



$Q_i$  and  $R_i$  are non-empty paths

$\forall 0 \leq i < k$ ,  $R_i$  path from  $u_i$  to  $u_{(i+1) \bmod k}$

$$Q_i \in P^{u_i}$$

$$R_i Q_{(i+1) \bmod k} \in P^{u_i}$$

$$\lambda^{u_i}(R_i Q_{(i+1) \bmod k}) \geq \lambda^{u_i}(Q_i)$$

$Q_i$  are *spoke* paths

$R_i$  are *rim* paths