BRANCHING PROCESSES

K. B. Athreya
P. E. Ney

A unified treatment of the limit theory of branching processes, this volume focuses on basic techniques. Courses in analysis and probability are prerequisites for this text, which is appropriate for graduate and advanced undergraduate students.

The authors follow a natural classification of branching processes according to criticality condition, time parameter, the single or multi-type particle cases, and the Markovian or non-Markovian character of the process. They begin by developing the basic Galton-Watson process in significant detail in the opening chapters. The subsequent treatment of continuous time cases (both Markov and age-dependent) reduces analogous questions to their Galton-Watson counterparts whenever possible. Concluding chapters focus on multi-type branching processes and special processes.

A helpful selection of complements and problems appears at the end of each chapter. Essentially self-contained, this treatment enables students to engage in an independent pursuit of the literature and their own research in the subject of branching processes.

Dover (2004) unabridged republication of the edition published by Springer Verlag, Berlin, 1972. Bibliography. List of Symbols. Indexes. xii+287pp. 5⅜ x 8½. Paperbound.

ALSO AVAILABLE

THE THEORY OF BRANCHING PROCESSES, Theodore E. Harris. xiv+230pp. 5⅜ x 8½. 49508-6

For current price information write to Dover Publications, or log on to **www.doverpublications.com**—and see every Dover book in print.

Free Dover Mathematics and Science Catalog (59065-8) available upon request.

ISBN 0-486-43474-5

$17.95 IN USA
$26.95 IN CANADA

Cover design by John M. Alves

Chapter I. The Galton-Watson Process

Chapter II. Potential Theory

Chapter III. One Dimensional Continuous Time Markov Branching Processes

Chapter IV. Age-Dependent Processes

Chapter V. Multi-Type Branching Processes

Chapter VI. Special Processes