

$$\vec{X}_{11} = (-r \cos u^1 \cos u^2, -r \cos u^1 \sin u^2, -r \sin u^1)$$

$$\vec{X}_{22} = (-(R + r \cos u^1) \cos u^2, \\ -(R + r \cos u^1) \sin u^2, 0)$$

$$\vec{X}_{12} = (r \sin u^1 \sin u^2, -r \sin u^1 \cos u^2, 0)$$

$$L_{11} = \vec{U} \cdot \vec{X}_{11} = r$$

$$L_{22} = \vec{U} \cdot \vec{X}_{22} = (R + r \cos u^1) \cos u^1$$

$$L_{12} = \vec{U} \cdot \vec{X}_{12} = 0$$