

$X^*: \Gamma TE$ in fact ΓVE

$X \nearrow$
 $g(t)$
 $g(0) = e$
 $g'(0) = X$

$H_u E$
 $= \text{lift } T_u M$
 $X_{u^*}^* \nearrow u_* g(t)$

$T_u M$

$h \cdot g(t) \cdot h^{-1} = (\text{Ad } h) g(t)$
 $g(t)$
 $g(0) = e$ $(\text{Ad } h) g(0) = e$

$\begin{aligned} & \nearrow X \\ & g(t) \\ & g(0) = e \\ & g'(0) = X \end{aligned}$

$\begin{aligned} & H_u E \\ & = \text{iff } T_u M \\ & \nearrow x_u^* u \circ g(t) \end{aligned}$

$T_u M$

