

# REDUCING FEASIBLE DECISION SPACE FOR SELECTING AN ALTERNATIVE IN MUTIATTRIBUTE DECISION

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## ABSTRACT

We present a method of assessing parameter value information that is imprecise, for choosing a single alternative in multiattribute-decision problem. A decision maker's imprecise information is ordinal and cardinal rankings, interval descriptions, etc., which can be expressed as a set of linear inequalities. A model is presented for establishing dominance between alternatives, where the imprecise information becomes the set of constraints in the model. For reducing the feasible space, we propose a new form of imprecise information, since the smaller the feasible space, the greater the likelihood of determining dominance. We illustrate that the new constraint is able to increase the likelihood of establishing dominance.

*(Session: Decision Analysis, or Mathematical Programming.)*