

$$\begin{aligned}
& \max \sum_{e \in E'} w'_e y_e \quad \text{s.t.} \quad \sum_{e \in \delta(i)} y_e \leq 1, \quad \forall i \in V, \quad y_e \in [0, 1], \quad \forall e \in E' \\
& \sum_{e \in \delta(i_C)} y_e \leq |C| - 1, \quad \sum_{j \in V(C)} (-1)^{d_C(j, e)} y_{i_C, j} \in [0, 2], \quad \forall e \in E(C), \forall C \in \mathcal{C}
\end{aligned}$$