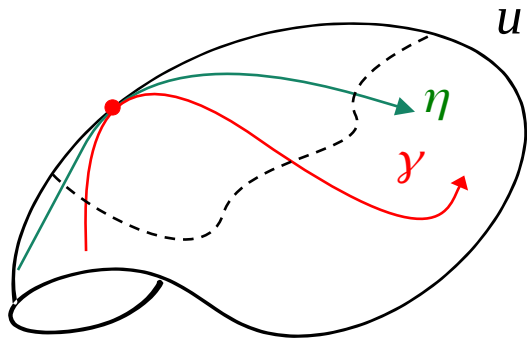
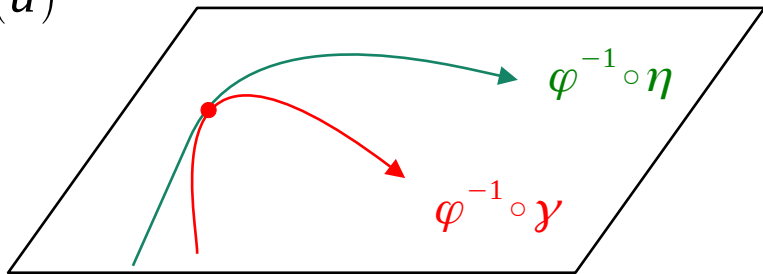


Manifold



$$\begin{array}{c} M \\ \uparrow \varphi \\ \varphi^{-1}(u) \end{array}$$

Local chart
 (u, φ)



\mathbb{R}^n Linear space