

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

$$egin{aligned} m{r}(q^1,q^2) &= m{r}(arphi,s) = \xi(s)m{e}_{\xi} +
ho(s)m{e}_{
ho}(arphi) \\ m{r} &= \xim{e}_{\xi} +
hom{e}_{
ho} \end{aligned}$$

$$\mathbf{r}_{\partial 1} = \partial_1 \mathbf{r} = \partial_{\varphi} \mathbf{r} = \frac{\partial \mathbf{r}}{\partial \varphi} = \rho \frac{\partial \mathbf{e}_{\rho}}{\partial \varphi} = \rho \mathbf{e}_{\varphi}, \ \mathbf{e}_{\varphi} \equiv \frac{\partial \mathbf{e}_{\rho}}{\partial \varphi} = -\sin \varphi \, \mathbf{e}_y + \cos \varphi \, \mathbf{e}_z$$

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

$$\boldsymbol{r}^1 = \rho^{-1}\boldsymbol{e}_{\varphi}$$

$$rac{-\rho}{m^2-t}$$

$$r^2 = t$$

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$$r^2 = t$$

$$r^2 = t$$

$$m{r}^1$$

$$\rho^{-1} = \rho^{-1}$$

$$r = \partial_s r = \frac{\partial r}{\partial s} = 0$$

