



Definition

An optimization problem is (X, f) is an *inequality constrained space optimization problem* if $X \subset \mathbf{R}^n$, $f : \mathbf{R}^n \rightarrow \mathbf{R}$, and there exists $g : \mathbf{R}^n \rightarrow \mathbf{R}^n$ so that

$$X = \{x \in \mathbf{R}^n\} g(x) \leq 0$$

