

$$\begin{split} q^1 &= \varphi, \ \ q^2 = s \\ \xi &= \xi(s), \ \ \rho = \rho(s), \ \frac{\partial \rho}{\partial \varphi} = 0 \\ \boldsymbol{e}_{\xi} &= \mathbf{constant}, \ \ \boldsymbol{e}_{\rho}(\varphi) = \boldsymbol{e}_{y} \cos \varphi + \boldsymbol{e}_{z} \sin \varphi \\ \boldsymbol{r}(q^1, q^2) &= \boldsymbol{r}(\varphi, s) = \xi(s) \boldsymbol{e}_{\xi} + \rho(s) \boldsymbol{e}_{\rho}(\varphi) \end{split}$$

$$m{r}(q^1,q^2) = m{r}(arphi,s) = \xi(s)m{e}_{\xi} + 
ho(s)m{e}_{
ho}(arphi)$$

$$r(q^1, q^2) = r(\varphi, s) = \xi(s)e_{\xi} + \rho(s)e_{\rho}(\varphi)$$
  
 $r = \xi e_{\xi} + \rho e_{\rho}$ 

$$m{r}_{\partial 1} = \partial_1 m{r} = \partial_{arphi} m{r} = rac{\partial m{r}}{\partial arphi} = 
ho rac{\partial m{e}_{
ho}}{\partial arphi} = 
ho m{e}_{arphi}, \ m{e}_{arphi} \equiv rac{\partial m{e}_{
ho}}{\partial arphi} = -\sin arphi \, m{e}_y + \cos arphi \, m{e}_z$$

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ho}} oldsymbol{e}_{arphi} = oldsymbol{t}$$

$$m{r}_{\partial 2} = \partial_2 m{r} = \partial_s m{r} = rac{\partial m{r}}{\partial s} = rac{\partial \xi}{\partial s} m{e}_{\xi} + rac{\partial 
ho}{\partial s} m{e}_{
ho} = m{t}$$

$$oldsymbol{r}^1=
ho^{-1}oldsymbol{e}_{arphi}$$

$$r^2 = t$$

$$oldsymbol{r}^2 = oldsymbol{t}$$
  $oldsymbol{r}_{\partial 3} = oldsymbol{r}^3 = oldsymbol{n} = oldsymbol{e}_{arphi} imes oldsymbol{t}$ 

