AN ANALYTIC ITERATIVE GOAL PROGRAMMING
(AIGP) ALGORITHM FOR SMALL & LARGE SCALE PROBLEMS

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ABSTRACT

In this paper (AIGP) algorithm is presented to solve and analyze small and large scale linear goal programming problems.

It is considered a modification of the "Arthur & Ravindron" algorithm such that the goals related with any priority level t (i.e. P_t), $t \geqslant 1$ are tested before adding them to prority level t+1. This test leads to:

(i)   decreasing the number of iterations,
(ii) measuring the effect of each goal i, $i \in P_t$ on the achievement of priority level (t+1), in turn, on the achievement function.

Key word: multi-objective programming , goal programming, decomposition techinque, partitioning techinque, iterative goal programming, augmented problem ; and decomposition (D-W) method.