Course: Digitial Control Engineering

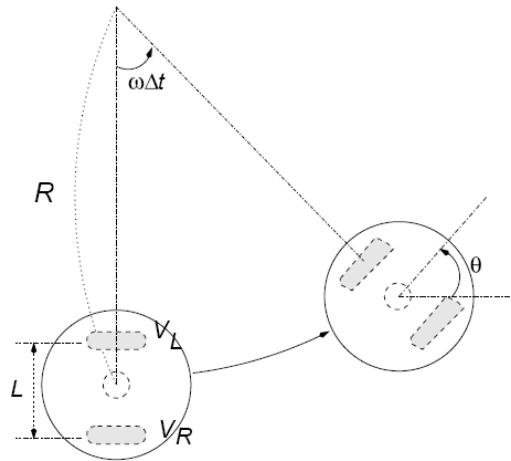# Homework 1
due date: before class on the 17[h] March

Figure 1. Robot system and kinematics in simulation

The robot is positioned at (x0, y0) and now the robot has the wheel speeds, the left wheel speed V_L, the right wheel speed V_R. Using the curved motion with a radius R and angular speed w, derive an equation to get a new robot position (x,y) and the head direction of the robot (refer to Figure 1).

Ultimately, you need find an equation for (x, y, θ) for given V_L, V_R and wheel base L.

Submit a 1-page handout to show the position of a wheeled robot.