

2.1

$$\begin{pmatrix} L_{00} & \emptyset & \emptyset \\ \lambda_{10eL}^T & 1 & v_{12eF}^T \\ \emptyset & \emptyset & U_{22} \end{pmatrix} \begin{pmatrix} D_{00} & \emptyset & \emptyset \\ \emptyset & \emptyset & \emptyset \\ \emptyset & \emptyset & B_{22} \end{pmatrix} \begin{pmatrix} L_{00} & \emptyset & \emptyset \\ \lambda_{10eL}^T & 1 & v_{12eF}^T \\ \emptyset & \emptyset & U_{22} \end{pmatrix}^T \begin{pmatrix} x_0 \\ x_1 \\ x_2 \end{pmatrix} = \begin{pmatrix} 0 \\ 0 \\ 0 \end{pmatrix}$$

$$\begin{pmatrix} L_{00}^T & \lambda_{10eL} & \emptyset \\ \emptyset & 1 & \emptyset \\ \emptyset & v_{12eF} & U_{22} \end{pmatrix} \begin{pmatrix} x_0 \\ x_1 \\ x_2 \end{pmatrix} = \begin{pmatrix} 0 \\ 1 \\ 0 \end{pmatrix}$$

$x_1 = 1$

$$L_{00}^T x_0 + x_1 \lambda_{10eL} = \emptyset$$

$$L_{00}^T \quad l_{210}$$

$$x_1 = 1$$

$$x_{02} = \begin{pmatrix} \lambda_{10} \\ -\lambda_{10} \end{pmatrix}$$

$$v_{12eF} x_1 + U_{22} x_2 = 0$$

$$\begin{pmatrix} L_{00} & \emptyset \\ \lambda_{10}^T & \lambda_{10} \end{pmatrix} \begin{pmatrix} \lambda_{10} \\ -\lambda_{10} \end{pmatrix} = \begin{pmatrix} 0 \\ 0 \end{pmatrix}$$

$$-\lambda_{10eL} = L_{00}^T x_0$$

$$\begin{pmatrix} \lambda_{10} \\ -\lambda_{10} \end{pmatrix} = \begin{pmatrix} \lambda_{10} \\ -\lambda_{10} \end{pmatrix}$$

$-\lambda_{10}$

$$v_{12eF} = U_{22}^T x_2$$

$$x_{22} = \begin{pmatrix} -v_{12} \\ 0 \\ 0 \end{pmatrix}$$

$$x_{02} = \begin{pmatrix} \lambda_{10} \\ 0 \\ -\lambda_{10} \end{pmatrix}$$

$$\beta_{12} = v_{12}$$

$$\beta_{10} = \lambda_{10}$$

$$\begin{pmatrix} v_{12} \\ 0 \\ 0 \end{pmatrix} = \begin{pmatrix} v_{12} \\ 0 \\ 0 \end{pmatrix}$$

$$l_{12}(0)$$

$$u_{11} = (0)$$

$$x_{22} = \begin{pmatrix} -v_{12} \\ 0 \\ 0 \end{pmatrix}$$

Cartan $\mathcal{O}(n)$