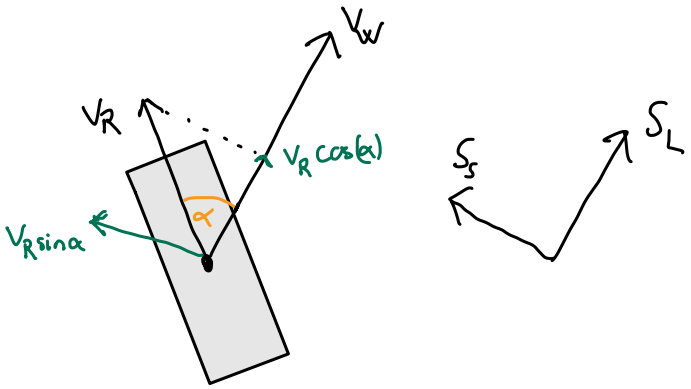
Side slip: $-1 \leq S_L \leq 1$

$\Rightarrow$ divide by the larger speed



$$S_L = \frac{\text{rotational speed} - \text{wheel speed}}{\text{bigger speed}}$$

Braking: $V_R \cos\alpha < V_w \Rightarrow$ $S_L = \dfrac{V_R \cos\alpha - V_w}{V_w}$

$$S_s = \frac{V_R \sin\alpha}{V_w}$$

Driving: $V_R \cos\alpha > V_w \Rightarrow$ $S_L = \dfrac{V_R \cos\alpha - V_w}{V_R \cos\alpha}$

$$S_s = \frac{V_R \sin\alpha}{V_R \cos\alpha} = \tan\alpha$$