogical excellence. All submitted textbooks undergo a meticulous evaluation process by specialists of recognized competence in the respective fields.

This rigorous assessment is designed to guarantee exceptional quality and to serve faithfully academic and engaged readers everywhere. We actively invite contributions from the academic community as well as specialists.

STOCHASTIC PROCESSES. THEORY, EXAMPLES & EXERCISES MANUEL CABRAL MORAIS

€25,00 | 516 PP. | 23,5x16,9 | 2024 | ISBN 978-989-9208-00-1

Stochastic Processes: Theory, Examples & Exercises is an introductory textbook to a central and active field of Mathematics with applications in Engineering, Economics, and Management Science.

It starts with an overview of the field and a detailed account of the concept of stochastic process. Following this, the text delves into Poisson processes, renewal processes, and Markov chains in discrete and continuous time.

The author aims to explain the theory very clearly and show how it can be applied to solve concrete problems.

A critical and unique feature of this well-written book is the structure of its exercises. They are embedded in the main text and have spaces to fill. This feature helps the students to stop and reflect on what they have just read and encourages them to become active during the educational process.

This "workbook" is mathematically accurate yet avoids unnecessary mathematical sophistication, making it suitable for undergraduate and graduate students in Mathematics, Computer Science, Engineering, and Management.

Antonis Economou

Professor, Mathematics National and Kapodistrian University of Athens | Greece

MANUEL CABRAL MORAIS has a degree in Applied Mathematics and Computation, a Master's in Applied Mathematics, and a Ph.D. in Mathematics from Instituto Superior Técnico, University of Lisbon. Currently, he is Associate Professor with Habilitation at the Mathematics Department at IST. Manuel Cabral Morais taught more than a dozen subjects throughout his teaching career, including Probability and Statistics; Complements on Probability and Statistics; Introduction to Stochastic Processes; Reliability and Quality Control; and Probability Theory. He has published more than eighty articles on statistical process control, stochastic ordering, and first passage times in scientific journals, books, and proceedings of national and international conferences.



