

$$G_{\sigma}(s\hat{k}_i)=\sum_j l_j exp\left(-\frac{dist(b_i,b_j)^2}{2\sigma^2}\right)s\hat{k}_j$$

where

$l_j \in \mathbb{R}$ the length of b_j

$dist \in \mathbb{R}^2, \mathbb{R}^2 \rightarrow \mathbb{R}$ measures the geodesic distance

$b_i \in \mathbb{R}^2$

$b_j \in \mathbb{R}^2$

$\sigma \in \mathbb{R}$

$s\hat{k}_j \in \mathbb{R}^2$ direction vector