Parking method
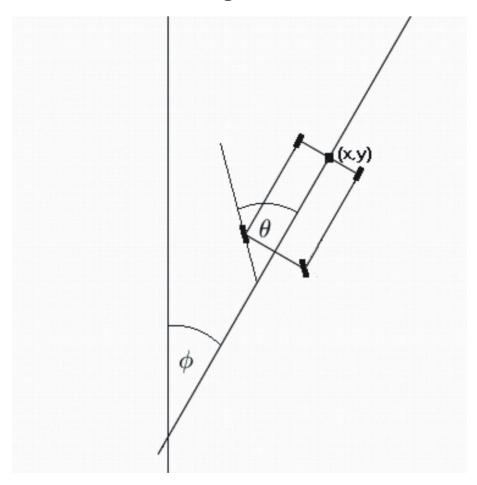

$$x(t+1) = x(t) + \sin\left[\theta(t) + \Phi(t)\right] - \sin\left[\theta(t)\right]\cos\left[\Phi(t)\right]$$

$$y(t+1) = y(t) + \cos\left[\theta(t) + \Phi(t)\right] - \sin\left[\theta(t)\right]\sin\left[\Phi(t)\right]$$

$$\Phi(t+1) = \Phi(t) - \arcsin\left[\frac{2\sin\theta(t)}{b}\right]$$