ABSTRACT

In this study we consider some aspects of linear fractional functionals programming problems. In spite of the research which has been done on the subject there are areas, for which generalizations can be made; results can be extended; algorithims can be improved; and new techniques can be developed. As a result, with a general review of the optimization theory surrounding the solution of the linear fractional functionals programming problem we focus our attention on the aspect of parametric programming.

Our problem considers changes in the coefficients of the objective function of the linear fractional functionals programming problem, and our main results concern the following types of problems

(a) The general parametric linear fractional functionals programming problem with a linear parameter both in the numerator as well as in the denominator of the objective function.

(b) The parametric linear fractional functionals programming problem, for which the parameter is in the form of a quadratic expression in the numerator as well as in the denominator of the objective function.

(c) A parametric linear fractional functionals programming problem when linear parameters appearing in the objective function are different.

Our main findings are presented in chapter III of the thesis.