

CHANCE CONSTRAINED PROGRAMMING (CCP) WITH GENERALIZED EXPONENTIAL (GE) DISTRIBUTED RANDOM PARAMETERS

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ABSTRACT

The three-parameter generalized exponential distribution $GE(\lambda, \mu, \alpha)$ is considered more flexible and applicable than three-parameter Gamma and Weibull distributions, where their Shape Parameter (α) may be not Integer.

The purpose of this paper is to transform CCP linear model to an equivalent deterministic linear programming model also, in turn can be solved by simplex method. Two cases are considered:

- (i) When some right hand side parameter (\tilde{b}_i) have $GE(\lambda_i, \mu_i, \alpha_i)$ or
- (ii) When one coefficient parameter (\tilde{a}_{ij}) have $GE(\lambda_{ij}, \mu_{ij}, \alpha_{ij})$.

Finally a numerical example is presented to illustrate the transformation and solution.