

Combinatorial Optimization Problems

$$\begin{aligned} \text{(COP)} \quad & \text{Max } c^T x \\ & Ax \leq b \\ & 0 \leq x \leq e \\ & x \in \{0,1\}^n \end{aligned}$$

$A \in \mathbb{Q}^{m \times n}$, $b \in \mathbb{Q}^m$, $c \in \mathbb{Q}^n$ are given.

$e := \begin{pmatrix} 1 \\ \vdots \\ 1 \end{pmatrix}$, $e_j := j^{\text{th}}$ unit vector.