n
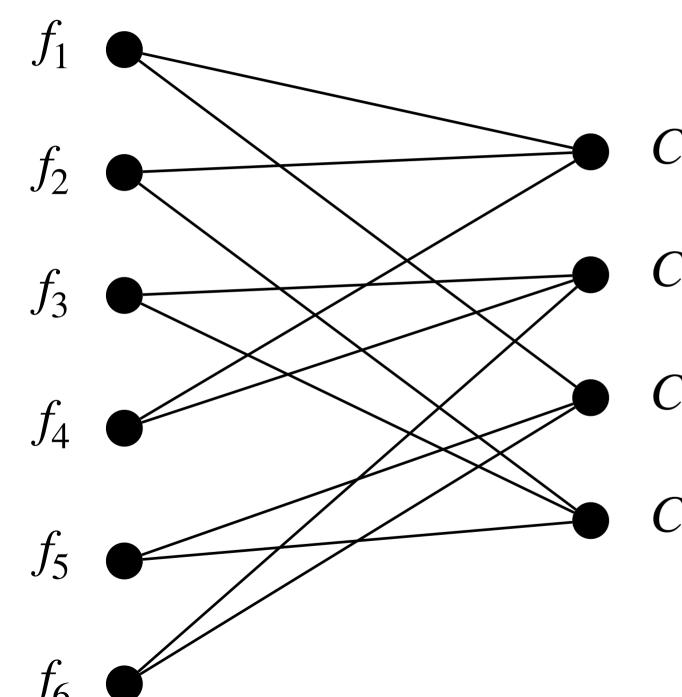
m

$C_1 : f_1 + f_2 + f_4 = 0$

$C_2 : f_3 + f_4 + f_6 = 0$

$C_3 : f_1 + f_5 + f_6 = 0$

$C_4 : f_2 + f_3 + f_5 = 0$

$$\longleftrightarrow \quad \begin{pmatrix} 1 & 1 & 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 1 & 0 & 1 \\ 1 & 0 & 0 & 0 & 1 & 1 \\ 0 & 1 & 1 & 0 & 1 & 0 \end{pmatrix} \begin{pmatrix} f_1 \\ f_2 \\ f_3 \\ f_4 \\ f_5 \\ f_6 \end{pmatrix} = \begin{pmatrix} 0 \\ 0 \\ 0 \\ 0 \end{pmatrix}$$