

$$\det \begin{pmatrix} b_{11} & \dots & b_{n1} \\ b_{12} & \dots & b_{n2} \\ \vdots & & \vdots \\ b_{1n-k} & \dots & b_{nn-k} \\ c_{11} & \dots & c_{n1} \\ \vdots & & \vdots \\ c_{1k} & \dots & c_{nk} \end{pmatrix} \neq 0$$

$$\begin{array}{ccc} M & \longrightarrow & G(n-k, V) \longrightarrow G(k, V^*) \\ \downarrow & & \downarrow \\ x & \longmapsto & \left\{ \begin{array}{l} \sigma = x_1 \sigma_1 + \dots + x_n \sigma_n \\ a_{xi}(x) x_i = 0 \end{array} \right\} \longmapsto \begin{array}{l} \tau_1^* = a_{11}(x) \sigma_1^* + \dots + a_{n1}(x) \sigma_n^* \\ \vdots \\ \tau_k^* = a_{1k}(x) \sigma_1^* + \dots + a_{nk}(x) \sigma_n^* \end{array} \end{array}$$

Here $a(x) \perp X$ where $X = (x_1, \dots, x_n)$
 s.t. $\sigma = x_1 \sigma_1 + \dots + x_n \sigma_n \in G(n-k, V)$.

Thus with respect to $\{\sigma_1^*, \dots, \sigma_n^*\}$, we may represent \bar{i}_V as follows

$$L_V(x)$$

$$= \left\langle \begin{pmatrix} a_{11}(x), & \dots & a_{1n}(x) \\ a_{21}(x), & \dots & a_{2n}(x) \\ \vdots & & \vdots \\ a_{k1}(x), & \dots & a_{kn}(x) \end{pmatrix} \right\rangle \in G(k, V^*)$$

\Rightarrow For $G(2, 4)$,

$$\bar{i}_V(x) = \left\langle \begin{pmatrix} a_{11}(x), & a_{12}(x), & a_{13}(x), & a_{14}(x) \\ a_{21}(x), & a_{22}(x), & a_{23}(x), & a_{24}(x) \end{pmatrix} \right\rangle$$