$$\begin{split} \bar{r} &= \bar{v} \times \bar{o} \\ \bar{s} &= \bar{o} \times \bar{u} \\ \bar{n} &= \bar{u} \times \bar{v} \\ k_r &= \bar{r} \cdot (\bar{C}_a - \bar{V}) \\ k_s &= \bar{s} \cdot (\bar{C}_a - \bar{V}) \\ k_n &= \bar{n} \cdot (\bar{C}_a - \bar{V}) \\ x(\theta, v) &= \frac{(\bar{r} \cdot D_A(\theta, v) + k_r \delta(\theta, v))}{(\bar{n} \cdot D_A(\theta, v) + k_s \delta(\theta, v))} \\ y(\theta, v) &= \frac{(\bar{s} \cdot D_A(\theta, v) + k_s \delta(\theta, v))}{(\bar{n} \cdot D_A(\theta, v) + k_s \delta(\theta, v))} \end{split}$$

## where

- $\bar{\mathbf{v}} \in \mathbb{R}^3$
- $\bar{o} \in \mathbb{R}^3$
- $\bar{u} \in \mathbb{R}^3$
- $\bar{V} \in \mathbb{R}^3$
- $\bar{C}_a \in \mathbb{R}^3$
- $\theta \in \mathbb{R}$
- $v \in \mathbb{R}$
- $D\_A \in \mathbb{R}, \mathbb{R} \to \mathbb{R}^3$
- $\delta \in \mathbb{R}, \mathbb{R} \to \mathbb{R}$