

**DISTRIBUTION OF THE NUMBER OF SUCCESSES IN A
SEQUENCE OF DEPENDENT TRIALS:
AN ALTERNATIVE APPROACH**

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ABSTRACT

This paper presents an alternative approach to the study of the distribution of the number of successes in a sequence of dependent trials based on the theory of delayed renewal process. Explicit expressions for the probability mass function as well as those for the moments of the number of successes are derived. Expressions for the forward and backwards recurrence probabilities are also derived. The computed probabilities of the number of successes are compared with those presented by Gabriel (1959). The results based on the theory of delayed renewal process are more explicit and are based on sound theoretical framework.