$$e^{K\theta} = I + K\theta + \frac{1}{2!}K^2\theta^2 + \frac{1}{3!}K^3\theta^3 + \cdots$$

$$K^2 = \begin{bmatrix} -k_Y^2 - k_Z^2 & k_X k_Y & k_X k_Z \\ k_X k_Y & -k_X^2 - k_Z^2 & k_Y k_Z \\ k_X k_Z & k_Y k_Z & -k_X^2 - k_Y^2 \end{bmatrix}$$

$$\left(e^{K\theta}\right)_{1,2} = 0 + (-k_Z)\theta + \frac{1}{2!}(k_X k_Y)\theta^2 + \frac{1}{3!}k_Z\theta^3 + \cdots$$

$$\left(e^{K\theta}\right)_{1,2} = -k_Z s\theta + k_X k_Y v\theta$$

$$R_K(\theta) = \begin{bmatrix} k_x k_x v\theta + c\theta & k_x k_y v\theta - k_z s\theta & k_x k_z v\theta + k_y s\theta \\ k_x k_y v\theta + k_z s\theta & k_y k_y v\theta + c\theta & k_y k_z v\theta - k_x s\theta \\ k_x k_z v\theta - k_y s\theta & k_y k_z v\theta + k_x s\theta & k_z k_z v\theta + c\theta \end{bmatrix},$$