

$$\Rightarrow \Lambda = \begin{pmatrix} 1 & 0 & a' & 0 & 0 \\ 0 & 1 & b' & 0 & 0 \\ 0 & 0 & c & 1 & 0 \\ 0 & 0 & d & 0 & 1 \end{pmatrix} \in \sigma_{1,1}(V).$$

$$\Rightarrow \dim(\Lambda \cap V_1) \geq 1 \quad \dim(\Lambda \cap V_2) \geq 2 \quad \dim(\Lambda \cap V_4) \geq 3 \\ \dim(\Lambda \cap V_5) \geq 4.$$

Since $V_1 = \{e_5\} \subset \mathbb{C}^5$, $V_2 = \{e_4, e_5\} \subset \mathbb{C}^5$, as above, $c = d = 0$. \Rightarrow

$$\Lambda = \begin{pmatrix} 1 & 0 & * & 0 & 0 \\ 0 & 1 & * & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 1 \end{pmatrix}$$

$$\Rightarrow \Lambda - L(x) \in T_{L(x)} \sigma_{1,1}(V), \text{ while } L(x') - L(x) \\ = \begin{pmatrix} * \\ * \\ * \\ 0 \\ 0 \end{pmatrix} \notin T_{L(x)} \sigma_{1,1}(V)$$

This implies that $L_*(T_x(D_4 - D_3)) \notin T_{L(x)} \sigma_{1,1}(V)$, and so $T_{L(x)} \sigma_{1,1} + L_*(T_x(D_4 - D_3)) \supset T_{L(x)} \sigma_1(V)$.

In the same way, we can show that

$$L_*(T_x M) \notin T_{L(x)} \sigma_1(V). \text{ and so}$$

$$L_*(T_x M) + T_{L(x)} \sigma_1(V) = T_{L(x)} G(4,5).$$

Point: codimension $_c$ of $\sigma_{\underbrace{1,1,\dots,1}_{r-1}}(V)$ is 1 in $\sigma_{\underbrace{1,1,\dots,1}_{r-1}}(V)$,

and we can find a vector in $L_*(T_x M)$ which does