

$$\bar{r} = \bar{v} \times \bar{o}$$

$$\bar{s} = \bar{o} \times \bar{u}$$

$$\bar{n} = \bar{u} \times \bar{v}$$

$$k_r = \bar{r} \cdot (\bar{C}_a - \bar{V})$$

$$k_s = \bar{s} \cdot (\bar{C}_a - \bar{V})$$

$$k_n = \bar{n} \cdot (\bar{C}_a - \bar{V})$$

$$x(\theta, v) = \frac{\bar{r} \cdot D_{-}A(\theta, v) + k_r \delta(\theta, v)}{\bar{n} \cdot D_{-}A(\theta, v) + k_n \delta(\theta, v)}$$

$$y(\theta, v) = \frac{\bar{s} \cdot D_{-}A(\theta, v) + k_s \delta(\theta, v)}{\bar{n} \cdot D_{-}A(\theta, v) + k_n \delta(\theta, v)}$$

where

- $\bar{v} \in \mathbb{R}^3$
- $\bar{o} \in \mathbb{R}^3$
- $\bar{u} \in \mathbb{R}^3$
- $\bar{V} \in \mathbb{R}^3$
- $\bar{C}_a \in \mathbb{R}^3$
- $\theta \in \mathbb{R}$
- $v \in \mathbb{R}$
- $D_{-}A \in \mathbb{R}, \mathbb{R} \rightarrow \mathbb{R}^3$
- $\delta \in \mathbb{R}, \mathbb{R} \rightarrow \mathbb{R}$