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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Continuous-Time and Discrete-State Branching Processes -- Applications of Single-Type Branching Processes -- Applications of Multi-Type Branching Processes -- Continuous-Time and Continuous-State Branching Processes.-MatLaB Programs.
Sommario/riassunto	This monograph provides a summary of the basic theory of branching processes for single-type and multi-type processes. Classic examples of population and epidemic models illustrate the probability of population or epidemic extinction obtained from the theory of branching processes. The first chapter develops the branching process theory, while in the second chapter two applications to population and epidemic processes of single-type branching process theory are explored. The last two chapters present multi-type branching process applications to epidemic models, and then continuous-time and continuous-state branching processes with applications. In addition, several MATLAB programs for simulating stochastic sample paths are provided in an Appendix. These notes originated as part of a lecture series on Stochastics in Biological Systems at the Mathematical

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