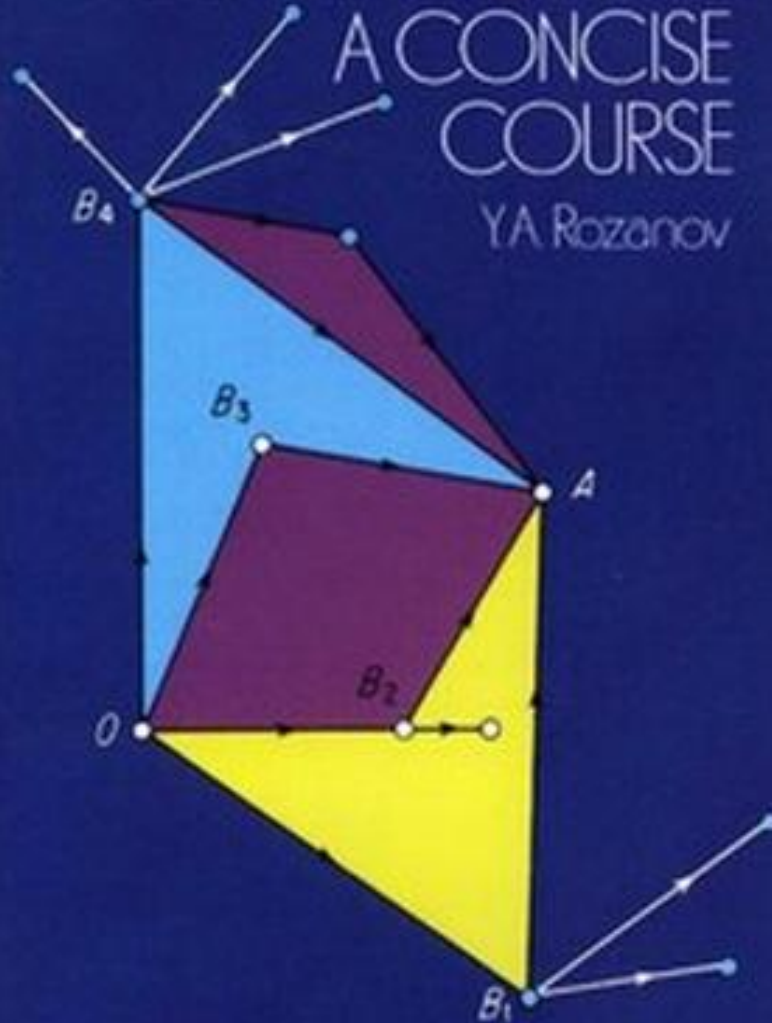


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PROBABILITY THEORY: A CONCISE COURSE

Y.A. Rozanov



Revised English Edition Translated & Edited by Richard A. Silverman

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EDITOR'S PREFACE

This book is a concise introduction to modern probability theory and certain of its ramifications. By deliberate succinctness of style and judicious selection of topics, it manages to be both fast-moving and self-contained.

The present edition differs from the Russian original (Moscow, 1968) in several respects:

1. It has been heavily restyled with the addition of some new material. Here I have drawn from my own background in probability theory, information theory, etc.

2. Each of the eight chapters and four appendices has been equipped with relevant problems, many accompanied by hints and answers. There are 150 of these problems, in large measure drawn from the excellent collection edited by A. A. Sveshnikov (Moscow, 1965).

3. At the end of the book I have added a brief Bibliography, containing suggestions for collateral and supplementary reading.

R. A. S.

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PROBABILITY THEORY: A CONCISE COURSE

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This book, a concise introduction to modern probability theory and certain of its ramifications, deals with a subject indispensable to natural scientists and mathematicians alike. Here the reader, with some knowledge of mathematics, will find an excellent treatment of the elements of probability together with numerous applications. Professor Y. A. Rozanov, an internationally known mathematician whose work in probability theory and stochastic processes has received wide acclaim, combines succinctness of style with a judicious selection of topics. His book is highly readable, fast-moving and self-contained.

The author begins with basic concepts and moves on to combination of events, dependent events and random variables. He then covers Bernoulli trials and the De Moivre-Laplace theorem, which involve three important probability distributions (binomial, Poisson and normal or Gaussian). The last three chapters are devoted to limit theorems, a detailed treatment of Markov chains, and continuous Markov processes. Also included are appendices on information theory, game theory, branching processes, and problems of optimal control. Each of the eight chapters and four appendices has been equipped with numerous relevant problems (150 of them!), many accompanied by hints and answers.

This volume is another in the popular series of fine translations from the Russian done by Richard A. Silverman. Dr. Silverman, a former member of the Courant Institute of Mathematical Sciences of New York University and the Lincoln Laboratory of the Massachusetts Institute of Technology, is himself the author of numerous papers on applied probability theory. He has heavily revised the English edition and added new material. The clear exposition, the ample illustrations and problems, the cross-references, index and bibliography make this book useful for self-study or the classroom.

Unabridged and slightly corrected republication of revised English edition originally entitled *Introductory Probability Theory* (1969). 4 appendices. Bibliography. Index. ix + 148pp. 5 $\frac{5}{8}$ x 8 $\frac{1}{4}$.
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