

Preface

This is a continuation of the volume on probability theory and likewise covers the contents of courses given at the Courant Institute. This volume deals with certain elementary continuous-time processes. We start with a description of the Poisson process and related processes with independent increments. After a brief look at Markov processes with a finite number of jumps we proceed to study Brownian motion. We then go on to develop stochastic integrals and Itô's theory in the context of one-dimensional diffusion processes. It ends with a brief survey of the general theory of Markov processes.