

CHARACTERIZATION OF THE COMPOUND POISSON DISTRIBUTION

Evdokia Xekalaki & J. Panaretos

Graduate School of Industrial Studies, Piraeus, Greece

ABSTRACT

Compound Poisson distributions (CPD's) have provided solutions for many statistical problems where the simple Poisson model has not been found adequate to describe. An interesting property of the CPD is revealed in the present paper in the form of two characterizations. The basic assumption is that the conditional distribution of two random variables (r.v.'s) has a compound binomial form (CBD). The results obtained are examined in relation to a problem of traffic accidents. Other possible applications are mentioned.
