The probability of successful allocation of particles in cells (the general case)

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Abstract

© 2015, Springer Science+Business Media New York. Let pnN be the probability of successful allocation of n groups of particles in N cells with the following assumptions: (a) each group contains m particles and has allocation as a general allocation scheme; (b) each cell contains at most r particles from the same group; (c) events connected with different groups are independent. We obtain an asymptotically exact bound of pnN as n,N →∞ such that n/N is bounded. Applications to problems in error-correcting coding are considered.