

1. Record Nr.	UNINA9911019810603321
Autore	Charalambides Ch. A
Titolo	Combinatorial methods in discrete distributions // Charalambos A. Charalambides
Pubbl/distr/stampa	Hoboken, N.J., : Wiley-Interscience, c2005
ISBN	9786610277032 9781280277030 1280277033 9780470323762 0470323760 9780471733188 0471733180 9780471733171 0471733172
Descrizione fisica	1 online resource (440 p.)
Collana	Wiley series in probability and statistics
Disciplina	519.2/4
Soggetti	Combinatorial analysis Distribution (Probability theory)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. 383-400) and indexes.
Nota di contenuto	COMBINATORIAL METHODS IN DISCRETE DISTRIBUTIONS; Contents; Preface; 1 BASIC COMBINATORICS AND PROBABILITY; 1.1 Basic counting principles; 1.2 Recurrence relations; 1.3 Finite differences; 1.4 Discrete probability; 1.5 Inclusion and exclusion principle; 1.6 Distributions and moments of random variables; 1.7 Generating functions; 1.8 Reference notes; 1.9 Exercises and complements; 2 STIRLING NUMBERS; 2.1 Introduction; 2.2 Definitions and generating functions; 2.3 Explicit expressions and recurrence relations; 2.4 Generalized factorial coefficients 2.5 Enumeration of partitions by subsets and permutations by cycles 2.6 Reference notes; 2.7 Exercises and complements; 3 GENERALIZED STIRLING AND LAH NUMBERS; 3.1 Introduction; 3.2 Associated Stirling numbers; 3.3 Associated generalized factorial coefficients; 3.4 Universal generating functions; 3.5 Generalized Stirling numbers; 3.6

Generalized Lah numbers; 3.7 Reference notes; 3.8 Exercises and complements; 4 OCCUPANCY DISTRIBUTIONS; 4.1 Introduction; 4.2 A random occupancy model; 4.3 Occupancy distributions; 4.4 Particular occupancy distributions; 4.4.1 Classical occupancy distribution 4.4.2 Restricted occupancy distribution 4.4.3 Pseudo-contagious occupancy distribution; 4.4.4 Restricted Bose-Einstein occupancy distribution; 4.5 Statistical applications; 4.6 A general random occupancy model; 4.7 Reference notes; 4.8 Exercises and complements; 5 SEQUENTIAL OCCUPANCY DISTRIBUTIONS; 5.1 Introduction; 5.2 A sequential random occupancy model; 5.3 Sequential occupancy distributions; 5.4 Particular sequential occupancy distributions; 5.4.1 Sequential classical occupancy distributions; 5.4.2 Sequential restricted occupancy distributions 5.4.3 Sequential pseudo-contagious occupancy distributions 5.5 Statistical applications; 5.6 A reduced sequential occupancy model; 5.7 Reference notes; 5.8 Exercises and complements; 6 CONVOLUTIONS OF TRUNCATED DISTRIBUTIONS; 6.1 Introduction; 6.2 Zero truncated discrete distributions; 6.3 Some particular convolutions; 6.3.1 Zero truncated Poisson distribution; 6.3.2 Logarithmic distribution; 6.3.3 Zero truncated binomial distribution; 6.3.4 Zero truncated negative binomial distribution; 6.4 General truncated discrete distributions; 6.5 Statistical applications 6.5.1 Zero truncated power series distribution 6.5.2 Left truncated power series distribution; 6.6 Reference notes; 6.7 Exercises and complements; 7 COMPOUND AND MIXTURE DISTRIBUTIONS; 7.1 Introduction; 7.2 Compound discrete distributions; 7.3 Mixture discrete distributions; 7.4 Particular compounding distributions; 7.4.1 Poisson compounding distribution; 7.4.2 Binomial compounding distribution; 7.4.3 Negative binomial compounding distribution; 7.4.4 Logarithmic compounding distribution; 7.5 Compound Poisson distributions; 7.5.1 Hermite distribution; 7.5.2 Generalized Hermite distribution 7.5.3 Polya-Aeppli distribution

Sommario/riassunto

A unique approach illustrating discrete distribution theory through combinatorial methods This book provides a unique approach by presenting combinatorial methods in tandem with discrete distribution theory. This method, particular to discreteness, allows readers to gain a deeper understanding of theory by using applications to solve problems. The author makes extensive use of the reduction approach to conditional distributions of independent random occupancy numbers, and provides excellent studies of occupancy and sequential occupancy distributions, convolutions of truncated discrete distri