

B
$M=\left[\begin{array}{rrrrrr}1 & 1 & 1 & 0 & 1 & -2 \\ 1 & -1 & 1 & -1 & 1 & 1 \\ 1 & 1 & 0 & -1 & -2 & 1 \\ 1 & -1 & -1 & 0 & 1 & -2 \\ 1 & 1 & -1 & 1 & 1 & 1 \\ 1 & -1 & 0 & 1 & -2 & 1\end{array}\right]$

- Columns of $M$ are formed by $K, \mathcal{C}, B_{A}, B_{B}, R_{A}, R_{B}$
- $\operatorname{det}(M) \neq 0$ implies that $K, \mathcal{C}, B_{A}, B_{B}, R_{A}, R_{B}$ form a basis for $\mathbb{R}^{6}$
- If $\overrightarrow{\mathbf{p}} \in \mathbb{R}^{6}$ is a profile with standard coordinates, then $M^{-1} \overrightarrow{\mathbf{p}}$ gives the decomposition in terms of $K, \mathcal{C}, B_{A}, B_{B}, R_{A}, R_{B}$

