

Definition (Feasible set of a design problem)

We define the *feasible set* $\mathbf{K}_{\mathbf{d}}$ of a design problem

$$\mathbf{d} : \mathbf{F}^{\text{op}} \times \mathbf{R} \rightarrow_{\text{Pos}} \mathbf{Bool}$$

as the subset of $\mathbf{F}^{\text{op}} \times \mathbf{R}$ for which \mathbf{d} is the *indicator function*, that is

$$\mathbf{K}_{\mathbf{d}} = \{\langle f^*, r \rangle \in \mathbf{F}^{\text{op}} \times \mathbf{R} \mid \mathbf{d}(f^*, r) = \top\}.$$